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Supplement to the April 2001 Report: Life Cycle Assessment of the Stonyfield Farm Product Delivery System

Vanessa M. Smith and Gregory A. Keoleian

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Supplement to the April 2001 Report: Life Cycle Assessment of the Stonyfield Farm Product Delivery System

1.0 Introduction

Following a review of the April 2001 report, Stonyfield Farm decided to explore one of the recommended options for improving the environmental performance of their product delivery system. Stonyfield Farm asked the Center for Sustainable Systems to evaluate three alternative closure options for their six and eight ounce containers. This supplement provides a life cycle assessment of the three alternative closure options and compares the environmental life cycle burdens of each alternative with the current closure system. It also includes an estimate of the reduction in corrugated secondary packaging material that would be required to achieve comparable savings.

The Center for Sustainable Systems carried out the evaluation using the same life cycle methodology outlined in the April 2001 report. Four new data modules were added in order to model the alternative options. The current closure system was unchanged except for a revision in the recycling rate of the paperboard slip-sheet which is part of the secondary packaging for Distribution 2.

2.0 Current System and Alternate Options

The 6 and 8 oz. yogurt containers require the same size lid (closure option). The only difference is the number of yogurt containers of each size required to deliver the same functional unit of yogurt, 1000 lbs^1 . The four options evaluated in this life cycle study are as follows:

- 1) The current closure system for the 6 and 8 oz. containers consisting of:
 - a) LLDPE injection molded lid
 - b) Co-extruded PE/PET roll stock seal
- 2) The first alternative is to eliminate the LLDPE lid from the current system and use only the co-extruded PE/PET roll stock seal.
- 3) The second alternative is a laminated foil pick and place seal consisting of the following layers:
 - a) Rolled Aluminum
 - b) PE resin (extrudate)
 - c) Co-extruded PE sealant film (heat seal)

¹ 6oz. PDS - 2666.67 containers required to deliver 1000 lbs. of yogurt. 8 oz. PDS – 2000 containers required to deliver 1000 lbs. of yogurt.

- 4) The third alternative is a polycoated paper pick and place seal consisting of the following layers:
 - a) Bleached Kraft Paper
 - b) LDPE Coating (heat seal)
 - c) Tinted Acrylic Resin on non-seal side

3.0 Data Modules

The data modules and data categories are unchanged and the same assumptions are applied. Printing of the lids was not included for any of the alternative options. Four new data modules were required: ocean transport, aluminum, bleached kraft paper and methyl methacrylate. The four data modules that were added are described in tables 3-1 and 3-2.

The methyl methacrylate data module was used to model the acrylic resin layer in the coated paper option although the actual composition of the acrylic layer was not disclosed by the supplier due to the proprietary nature of the information. A Materials Science and Engineering professor at the University of Michigan recommended the use of methyl methacrylate as a surrogate for this application². The rolled aluminum module was developed for automotive applications and, as it would not vary significantly for packaging applications, was utilized to model the laminated foil lid option.

² Correspondence April 2, 2002.

I able 3-1 Transportation Dat	ta Module Description	
Transport Mode S	Source	Description
	DEAM module name – Sea Transport (US Tanker) Primary source: EPA (Environmental Protection Agency)	 Technology – Heavy Fuel Oil Production included, US data Module values are calculated in km.kg of shipped goods. Heavy fuel oil consumption 2.6 g/t.km Ship characteristics: Average speed: 8 knots Specific engine power: 0.11 kW/metric tons Actual load weight > 80 000 dwt Fuel consumption: 0.35 kg/kWh

Table 3-1 Transportation Data Module Description

Table 3-2 Material Data Module Descriptions

Table 3-2 Material Data MC	Julie Descriptions	
Material	Source	Description
Bleached Kraft Paper	DEAM module name – Bleached Kraft Paper Original Source: BUWAL (Bundesamt für Umwelt, Wald und Landschaft) n°250 Bern, 1996	 Technology – Production of 1000 kg kraft (bleached) from pulp bleached with sulphate moisture content: 8% co-product: tall oil (11.7 kg) and turpentine oil (1.38 kg) data derived from one plant in Switzerland all transport included (150 km rail)
Aluminum – rolled	TEAM module name – Rolled aluminum Primary Data from the Aluminum Association	 Technology –Production of 1 kg Rolled Aluminum Data for Rolled Aluminum for automotive applications Obtained from USAMP database

Methyl Methacrylate – for	DEAM module name –	Technology – Production of
acrylic film on polycoated	Methyl Methacrylate	1 kg Methyl Methacrylate
paper		Monomer
	Original Source-	 Information have been
	Eco-profiles of European	supplied by 4 plants
	plastics industry	producing a total of 360
	Report 14 : Polymethyl	000 tonnes of methyl
	Methacrylate	methacrylate monomer.
	September, 1997	 Methyl Methacrylate
	September, 1997	monomer is produced
	Primary source for energy:	by reacting acetone
	1) International Energy	cyanohydrin with
	Agency. Coal	sulphuric acid to
	Information 1995.	produce
	OECD Paris 1995	methacrylamide
	2) International Energy	sulphate. Without
	Agency. Oil and Gas	separating this
	Information 1995.	intermediate, it is
	OECD Paris 1995	further reacted with
	3) International Energy	methanol and water to
	Agency. Electricity	produce methyl
	Information 1995.	methacrylate.
	OECD Paris 1995	 The suphuric acid is
		recovered and in this
		module, the sulphuric
		acid recovery plant has
		been included.

4.0 Data Inputs

The current Product Delivery System (PDS) data input was unchanged except for the recycling rate for the paperboard slip sheet in Distribution 3 which was updated from 0% to the current rate of 85%³. Two packaging suppliers, whose names are not disclosed here for proprietary reasons, provided product composition, transportation and secondary packaging data for both the laminated foil and coated paper options. All input data is available in the input forms from the computer calculation model in Appendix A.

5.0 Results

The results of the life cycle study for the four closure options are presented in the following tables and figures. Results for the 6 oz. PDS and 8 oz. PDS are presented separately. In the first two tables, 5-1 and 5-2, the environmental burdens associated with each of the options are listed. The savings offered by each alternative option when compared with the Current System are also listed. The option that offers the greatest savings for each environmental flow is highlighted in red. Options within 2% of the greatest savings are not considered to be significantly different and, therefore, are also highlighted.

Result forms from the computer calculation model can be found in Appendix B.

³ Correspondence with Stonyfield April 3, 2002

		Current	Seal	%	Laminated	%	Coated	%
Environmental Flows	Units	System	only	Savings	Foil	Savings	Paper	Savings
Energy								
Energy (Total - inlc. renewable)	MJ	4756	3650	23%	3957	17%	3705	22%
Renewable	%	18%	22%		22%		21%	
Waste								
Solid Waste (Total - incl. recycled)	kg	67	57	15%	63	6%	57	16%
Recycled	%	49%	55%		50%		56%	
Criteria Air Pollutants								
Carbon Monoxide (CO)	g	224	195	13%	291	-30%	184	18%
Hydrocarbons	g	565	407	28%	384	32%	385	32%
Nitrous Oxides (NOx)	g	974	846	13%	894	8%	837	14%
Particulates	g	122	104	15%	157	-29%	96	21%
Sulfur Oxides (SOx)	g	451	408	9%	488	-8%	368	18%
Water Emissions								
Acid	g	2.5	2.1	18%	2.0	20%	2.0	20%
BOD	g	78	77	1%	75	3%	76	3%
COD	g	238	229	4%	220	7%	225	6%
TDS	g	8	7	17%	6	19%	6	19%
Metals	g	15	7	50%	8	48%	8	49%
Water Use	L	916	812	11%	790	14%	785	14%
Impact Categories								
Global Warming Potential	kg CO2	159	137	14%	159	0%	143	10%
Ozone Depletion Potential	mg CFC-11	3.9	3.7	5%	3.7	5%	3.7	5%
Maximum Allowable Concentration	m3	164	143	13%	163	0%	138	16%

Table 5-1: Environmental Burdens for 6 oz. PDS (1000 lbs. Yogurt Delivered)

		Current	Seal	%	Laminated	%	Coated	%
Environmental Flows	Units	System	only	Savings	Foil	Savings	Paper	Savings
Energy								
Energy (Total - inlc. renewable)	MJ	4019	3187	21%	3394	16%	3229	20%
Renewable	%	18%	20%		21%		20%	
Waste								
Solid Waste (Total - incl. recycled)	kg	55	48	14%	52	5%	48	14%
Recycled	%	48%	53%		49%		54%	
Criteria Air Pollutants								
Carbon Monoxide (CO)	g	202	180	11%		-25%	172	15%
Hydrocarbons	g	477	359	25%		30%	342	28%
Nitrous Oxides (NOx)	g	884	788	11%	821	7%	781	12%
Particulates	g	106	92	13%		-24%		18%
Sulfur Oxides (SOx)	g	388	357	8%	414	-7%	326	16%
Water Emissions								
Acid	g	2.1	1.8	15%		19%	1.8	17%
BOD	g	62	61	1%	60	3%	61	2%
COD	g	197	190	3%	183	7%	187	5%
TDS	g	7	6	15%	6	17%	6	17%
Metals	g	12	6	47%	7	46%	7	45%
Water Use	L	784	708	10%	686	13%	688	12%
Impact Categories								
Global Warming Potential	kg CO2	139	123	12%	139	0%		9%
Ozone Depletion Potential	mg CFC-11	3.1	3.0	4%	2.9	5%		4%
Maximum Allowable Concentration	m3	147	131	11%	146	1%	127	13%

Table 5-2: Environmental Burdens for 8 oz. PDS (1000 lbs. Yogurt Delivered)

5.1 Life Cycle Energy

The total life cycle energy requirements for each option were compared. The values from Tables 5-1 and 5-2 were graphed and shown in figures 5-1 and 5-2. The options that require the least amount of energy for both the 6 oz. and 8 oz. PDS are the Seal Only and Coated Paper options. The Seal Only and Coated Paper options require 3650 MJ and 3705 MJ, respectively, for the 6 oz. PDS and 3187 and 3229 MJ, respectively for the 8 oz. PDS.

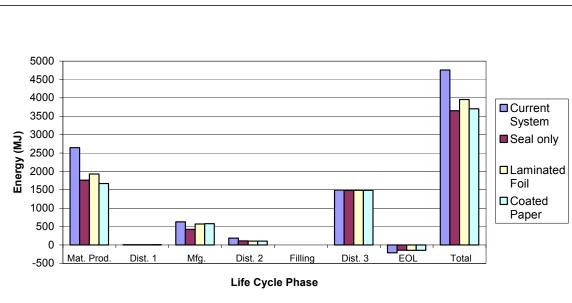
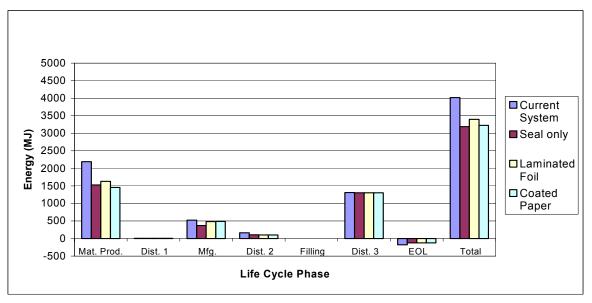


Figure 5-1: Life Cycle Energy for 6 oz. PDS

Figure 5-2: Life Cycle Energy for 8 oz. PDS



5.2 Life Cycle Solid Waste

The Current System produces 67 kg of solid waste for the 6 oz. PDS and 55 kg of solid waste for the 8 oz. PDS. The Seal Only and Coated Paper options result in the greatest reductions in the amount of solid waste produced for both the 6 oz. and 8 oz. PDS. The solid waste produced by the Seal Only, Laminated Foil and Coated Paper is 57, 63 and 57 kg for the 6 oz. PDS and 48, 52, and 48 kg for the 8 oz. PDS.



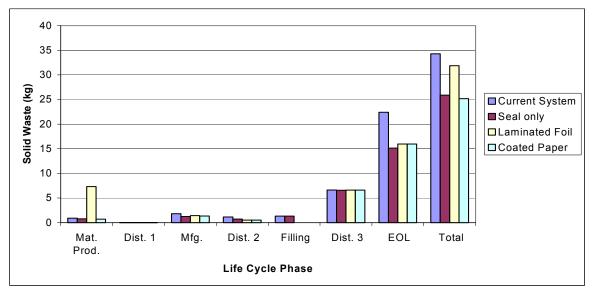
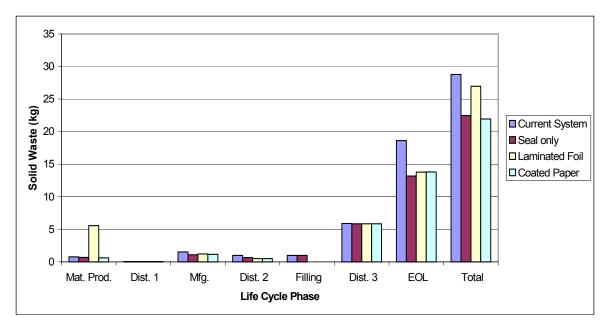


Figure 5-4: Life Cycle Solid Waste for 8 oz. PDS



5.3 Life Cycle Air Emissions

The amount of criteria air pollutants emitted for each option are listed in Tables 5-1 and 5-2 for the 6 and 8 oz. PDS, respectively. The option offering the greatest savings for each air pollutant for both the 6 and 8 oz. PDS is the Coated Paper option.

Figure 5-5: Life Cycle Criteria Air Pollutant Emissions for 6 oz. PDS

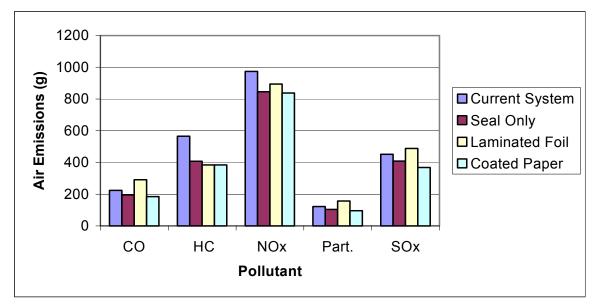
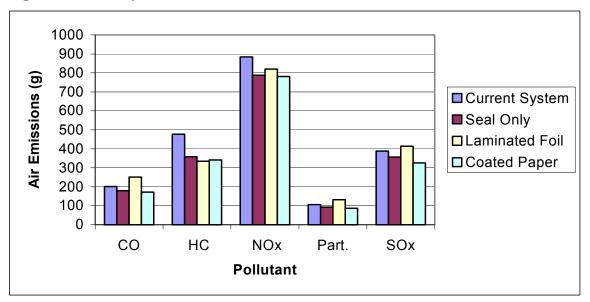


Figure 5-6: Life Cycle Criteria Air Pollutant Emissions for 8 oz. PDS



5.4 Life Cycle Emissions to Water

The pollutants emitted to water for the 6 and 8 oz. PDS are listed in tables 5-1 and 5-2 respectively. The Seal Only, Laminated Foil and Coated Paper options offer almost equivalent savings for both the 6 and 8 oz. PDS. Savings in Metal emissions were the most significant, at 48 to 50% for the 6 oz. PDS and 45 to 47% for the 8 oz. PDS.

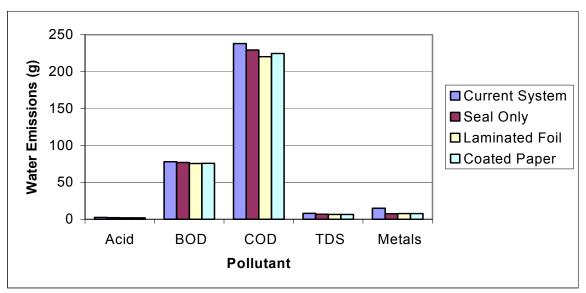
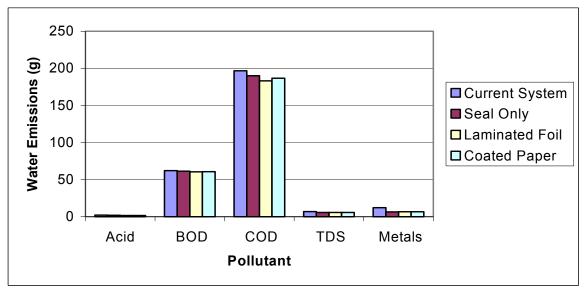


Figure 5-7: Life Cycle Emissions to Water for 6 oz. PDS

Figure 5-8: Life Cycle Emissions to Water for 8 oz. PDS



5.5 Life Cycle Water Use

Life cycle water use for the Current System was 916 and 784 liters for the 6 and 8 oz. PDS, respectively. The alternate options offered savings of between 11 and 14% for the 6 oz. PDS and 10 to 13% for the 8 oz. PDS.

Figure 5-9: Life Cycle Water Use for the 6 oz. PDS

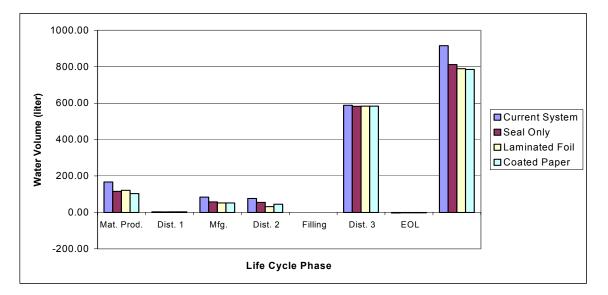
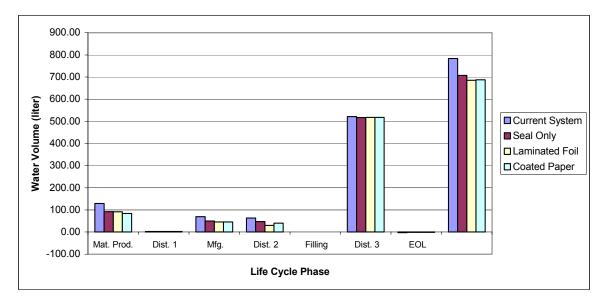


Figure 5-10: Life Cycle Water Use for the 8 oz. PDS



5.6 Characterized Impact Categories

The Seal Only and Coated Paper options offered the greatest overall reductions in the Impact Categories for the 6 and 8 oz. PDS. For the 6 oz. PDS the Seal Only offered the greatest reductions in Global Warming Potential (GWP) at 14%, all 3 alternative options offered 5% reductions in Ozone Depletion Potential (ODP) and the Coated Paper offered the greatest reductions in Maximum Allowable Concentration (MAC) at 16%. For the 8 oz. PDS the Seal Only offered the greatest reductions in GWP at 12%, all 3 alternative options offered 4 to 5% reductions in ODP and the Seal only and Coated Paper offered 11 to 13% reductions in MAC.

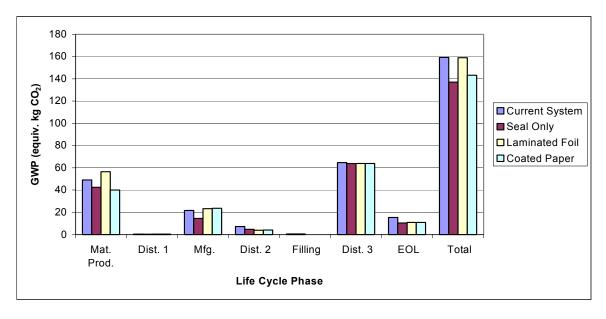


Figure 5-11: Life Cycle Global Warming Potential for 6 oz. PDS

Figure 5-12: Life Cycle Global Warming Potential for 8 oz. PDS

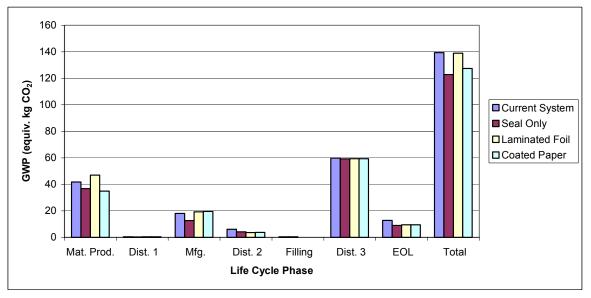


Figure 5-13: Life Cycle Ozone Depletion Potential for 6 oz. PDS

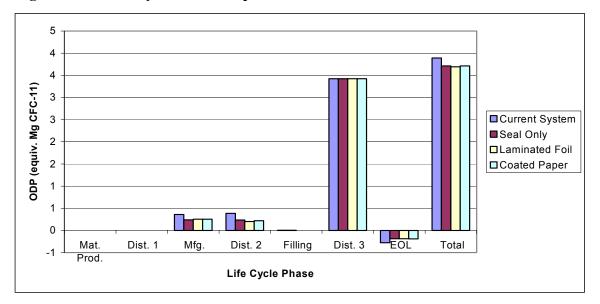
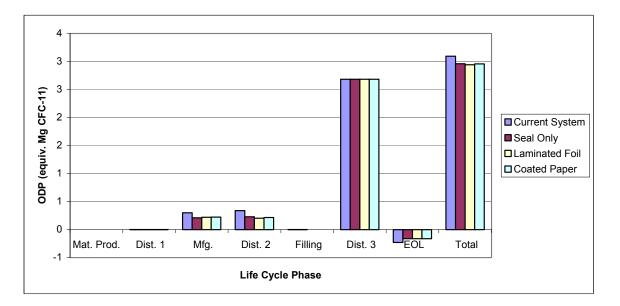


Figure 5-14: Life Cycle Ozone Depletion Potential for 8 oz. PDS



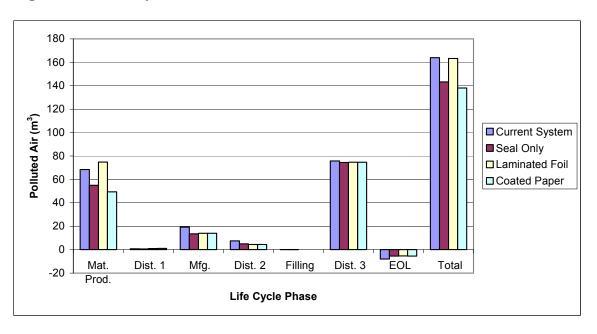
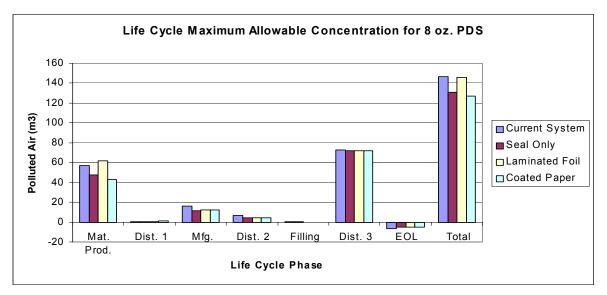


Figure 5-15: Life Cycle Maximum Allowable Concentration for 6 oz. PDS

Figure 5-16: Life Cycle Maximum Allowable Concentration for 8 oz. PDS



5.7 Results for 2002 Projected Sales

In the following tables, 5-3 and 5-4, the total environmental burdens associated with the 6 and 8 oz. PDS, respectively, are presented based on the projected 2002 sales for each PDS.

Environmental Flows	Units	Current System	Seal only	Laminated Foil	Coated Paper
Energy					
Energy (Total - inlc. renewable)	MJ	40,241,579	30,879,981	33,475,625	31,349,837
Renewable	%	18%	22%	22%	21%
Waste					
Solid Waste (Total - incl. recycled)	kg	569,918	482,262	536,221	480,989
Recycled	%	49%	55%	50%	56%
Criteria Air Pollutants					
Carbon Monoxide (CO)	kg	1,891	1,649	2,460	1,558
Hydrocarbons	kg	4,781	3,447	3,248	3,255
Nitrous Oxides (NOx)	kg	8,242	7,155	7,564	7,086
Particulates	kg	1,030	878	1,325	812
Sulfur Oxides (SOx)	kg	3,816	3,456	4,130	3,113
Water Emissions					
Acid	kg	21	17	17	17
BOD	kg	658	650	638	642
COD	kg	2,013	1,940	1,864	1,900
TDS	kg	68	56	55	55
Metals	kg	126	63	65	65
Water Use	L	7,752,458	6,871,107	6,682,348	6,645,798
Impact Categories					
Global Warming Potential	kg CO2	1,347,198	1,159,878	1,345,421	1,211,657
Ozone Depletion Potential	mg CFC-11	32,912	31,389	31,220	31,389
Maximum Allowable Concentration	m3	1,387,082	1,212,402	1,382,005	1,168,169

Table 5-3: Environmental Burdens for 6 oz. PDS (For 2002 Predicted Sales Volume)

Environmental Flows	Linita	Current System	Socianty	Lominated Fail	Controd Dapar
Environmental Flows	Units	Current System	Seal only	Laminated Foil	Coated Paper
Energy	N 4 1	00 770 454	05 004 400	00 000 770	00 404 040
Energy (Total - inlc. renewable)	MJ	82,773,451	65,634,139	69,896,772	66,491,916
Renewable	%	18%	22%	22%	21%
Waste					
Solid Waste (Total - incl. recycled)	kg	1,141,633	981,468	1,079,720	979,350
Recycled	%	49%	55%	50%	56%
Criteria Air Pollutants					
Carbon Monoxide (CO)	kg	4,155	3,711	5,187	3,546
Hydrocarbons	kg	9,829	7,388	6,899	7,037
Nitrous Oxides (NOx)	kg	18,205	16,219	16,900	16,092
Particulates	kg	2,181	1,904	2,709	1,783
Sulfur Oxides (SOx)	kg	7,996	7,342	8,531	6,717
Water Emissions					
Acid	kg	44	37	36	36
BOD	kg	1,281	1,266	1,243	1,250
COD	kg	4,049	3,915	3,769	3,842
TDS	kg	142	120	117	118
Metals	kg	250	133	136	137
Water Use	Ĺ	16,143,333	14,571,960	14,119,702	14,160,685
Impact Categories					
Global Warming Potential	kg CO2	2,871,308	2,529,437	2,861,629	2,624,172
Ozone Depletion Potential	mg CFC-11	63,638	60,960	60,548	60,960
Maximum Allowable Concentration	m3	3,018,807	2,700,043	2,997,512	2,619,291

Table 5-4: Environmental Burdens for 8 oz. PDS (For 2002 Predicted Sales Volume)

5.8 Secondary Packaging Reduction Study

A brief study was performed in order to find out whether it would be possible to achieve similar reductions in environmental burdens as were achieved by the alternate options by reducing the board grade of corrugated secondary packaging in Distribution 3 (Stonyfield to Distributor).

The study was carried out by varying the mass of corrugated packaging used in Distribution 3. It was found that it would not be possible to achieve the reductions seen in energy consumption for the 6 and 8 oz. PDS with the Seal Only and Coated Paper options even by eliminating the corrugated packaging all together. It was possible, however, to achieve equivalent savings in solid waste production for both the 6 and 8 oz. PDS by reducing the mass of corrugated packaging by 30%. Tables 5-5 and 5-6 show the results of the 30% reduction and the elimination of the corrugated packaging along side of the results of the other 4 options. Savings that were equivalent or better to those achieved with the other options are highlighted in blue. Please note that these reductions do not hold any design significance, as it is not known whether light-weighting the corrugated packaging by 30% would provide equivalent functional packaging performance.

Table 5-5. Environmental Burger				ogant Bo	intered)							
									30 %		Elimination	
									reduction of		of	
		Current	Seal	%	Laminated	%	Coated	%	Corrugated	%	Corrugated	%
Environmental Flows	Units	System	only	Savings	Foil	Savings	Paper	Savings	in Dist. 3	Savings	in Dist. 3	Savings
Energy												
Energy (Total - inlc. renewable)	MJ	4756	3650	23%	3957	17%	3705	22%	4488	6%	3862	19%
Renewable	%	18%	22%		22%		21%		18%		7%	
Waste												
Solid Waste (Total - incl. recycled)	kg	67	57	15%	63	6%	57	16%	58	14%	36	47%
Recycled	%	49%	55%		50%		56%		43%		15%	
Criteria Air Pollutants												
Carbon Monoxide (CO)	g	224	195	13%	291	-30%	184	18%	218	3%	204	9%
Hydrocarbons	g	565	407	28%	384	32%	385	32%	558	1%	543	4%
Nitrous Oxides (NOx)	g	974	846	13%	894	8%	837	14%	951	2%	897	8%
Particulates	g	122	104	15%	157	-29%	96	21%	119	3%	111	9%
Sulfur Oxides (SOx)	g	451	408	9%	488	-8%	368	18%	437	3%	404	10%
Water Emissions												
Acid	g	2.5	2.1	18%	2.0	20%	2.0	20%	2.5	0%	2.0	20%
BOD	g	78	77	1%	75	3%	76	3%	57	26%	10	87%
COD	g	238	229	4%	220	7%	225	6%	189	21%	75	68%
TDS	g	8	7	17%	6	19%	6	19%	8	0%	8	0%
Metals	g	15	7	50%	8	48%	8	49%	15	1%	14	6%
Water Use	Ĺ	916	812	11%	790	14%	785	14%	822	10%	604	34%
Impact Categories												
Global Warming Potential	kg CO2	159	137	14%	159	0%	143	10%	152	4%	136	15%
Ozone Depletion Potential	mg CFC-11	3.9	3.7	5%	3.7	5%	3.7	5%	3	26%	0.5	87%
Maximum Allowable Concentration		164	143	13%	163	0%	138	16%	160	3%	150	9%

Table 5-5: Environmental Burdens for 6 oz. PDS (1000 lbs. Yogurt Delivered)

		,		5	,				30 %		Elimination	
									reduction of		of	
		Current	Seal	%	Laminated	%	Coated	%	Corrugated	%	Corrugated	%
Environmental Flows	Units	System	only	Savings	Foil	Savings	Paper	Savings	in Dist. 3	Savings	in Dist. 3	Savings
Energy												
Energy (Total - inlc. renewable)	MJ	4019	3187	21%	3394	16%	3229	20%	3809	5%	3320	17%
Renewable	%	18%	20%		21%		20%		15%		6%	
Waste												
Solid Waste (Total - incl. recycled)	kg	55	48	14%	52	5%	48	14%	48	13%	30	46%
Recycled	%	48%	53%		49%		54%		42%		16%	
Criteria Air Pollutants												
Carbon Monoxide (CO)	g	202	180	11%	252	-25%	172	15%	197	2%	187	7%
Hydrocarbons	g	477	359	25%	335	30%	342	28%	472	1%	460	4%
Nitrous Oxides (NOx)	g	884	788	11%	821	7%	781	12%	866	2%	823	7%
Particulates	g	106	92	13%	132	-24%	87	18%	103	2%	98	7%
Sulfur Oxides (SOx)	g	388	357	8%	414	-7%	326	16%	377	3%	352	9%
Water Emissions												
Acid	g	2.1	1.8	15%	1.7	19%	1.8	17%	2.1	0%	2.0	6%
BOD	g	62	61	1%	60	3%	61	2%	46	26%	9	<mark>86</mark> %
COD	g	197	190	3%	183	7%	187	5%	158	19%	69	65%
TDS	g	7	6	15%	6	17%	6	17%	7	0%	7	-2%
Metals	g	12	6	47%	7	46%	7	45%	12	1%	12	1%
Water Use	L	784	708	10%	686	13%	688	12%	711	9%	540	31%
Impact Categories												
Global Warming Potential	kg CO2	139	123	12%	139	0%	127	9%	134	4%	121	13%
Ozone Depletion Potential	mg CFC-11	3.1	3.0	4%	2.9	5%	3.0	4%	2.3	26%		<mark>86</mark> %
Maximum Allowable Concentration	m3	147	131	11%	146	1%	127	13%	143	2%	136	7%

Table 5-6: Environmental Burdens for 8 oz. PDS (1000 lbs. Yogurt Delivered)

6.0 Conclusions and Recommendations

This study investigated the environmental performance of the current closure system and three alternative closure options for the 6 and 8 oz. Stonyfield Farm PDS:

- 1) Current System LLDPE injection molded lid and co-extruded PE/PET roll stock seal.
- 2) Seal Only elimination of LLDPE lid from current closure system; use only the coextruded PE/PET roll stock seal
- 3) Laminated Foil laminated foil pick and place seal
- 4) Coated Paper polycoated paper pick and place seal

The impact of board grade reductions of secondary corrugated packaging in Distribution 3 on environmental flows was also investigated. An economic analysis and an analysis of the structural integrity of each option were not within the scope of this supplemental report; therefore, recommendations and conclusions are based solely on the outcome of the life cycle inventory carried out to determine the environmental performance of each option.

As is shown in Tables 5-1 and 5-2, the option with the best overall environmental performance for both the 6 and 8 oz. PDS is the Coated Paper lid. Both the Seal Only and Coated Paper options improve every environmental flow category relative to the Current System. The Coated Paper lid, however, provides equivalent or greater savings for each category compared to the Seal Only option, excluding Global Warming Potential (the Seal Only option exceeds the Coated Paper savings with 3 to 4% additional savings).

The Seal Only lid is the second best option for both the 6 and 8 oz. PDS, providing equivalent savings in energy consumption, solid waste production, nitrous oxide emissions, some water emissions (Acid (6 oz. only), BOD, TDS and metals) and the impact categories (excluding GWP savings which are higher, as mentioned). The Laminated Foil lid had equivalent savings to the Coated Paper lid in some environmental flows including hydrocarbons, water emissions, water use and Ozone Depletion Potential but resulted in higher flows than the Current System in a few of the air emission categories. For both the 6 and 8 oz. PDS, it resulted in 25 to 30% higher carbon monoxide emissions, 24 to 29% higher particulate emissions, and 7 to 8% higher sulfur oxide emissions.

In general reductions in board grade of the corrugated secondary packaging used in Distribution 3 did not improve the environmental performance of the PDS as much as the Coated Paper or Seal Only options. However, significant reductions in solid waste, some water emissions, water use, GWP and Ozone Depletion Potential are achievable with board grade reductions greater than or equal to 30% by mass.

When comparing the 6 and 8 oz. PDS, it was found that the 8 oz. PDS has a better overall environmental performance than the 6 oz. PDS because fewer 8 oz. PDS are needed to

deliver the same volume of yogurt product⁴. For the Current System using an 8 oz. PDS instead of a 6 oz. PDS reduces the amount of energy required by 15%, produces 18% less solid waste, 9 to 16% fewer air emissions, 14 to 20% fewer water emissions, uses 14% less water, and reduces all of the impact categories by 11 to 21%.

Based on 2002 project annual sales of the 6 and 8 oz. PDS, Stonyfield Farm could increase the energy efficiency of each PDS significantly by choosing either the Coated Paper or Seal Only option over the Current System. Energy consumption would be reduced by approximately 9.1 million MJ per year for the 6 oz. PDS and 16.7 million MJ per year for the 8 oz. PDS. This is equivalent to 1500 and 2700 barrels of crude oil⁵, respectively, or the amount of energy consumed annually by 86 and 157 U.S. households⁶, respectively.

The Center for Sustainable Systems recommends the use of either the Coated Paper or Seal Only option based solely on their superior environmental performance to the Current System and Laminated Foil. The Center also recommends that Stonyfield Farm conduct feasibility studies on board grade reductions of corrugated packaging in Distribution 3. This can provide further reductions in solid waste, some water emissions, water use, Global Warming Potential and Ozone Depletion Potential as well as small improvements in energy efficiency and air emissions. The Center's final recommendation is for Stonyfield Farm to encourage consumers to purchase yogurt products in larger container sizes (e.g. this study shows that 8 oz. containers outperform 6 oz. containers).

⁴ 6oz. PDS - 2666.67 containers required to deliver 1000 lbs. of yogurt. 8 oz. PDS – 2000 containers required to deliver 1000 lbs. of yogurt.

⁵ Average heat content for imported and exported crude oil in the United States in 2000 was 5.879 million BTU per barrel; Source: Annual Energy Review 2000, DOE-EIA-0384(2000), p. 332.

⁶ Annual Household Energy Consumption for 1997, 101 million Btu; upstream energy requirements not included; Source: Annual Energy Review 2000, DOE-EIA-0384(2000), p. 49.

APPENDIX A

INPUT FORMS

Content Description:

Scenario A:	6 oz. Current System
Scenario B:	8 oz. Current System
Scenario C:	6 oz. Seal Only
Scenario D:	8 oz. Seal Only
Scenario E:	6 oz. Laminated Foil
Scenario F:	8 oz. Laminated Foil
Scenario G:	6 oz. Coated Paper
Scenario H:	8 oz. Coated Paper
Scenario I:	6 oz. Distribution 3 Corrugated Packaging – 30% reduction*
Scenario J:	8 oz. Distribution 3 Corrugated Packaging – 30% reduction*
Scenario K:	6 oz. Distribution 3 Corrugated Packaging – Eliminated (0 kg)*
Scenario L:	8 oz. Distribution 3 Corrugated Packaging – Eliminated (0 kg)*

*Change from Current System is circled.

Stonyfield Farm Master's Project LCI Model Inputs

PP 6 oz CF IM

Units/Comp.

Weight (g)

7.800 3.900 0.332

Manufacturer Polytainers Polytainers Clear-Lam

Designation Name	onent 1 Cup	mponent 2 Lid	mponent 3 Seal	
Design	ent System Comp	Comp	Comp	
÷	P 6 oz CF IM (Current System Component 1 0	1000 lb	6 oz.	
Data Set	Designation =	Functional Unit	Container Size	
6		uəi	อ	

	Supplier	65.0% Unknown	30.1% Unknown	4.9% Unknown	0.0% N/A
tion	weight %	65.0%	30.1%	4.9%	%0.0
Seal Composition	Material	ΡE	PET	Other	N/A
	Supplier	97.0% Novacor	3.0% Spartech	0.0% N/A	N/N %0.0
c	weight %	%0'.26	3.0%	%0.0	%0.0
Lid Composition	Material	TLDPE	Cotton Color	N/A	N/A
:	Supplier	Montell	Spartech	N/A	N/A
ы	weight %	82.0%	3.0%	%0.0	%0.0
Cup Composition	Material	ЬР	Cotton Color	N/A	N/A
.b	01	4 I	sire	əte	W

Transport	
Material	
l dn	

Material		-	Transport				Packaging	
(Supplier)	Distance	Mode of Trans.	ans. Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
DD (Maatall)	306	Rail	%66	100%	0.00% N/A	N/A	0	
	624	Truck	1%		0.00% N/A	N/A	0	
Cotton Color	8	Truck	100%	100%	%00.0	0.00% Bag & Pallet	449	20
(Spartech)	6	N/A	%0	%0	0.00% N/A	N/A	0	
ALA ALAN	C	N/A	%0	%0	0.00% N/A	N/A	0	
(YNI) YNI	>	N/A	%0	%0	0.00% N/A	N/A	0	
	c	N/A	%0	%0	0.00% N/A	N/A	0	
	>	N/A	%0	%0	0.00% N/A	N/A	0	
Lid Material Transport	ansport							
Material			Transport				Packaging	
(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
LLDPE		Rail	92.0%	100%	0.00% N/A	N/A	0	
(Novacor)	200	Truck	8.0%	%0	0.00% N/A	N/A	0	
Cotton Color	8	Truck	100%	400%	0.00%	0.00% Bag & Pallet	449	20
(Spartech)	6	N/A	%0	%0	0.00% N/A	N/A	0	
NIVA (AIVA)	c	N/A	%0	%0	0.00% N/A	N/A	0	
	D	N/A	%0	%0	0.00% N/A	N/A	0	
VVV VVIV	c	N/A	%0	%0	0.00% N/A	N/A	0	
	>	N/A	%0	%0	0.00% N/A	N/A	0	

bution 2 (Manufacturer to Ston Cup Cup Cup Box Pallet Pallet	28/							
Seal Packaging Component Cup		N/A	%0	%0	0.00%			
Packaging Component Cup		Truck	100%	100%	0.00%			
Packaging Component Cup	neni	N/A	%0	%0	0.00%			
Component Cup								
CnD		Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight (g)	Reuse Rate	Recycle Rate
Cup		Atlantic	5	2130(2130 Corrugated (100	1497	%0	100%
Ch		Regency	9.4	2130 LDPE	DPE	110.5858	0%0	0%
		Woodbridge	53	51120 Wood	νοο	18144	94%	71%
	Stretch Wrap	Artic	18	51120	51120 LLDPE Film	635	%0	%0
		N/A	0	40	0 N/A	0	%0	%0
		Atlantic	5	1500 (1500 Corrugated (100	862	%0	100%
	et	Woodbridge	23	72000 W ood	Nood	18144	94%	71%
Lid	Stretch Wrap	Artic	18	72000	72000 LLDPE Film	635	%0	
Sleeve		Regency	6.4	201	50 LDPE	3	%0	%0
N/A		N/A	0	<u>v </u> 0	0 N/A	0	%0	%0

ency Loss Rate 100% 0.00% 0% 0.00% 0% 0.00% 12 Keight 3360 Wood 3360 LLDPE Film 0 0	Dist. to Mfg. Units. Stone 47.6 ervices 10 138.2 0	%0	100%	Fraction Efficiency	
Weight Reuse 132 18144 9 331 0	Jnits/Package Material 12 Corrugated(22 3360 Wood 3360 LLDPE Film 0 N/A				
0% 0% 0%	Weight 132 18144 331 0				
Recycle 95% 71% 7%	Recycle 9				

	<u> </u>
23.5%	Fraction Plastic
ated jing Make-up	Recycle Rate
Fraction Incinerated Primary Packaging Make-up	Component
əj	i of Lin

əj	I IIIIIAIY I AUNAYIIY WIANG-UP	yii iy wanc-up			
		-	Fraction		
	Component	Recycle Rate	Plastic	Fraction Paper Fraction Other	Fraction Other
-	Cup	%0	100%	%0	%0
~	Lid	%0	100%	%0	%0
	Seal	%0	100%	%0	%0

Stonyfield Farm Master's Project LCI Model Inputs

► WI HW ZO 8 PP

PP 8 oz WH IM (Current System) 1000 lb 8 oz. N Designation P Functional Unit **Container Size** Data Set General

Units/Comp. it's 3.900 0.332 9.100 Weight (g) Č Manufacturer Polytainers Polytainers Clear-Lam Name Seal Seal Component 2 Component 3 Component 1 Designation

weight % Supplier 98.0% Montell 2.0% Spartech 0.0% N/A
Lup Composition faterial we P Vhite Color

(Cup Material I ransport	ransport							
6u	Material			Transport				Packaging	
ıµr	(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate 1	Type	Mat/Package	Pkg. Wt. (kg)
nto.		L.	Rail	%66	100%	0.00% N/A	J/A	0	0
etu	HP (Montell)	425	Truck	1%	100%	0.00% N/A	1/A	0	0
uB	White Color	8	Truck	100%	100%	0.00% N/A	J/A	0	0
W	(Spartech)	5	N/A	%0	%0	0.00%	J/A	0	0
oT		4	N/A	%0	%0	0.00% N/A	1/A	0	0
uc	N/A (N/A)	5	N/A	%0	%0	0.00% N/A	4/A	0	0
bitc			N/A	%0	%0	0.00% N/A	J/A	0	0
onp	N/A (N/A)	D	N/A	%0	%0	0.00% N/A	1/A	0	0
010	Lid Material Transport	ansport							
4 H	Material			Transport				Packaging	
eris	(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate 1	Type	Mat/Package	Pkg. Wt. (kg)
əte	LLDPE		Rail	92.0%	100%	0.00% N/A	4/A	0	0
W)	(Novacor)	061	Truck	8.0%			V/A	0	0
Ļ ۱	White Color	ŝ	Truck	100%	100%	0.00% N/A	V/A	0	0
loi	(Spartech)	00	N/A	%0	%0	0.00% N/A	V/A	0	0
inc		•	N/A	%0	%0	0.00% N/A	V/A	0	0
trit	N/A (N/A)	5	N/A	%0	%0	0.00%	4/A	0	0
eiC	114 (ALLA)	4	N/A	%0	%0	0.00% N/A	V/A	0	0
]	N/A (N/A)	5	N/A	%0	%0	0.00% N/A	4/A	0	0

Material Distance		of Trans.		Efficiency	Loss Rate	Type		Pkg. Wt. (kg)
492 Truck	Truck		100%	100%	0.00% N/A 0.00% N/A	N/A N/A	00	0
	Truck	1	100%	100%	0.00% N/A	N/A	0	0
492 N/A	N/A		%0	%0	0.00% N/A	N/A	0	0
100 Truck	Truck		100%	100%	0.00% N/A	N/A	0	0
	N/A		%0	%0	0.00% N/A	N/A	0	
N/A	N/A		%0	%0	0.00% N/A	N/A	0	
	N/A		%0	%0	0.00% N/A	N/A	0	0
Manufacturer IProcess	Process	_	Scrap Rate	Recycle				
	Injection Moldin		%9	100.0%				
	Injection Moldini		3.76%	10				
Extrusion	Extrusion		2.00%	%0.0				
Distance Mode of Trans. F	ns.	LT I	Fraction	Efficiency	Loss Rate			
E Truck	Truck		100%	100%	0.00%			
N/A	N/A		%0	%0	0.00%			
Eeg Truck	Truck		100%	10	00.0%			
A/N NOC	N/A		%0		%00.0			
1 Truck	Truck		100%	100%	0.00%			
N/N NCOL	N/A		%0	%0	0.00%			
Type Supplier			Dist. to Mfg.	Units/Package Material	Material	Weight (g)	Reuse Rate	Recycle Rate
Box Atlantic	Atlantic	1	5	1500	1500 Corrugated (100	1451		100%
Liner Regency	Regency		9.4	1500	1500 LDPE	110.5858		%0
Paliet Woodbridge	Woodbridge	-	23	45000 Wood	Wood	18144	o	71%
h Wrap	Artic	-	18	45000	45000 LLDPE Film	635		%0
	N/A		0	0	0 N/A	0		%0
	Atlantic		5	1500	Corrugated(100	862	%0	100%
et	Woodbridge		23	72000	Wood	18144	5	2
h Wrap	Artic		18	72000		635		
eve	Regency		9.4	50	LDPE	e S		
	N/A		0	0	N/A	0	%0	%0

	Ð	%0	%0	%0
	Recycle Rate			
Process Scrap	Hate	%00.0	%00.0	%00.0
Engineered	Scrap Hate	%00.0	%00.0	150.00%
	Component	Cup	Lid	Seal
	วิน		Ч	

					Reuse					
				-	Weight	137	18144	331	0	0
	Loss Rate	%00'0	0.00%		Material	12 Corrugated(229	2016 Wood	LLDPE Film	0 N/A	0 N/A
	Efficiency	100%	%0		Units/Package		2016	2016	0	0
	Fraction	100%	%0		Dist. to Mfg.	47.6	10	138.2	0	0
	Mode	Truck	N/A		Supplier	Smurfit-Stone	Pallet Services	Brown	N/A	N/A
Transport	Distance	552	0	Packaging	Type	Box	Pallet	Stretch Wrap	N/A	N/A
(619	u	ote	nŊ	oţ	ЧS	s) e	: .11	si0	

7% 0% 0%

0% 94% 0% 0%

95% 71%

Recycle

23.5%

action Other	%0	%0	%0
raction Paper Fr	%0	%0	%0
Fraction Plastic F	100%	100%	100%
Recycle Rate	%0	%0	%0
Component	Cup	Lid	Seal
	Component Recycle Rate Fraction Plastic Fraction Paper Fraction Other	Recycle Rate Fraction Plastic Fraction Paper Fraction Ot 0% 100% 0%	Recycle Rate Fraction Plastic Fraction Other 0% 100% 0% 0% 100% 0%

Data Set General

Designation Functional Unit Container Size

ო

PP 6 oz CF IM (Seal Only) 1000 lb 6 oz.

Units/Comp. 7.800 0.332 Manufacturer Weight (g) Polytainers Clear-Lam Name Component 2 Lid Component 3 Seal Cup Component 1 Designation

on	weight % Supplier	65.0% Unknown	30.1% Unknown	4.9% Unknown	0.0% N/A
Seal Composition	Material	PE	PET	Other	N/A
	Supplier	0% Novacor	0.0% Spartech	0.0% N/A	0.0% N/A
uo	weight %	Ó	Ó		0
Lid Composition	Material	LLDPE	Cotton Color	N/A	N/A
	Supplier	97.0% Montell		0.0% N/A	0.0% N/A
ion	Iweight %	0			
ICun Composition	Material	ЬР	Cotton Color	N/A	N/A
Ŀ	po.	l Pi	Bİ	leti	вM

Cup Material Transport

Itansport Itansport Distance Mode of Trans. Fraction Efficiency Loss Rat 0 425 Rail 99% 100% 0 0 1/ruck 100% 0 0% 0 0 N/A 0% 0% 0% 0% 0 N/A 0% 0% 0% 0% 1 0 N/A 0% 0% 0% 0 N/A 0% 0% 0% 0% 1 0 N/A 0% 0% 0% 1 1 0 N/A 0% 0% 0% 1 0 N/A 0% 0% 0% 0% 0 0 1 0 0% 0% 0% 1 0 0 0 0% 0% 0% 1 0 0 0 0% 0% 0% 1 0 <	(Cup Material Transpor	Idiispuit						Dockodind	
(Supplier) Distance Mode of Trans. Fraction Efficiency Loss Rat PP (Montell) 425 Truck 19% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 0 N/A N/A N/A N/A 0 N/A 0 0% 0	6				Transport				rackaging	
PP (Montell) 425 Rail 99% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 0% <th></th> <th></th> <th>Distance</th> <th>ns.</th> <th>Fraction</th> <th>Efficiency</th> <th></th> <th>Type</th> <th>Mat/Package</th> <th>Pkg. Wt. (kg)</th>			Distance	ns.	Fraction	Efficiency		Type	Mat/Package	Pkg. Wt. (kg)
PP (Montell) 425 Truck 1% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 0 0% </th <th>nto</th> <td></td> <td></td> <td></td> <td></td> <td>100%</td> <td>%00.0</td> <td>N/A</td> <td>0</td> <td></td>	nto					100%	%00.0	N/A	0	
Cotton Color 90 Truck 100% 100% 100% 0% </th <th>Bîl</th> <td></td> <td>425</td> <td>Truck</td> <td>1%</td> <td>100%</td> <td>%00.0</td> <td>N/A</td> <td>0</td> <td></td>	Bîl		425	Truck	1%	100%	%00.0	N/A	0	
(Spartech) 90 N/A N/A 00% 0	านข	-		Truck	100%		%00.0	0.00% Bag & Pallet	449	20
N/A (N/A) 0 N/A 0%	\$ M		66	N/A	%0	%0	%00.0	N/A	0	
N/A (N/A) 0 N/A 0%	01	<u> </u>		N/A	%0	%0	%00.0	N/A	0	
N/A (N/A) 0 N/A 0%	_ uc		0	N/A	%0	%0	%00.0	N/A	0	
N/A (N/A) 0 N/A 0 N/A 0%				N/A	%0	%0	%00.0	N/A	0	
Lid Material Transport Material Material Transport Transport Material Naterial Distance Mode of Trans. Fraction Efficiency Loss Rat (Supplier) Distance Mode of Trans. Fraction Efficiency Loss Rat (LLDPE 0 Rail 0.0% 0% 0% (Novacor) 0 Truck 0.0% 0% 0% (Spartech) 0 N/A 0% 0% 0% 0% N/A (N/A) 0 N/A 0% 0% 0% 0% 0%	onp		0	N/A	%0	%0	%00.0	N/A	0	
Material Transport (Supplier) Distance Mode of Trans. Fraction Efficiency Loss Rat (LLDPE 0 Rail 0.0% 0% (Novacor) 0 Truck 0.0% 0% Cotton Color 0 Truck 0% 0% (Spartech) 0 N/A 0% 0% N/A (N/A) 0 N/A 0% 0%	01	_	ansport							
(Supplier) Distance Mode of Trans. Fraction Efficiency Loss Rat LLDPE 0 Rail 0.0% 0% 0% (Novacor) 0 Truck 0.0% 0% 0% Cotton Color 0 Truck 0.0% 0% 0% (Spartech) 0 N/A 0% 0% 0% N/A (N/A) 0 N/A 0% 0% 0%	d				Transport				Packaging	
LLDPE 0 Rail 0.0% 0% (Novacor) 0 Truck 0.0% 0% (Novacor) 0 Truck 0.0% 0% Cotton Color 0 N/A 0% 0% (Spartech) 0 N/A 0% 0% N/A (N/A) 0 N/A 0% 0%	ria		Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
(Novacor) 0 Truck 0.0% 0% Cotton Color 0 Truck 0% 0% (Spartech) 0 N/A 0% 0% N/A (N/A) 0 N/A 0% 0% N/A (N/A) 0 N/A 0% 0%				Rail	%0.0		0.00%	N/A	0	
Cotton Color 0 Truck 0% 0% (Spartech) 0 N/A 0% 0% N/A (N/A) 0 N/A 0% 0% N/A (N/A) 0 N/A 0% 0%	M)		0	Truck	0.0%			N/A	0	
(Spartech) 0 N/A 0% 0% 0% N/A (N/A) 0 N/A 0% 0% 0% N/A (N/A) 0 N/A 0% 0% 0%	11	_	•	Truck	%0			0.00% Bag & Pallet	0	
N/A (N/A) 0 N/A 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	uo 		0	N/A	%0			N/A	0	
N/A (N/A) 0 N/A 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	<u>in</u>	1		N/A	%0		%00.0	N/A	0	
N/A (A)(A) (A) (A) (A) (A) (A) (A) (A) (A)	din		0	N/A	%0			N/A	0	
	tei	1		N/A	%0	%0	0.00%	N/A	0	
		(N/A) (N/A)	0	N/A	%0		00:00%	N/A	0	

Scenario C

PP 6 oz CF IM

| Wt. (kg) | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | |

 | | | | |

 | |
 | | | | | ycle Hate | 100% | %0
 | 71% | %0
 | %0
 | %0 | %0 | %0 | 00 |
|----------------|---|---|---|--|--|--|--|--|---|--
--
--
---|--|---|--|---
--
--
---|--|---|---|---|--|---|---|---
--
---|--
---|---|--
---|---|
| Pkg. | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |

 | | | | |

 | |
 | | | | Ī | | %0 | %0
 | 94% | %0
 | %0
 | %0 | %0 | %0 | 1%0 |
| Type | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | | |

 | | | | |

 | |
 | | | | | Weight (g) | 1497 | 110.5858
 | 18144 | 635
 | 0
 | 0 | 0 | 0 | C |
| | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | %00.0 | | |

 | | | | ца
Г | 0.00%

 | 0.00% | 0.00%
 | %00.0 | 0.00% | 0.00% | | | Corrugated(100 | LDPE
 | Wood | LLDPE Film
 | N/A
 | Corrugated(100 | Nood | LLDPE Film | 1 DDC |
| | 100% | %0 | 100% | %0 | 100% | %0 | %0 | %0 | ľ | Hecycle | 100.0%

 | 0.0% | %0.0 | | | 100%

 | %0 | %0
 | %0 | 100% | %0 | | Units/Package | 2130 | 2130
 | 51120 | 51120
 | 0
 | 0 | 0 | 0 | |
| | 100% | %0 | 100% | %0 | 100% | %0 | %0 | %0 | ľ | | 3.76%

 | %00.0 | 2.00% | | | 100%

 | %0 | %0
 | %0 | 100% | %0 | | to Mfg. | 5 | 9.4
 | 23 | 18
 | 0
 | 0 | 0 | 0 | c |
| Mode of Trans. | Truck | N/A | Truck | N/A | Truck | N/A | N/A | N/A | | | Injection Moldin

 | | Extrusion | ľ | S. | Truck

 | N/A | Truck
 | N/A | Truck | N/A | | Supplier | Atlantic | Regency
 | Woodbridge | Artic
 | N/A
 | Atlantic | Woodbridge | Artic | |
| | | | | | | | | | | | Polytainers

 | | Clear-Lam | | |

 | |
 | | | | | Type | Box | Liner
 | Pallet | Stretch Wrap
 | N/A
 | Box | Pallet | Stretch Wrap | |
| (Supplier) | | | PET | (Unknown) | Other | (Unknown) | | N/A (N/A) | | Component | Cup

 | Lid | Seal | Transport | Component | an
C

 | dhO | •
 | | 1000 | Oeal | Packaging | Component | |
 | Cup | ,
 |
 | | | Lid | |
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 0 0 |

	Packaging (Cont.)	ont.)							
(.1	Component	Tvpe	Supplier	Dist. to Mfg.	Units/Package Material	rial	Weight	Reuse Rate	Recycle Rate
uo;		Core Tube	Unknown	17	20800 Paper Board	r Board	635	900	
))		Pallet	Unknown	22	665600 Wood	P	13608	94%	71%
. 2	Seal	Stretch Wran	Unknown	4	665600 LLDP	LLDPE Film	181	%0	
rsi()	Slin Sheet	Unknown	14	665600 Paper Board	r Board	1361	0%	ω
a		Roll Wrap	Unknown	17	20800	LLDPE Film	18.143696	٤ 0%	%0

		Engineered	Process Scrap	
6	Component	Scrap Rate	Rate	Recycle Rate
nill	Cup	%00.0	%00'0	%0
Fi	Lid	%00:0	%00'0	%0
	Seal	150.00%	%00.0	%0

stance	Mode	Fraction	Efficiency	Loss Rate				
552	Truck	100%	100%	%00.0				
	N/A	%0	%0	0.00%				
Packaging								ſ
	Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight	Reuse	Recycle	
	Smurfit-Stone	47.6		12 Corrugated (229		132	0%	95%
	Pallet Services	10		3360 Wood	18144		94%	71%
Wran	Brown	138.2	3360	LLDPE Film	331		%0	7%
	N/A	0		0 N/A		0	0	%0
	N/A	0	0	0 N/A		0	%0	%0

	Fraction Plastic Fraction Paper Fraction Other	%0	%0	%0 %0
23.5%	Fraction Plastic	100%	100%	100%
ated jing Make-up	Recycle Rate	%0	%0	%0
Fraction Incinerated Primary Packaging Make-up	Component	Cup	Lid	Seal
9	04 FI	рι	E	

Data Set General

4

Designation Functional Unit Container Size

PP 8 oz WH IM (Seal Only) 1000 lb 8 oz.

► WI HW ZO 8 PP

-	Designation	Name	Manufacturer	Weight (g)	Units/Comp.	
	Component 1 Cup	Cup	Polytainers	9.100	1	
	Component 2 1	Lid			*-	
	Component 3 Seal		Clear-Lam	0.332	-	
-						

Cup Composition	on		Lid Composition	Ľ		Seal Composition	tion	
Material	weight %	Supplier	Material	weight %	Supplier	Material	weight %	Supplier
ЬР	98.0%	Montell	ILLDPE	%0.0	0.0% Novacor	ΡE	65.0%	65.0% Unknown
White Color	2.0%	2.0% Spartech	White Color	%0.0	0.0% Spartech	PET	30.1%	30.1% Unknown
N/A	0.0%	N/A	N/A	%0.0	0.0% N/A	Other	4.9%	4.9% Unknown
N/A	%0.0	N/A	N/A	%0.0	0.0% N/A	N/A	%0.0	0.0% N/A

Cup Material Transport

Ľ	Transport	Mode of Tra	425 Rail	7 Truck	on Truck	N/A	N/A	N/A	N/A	N/A		Distance Mode of Tra	n Rail	v Truck	0 Truck	N/A	N/A	N/A	N/A	N/A	
		ns. Fraction	ns. Fraction	866	1%	100%	%0	%0	%0	%0	%0	Transport	Trans. Fraction	0.0%	%0.0	%0	%0	%0	%0	%0	%0
		Efficiency	100%	100%		%0	%0	%0	%0	%0		Efficiency	%0	%0	%0	%0	%0	%0	%0	%0	
		y Loss Rate Type	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A			Loss Rate Type	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	
	Packaging	Mat/Package Pkg. Wt. (kg)	0	0	0	0	0	0	0	0	Packaging	Mat/Package Pkg. Wt. (kg)	0	0	0	0	0	0	0	c	

(*	Material			Transport				Packaging	
.tn	(Supplier)	Distance	Mode of Trans.	μĒ	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
ວ			Truck	100%	100%	0.00% N/A	N/A	0	
) L	PE (UNKNOWN)	492	N/A	%0	%0	0.00% N/A	N/A	0](
uo	PET	001	Truck	100%	100%	0.00% N/A	N/A	0	0
nn	(Unknown)	492	N/A	%0	%0	0.00% N/A	N/A	0](
aIJ	Other	007	Truck	100%	100%	0.00% N/A	N/A	0	0
19	(Unknown)	492	N/A	%0	%0		N/A	0	0
a		<	N/A	%0	%0	0.00% N/A	N/A		
	N/A (N/A)	5	N/A	%0	%0	0.00% N/A	N/A	0	0
1	Component	Manufacturer	Process	Scrap Rate	Recycle				
۰6	Cup	Polytainers	Injection Moldin	3.76%	100.0%				
łM	Lid	•		%00.0	%0.0				
	Seal	Clear-Lam	Extrusion	2.00%	%0.0				
		5							
(I ransport						-		
(ա.	Component	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate			
18 ⁻	!	507	Truck	100%	100%	0.00%			
I P		/00	N/A	%0	%0	%00 .0			

-				-					
5	Component	Distance	Mode of Irans.	Fraction	ETTICIENCY	Loss Hale			
	!	507	Truck	100%	100%	0.00%			
	cup	/00	N/A	%0	%0	0.00%			
	P: -	4	Truck	%0	%0	0.00%			
λu		5	N/A	%0	%0	0.00%			
	1.20	1000	Truck	100%	100%	0.00%			
	Veal	nen	N/A	%0	%0	0.00%			
	Packaging								
ပိ	Component	Type	Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight (g)	Reuse Rate	Recycle Rate
		Box	Atlantic	2		1500 Corrugated (100	1451	%0	100%
		Liner	Regency	9.4	1500	1500 LDPE	110.5858	%0	%0
	Cup	Pallet	Woodbridge	23	45000 Wood	Mood	18144	94%	71%
		Stretch Wrap	Artic	18		45000 LLDPE Film	635	%0	%0
		N/A	N/A	0	0	0 N/A	0	%0	%0
		Box	Atlantic	0	0	0 Corrugated (100	0	%0	%0
		Pallet	Woodbridge	0	0	Doo W 0	0	%0	%0
	Lid	Stretch Wrap	Artic	0	0	0 LLDPE Film	0	%0	%0
		Sleeve	Regency	0	0	0 LDPE	0	%0	%0
		N/A	N/A	0	0	ON/A	0	%0	%0

	Φ	%0	71%	%0	85%	%0
	Recycle Rate		7		<u>8</u> 5	
	ecycle					
	Å	%0	94%	%0	0%	%0
	Rate	0	94	0	0	0
	Reuse Rate					
	Re	635	8	11	11	ဖွ
		99	13608	181	1361	18.143696
	Veight					18.
	W					
		Paper Board		Film	soard	Film
	Aaterial	per B	Vood	LLDPE Film	Paper Board	LLDPE Film
			٨			0
	Units/Package	20800	665600	665600	665600	20800
	its/Pa		Ű		<i>a</i>	
	IUn	77	77	11	22	11
	Mfg.	2				
	Dist. to Mfg.					
	Dis					
	plier	Jnknown	Inknown	nknown	nknown	nknown
	Sup	Ъ С	Š	Š	Ъ С	Š
				ap		
		Core Tube		tretch Wr	lip Sheet	Nrap
(t.)	Type	Core	Pallet	Stretc	Slip S	Roll V
caging (Cont.	¥		•	•		
aging	poner			Seal		
Pack	Com			-		
	(.tn	100)) Z	; .t	eiQ	,
L						

					Reuse					
					Weight	137	18144	331	0	0
	Loss Rate	%00'0	%00.0		Material	Corrugated(229	2016 Wood	2016 LLDPE Film	0 N/A	0 N/A
	Efficiency	100%	%0		Units/Package	12 (2016	2016	0	0
	Fraction	100%	%0		Dist. to Mfg.	47.6	10	138.2	0	0
	Mode	Truck	N/A		Supplier	Smurfit-Stone	Pallet Services	Brown	N/A	N/A
Transport	Distance	552	0	Packaging	Type	Box	Pallet	Stretch Wrap	N/A	N/A
	s.e	e W	ote	nე	o j	36	5) {	5.1	eiC]

95% 71% 0%

94% 0% 0%

Recycle

	Fraction Other	%0	%0	%0
	Fraction Plastic Fraction Paper Fraction Other	%0	%0	%0
23.5%	Fraction Plastic	100%	%0	100%
ated jing Make-up	Recycle Rate	%0	%0	%0
Fraction Incinerated Primary Packaging Make-up	Component	Cup	Lid	Seal
əj	o i Li	pu	Ξ	

6 oz Foil Lid

•

DesignationNameManufacturerWeight (g)Units/Comp.Component 1CupPolytainers7.800Component 2LidWinpak0.718Component 3Seal0.718

5 6 oz Foil Lid 1000 lb 6 oz.

> Designation Functional Unit Container Size

General

Data Set

	Supplier	known	known	known	4
ion	weight % Su	0.0% Unknown	0.0% Unknown	0.0% Unknown	0.0% N/A
Seal Composition	Material	PE	PET	Other	N/A
	Supplier	68.4% Unknown	14.1% Unknown	17.5% Unknown	0.0% N/A
on	weight %	68.4	14.19	17.5	0.0
Lid Composition	Material	Aluminum	PE	PE	N/A
	Supplier	97.0% Montell	3.0% Spartech	0.0% N/A	0.0% N/A
on	weight %	97.	С	Ö	0.
Cup Composition	Material	рр	Cotton Color	N/A	N/A
.Ŀ	100	d١	ria	əte	W

	ł
Transpor	
Ē	ł
·	l
<u>a</u>	1
.E	1
Ð	1
5	
~	l
Q	
0	ł

	Packaging	Mat/Package Pkg. Wt. (kg)	0	0	449 20	0	0	0	0	0		Packaging	Mat/Package Pkg. Wt. (kg)	0	0	0	0	0	0	0	
		Fype	0.00% N/A	0.00% N/A	0.00% Bag & Pallet	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A			Fype	0.00% N/A	0.00% N/A	N/N %00.0	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	
		Efficiency Loss Rate	100% 0	100% 0	100% 0	0 %0	0 %0	0 %0	0 %0	0%			Efficiency Loss Rate	100% 0	100% 0	100% 0	0%0	100%	0% 0	0%	
	Transport	Fraction Effi	%66	1%	100%	%0	%0	%0	%0	%0		Transport	Fraction Effi	96.5%	3.5%	100%	%0	100%	%0	%0	
		Mode of Trans.	Rail	Truck	Truck	N/A	N/A	N/A	N/A	N/A			Mode of Trans.	Ship	Truck	Truck	N/A	Truck	N/A	N/A	
ansport		Distance	10.7	425		06	(5		D	ansport		Distance		5344		1281	000	282		_
Up Material Transport	Material	(Supplier)		PP (Montell)	Cotton Color	(Spartech)		(N/A) (N/A)		N/A (N/A)	_id Material Transport	Material	(Supplier)	Aluminum	(Unknown)		PE (Unknown)		PE (Unknown)		

	Seal Material Transport	Transport						
(:	Material			Transport			Packaging	
1uc	(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate Type	Mat/Package	Pkg. Wt. (kg)
) 	Č		Truck	%0	%0	0.00% N/A	0	0
1		0	N/A	%0	%0	0.00% N/A	0	0
uo	PET	c	Truck	%0	%0		0	0
ļţn	(Unknown)	>	N/A	%0	%0	0.00% N/A	0	0
rip	Other	4	Truck	%0	%0		0	0
jsi	(Unknown)	>	N/A	%0	%0	0.00% N/A	0	0
D			N/A	%0	%0	0.00% N/A	0	0
	(N/A) (N/A)	5	N/A	%0			0	0
	Component	Manufacturer	Process	Scrap Rate	Recycle			
·6	Cup	Polytainers	Injection Moldin	3.76%	100.0%			
IM		Winpak	LDPE Coating	15.70%	68.4%			
	Seal			%00.0	%0.0			
	ŀ							
(I ransport							
(ա.	Component	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate		
187	<u>د</u> ن	607	Truck	100%	100%	0.00%		
P	dho	100	N/A	%0	%0	0.00%		
əit	7	044	Truck	100%	100%	0.00%		
λι		4/0	N/A	%0	%0	0.00%		

) Reuse Rate Recycle Rate	1497 0%	10.5858 0%	18144 94%	635 0%	0 0%	92 0%	687 0%	13000 94%	227 0%	%0 0
	.0	.0		Weight (g)		110.	-			þ	þ	-		
0.00%	00.0%	%00:0		Material	2130 Corrugated(100	2130 LDPE	51120 Wood	51120 LLDPE Film	0 N/A	2000 Corrugated (100	24000 Corrugated (100	Wood	LLDPE Film	0 N/A
0%	%0	%0		Units/Package Material	2130	2130	51120		0	2000	24000	268000 Wood	1000892	0
0%	%0	%0		Dist. to Mfg.	5	9.4	23	18	0	15	15	16.8	12.4	0
N/A	Truck	N/A		Supplier	Atlantic	Regency	W oodbridge	Artic	N/A	Unknown	Unknown	Unknown	Unknown	N/A
	-	D		Type	Box	Liner	Pallet	Stretch Wrap	N/A	Box	Box	Pallet	Stretch Wrap	N/A
	Joco	Oedi	Packaging	Component			Cup					Lid		

Component Type Component Type Pallet Stretch		Supplier Unknown Unknown Unknown Unknown	Dist. to Mfg.	Units/Packag	je Material 0 Paper Board 0 Wood 0 LLDPE Film 0 Paper Board	Weight	00000000000000000000000000000000000000	Recycle Rate 0% 00 0% 00 0% 00 0% 00 0% 00 0%
3	/rap	Unknown	<u> </u>	<u> </u>	0 LLDPE Film		0	ŏ

				11 11 11 11 11 11 11 11 11 11 11 11 11
		Engineered	Process Scrap	
61	Component	Scrap Rate	Rate	Recycle Rate
nill	Cup	%00'0	%00'0	%0
13	Lid	%00'0	%00'0	0%
	Seal	%00'0	%00:0	%0

				e Recycle	0% 05%	94% 71%	%0	0	% U
				Veight Reuse	132	18144	331	0	C
Loss Rate		0.00%		Material	12 Corrugated(229	3360 Wood	LLDPE Film	0 N/A	
Efficiency	100%	%0		Units/Package		3360	3360 1	0	C
Fraction	100%	%0		Dist. to Mfg.	47.6	10	138.2	0	C
Mode	Truck	N/A		Supplier	Smurfit-Stone	Pallet Services	Brown	N/A	NI/A
Distance	552	0	Packaging	Type	Box	Pallet	Stretch Wrap	N/A	N/N

Fraction Incinerated	Primary Packaging Ma
	ə,

23.5%

Component Recycle Rate Cup 0%

General

Data Set Designation Functional Unit Container Size

6 8 oz Foil Lid 1000 lb 8 oz.

▶ 8 oz Foil Lid

(g) Units/Comp.	9.100	0.718	-	
Manufacturer Weight (g)	Polytainers	Ninpak		
Name Ma	Cup Pc		Seal	
Designation	Component 1	Component 2	Component 3 Seal	

	Γ				
	Supplier	0.0% Unknown	0.0% Unknown	0.0% Unknown	0.0% N/A
tion	weight %	0.0%	0.0%	0.0%	0.0%
Seal Composition	Material	PE	PET	Other	N/A
	Supplier	68.4% Unknown	4.1% Unknown	17.5% Unknown	0.0% N/A
u	weight %	68.4%	14.1%	17.5%	%0.0
Lid Composition	Material	Aluminum	PE	PE	N/A
	Supplier	Montell	Spartech	N/A	N/A
u	weight %	98.0%	2.0% Sr	0.0%	%0.0
Cup Composition	Material	РР	White Color	N/A	N/A
)16l	

Cup Material Transport

Image: Constraint of the state of		Motoriol			Transment					
(Supplier) Distance Mode of Irans. Fraction Efficiency Loss Hate Type Mat/Package PP (Monteli) 425 Raii 99% 100% 0.00% N/A 0 White Color 90 Truck 10% 00% 0.00% N/A 0 White Color 90 N/A 0% 0.00% N/A 0 <th></th> <th>INIALETIAL</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>rackaging</th> <th></th>		INIALETIAL							rackaging	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	_	(Supplier)	Distance	e of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		PP (Montell)	ADE	Rail	%66	100%	%00:0	N/A	0	0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			16.0	Truck	1%	100%	0.00%	N/A	0	0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	_	White Color	8	Truck	100%		0.00%	N/A		0
$ \left(\begin{array}{c c c c c c c c c c c c c c c c c c c $		(Spartech)	ß	N/A	%0	%0	0.00%	N/A		0
0 N/A 0% 0.00% N/A 0 0 N/A 0% 0.00% N/A 0 ansport Transport 0 0.00% N/A 0 ansport Transport Transport Packaging 0 ansport Transport Transport Packaging 0 5344 Ship 96.5% 100% N/A 0 5344 Truck 3.5% 100% N/A 0 0 1821 Ituck 100% 0.00% N/A 0 0 0 1821 Ituck 100% 0.00% N/A 0 0 0 1821 N/A 0.00% N/A 0		N/A (N/A)	c	N/A	%0	%0	0.00%	N/A		0
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $			0	N/A	%0	%0	0.00%	N/A	0	0
V N/A 0% 0.00% N/A 0 ansport Transport Transport Packaging Distance Mode of Trans. Fraction Efficiency Loss Rate Type Mat/Package 5344 Truck 3.5% 100% 0.00% N/A 0 1821 Truck 3.5% 100% 0.00% N/A 0 0 1821 Truck 100% 0.00% N/A 0			G	N/A	%0	%0	0.00%	N/A	0	0
Transport Transport Transport Packaging Distance Mode of Trans. Fraction Efficiency Loss Rate Type Mat/Package 5344 Ship 96.5% 100% 0.00% N/A 0 <th></th> <td></td> <td>2</td> <td>N/A</td> <td>%0</td> <td>%0</td> <td>0.00%</td> <td>N/A</td> <td>0</td> <td>0</td>			2	N/A	%0	%0	0.00%	N/A	0	0
Transport Transport Packaging Distance Mode of Trans. Fraction Efficiency Loss Rate Type Mat/Package 5344 Ship 96.5% 100% 0.00% N/A 0 0 5344 Truck 3.5% 100% 0.00% N/A 0	_	Lid Material Tra	ansport							
Distance Mode of Trans. Fraction Efficiency Loss Rate Type Mat/Package 5344 Ship 96.5% 100% 0.00% N/A 0 0 5344 Truck 3.5% 100% 0.00% N/A 0 0 0 1821 Truck 100% 0.00% N/A 0	-	Material			Transport				Packaging	
5344 Ship 96.5% 100% 0.00% N/A 0 Truck 3.5% 100% 0.00% N/A 0 1821 Truck 100% 0.00% N/A 0 1821 Truck 100% 0.00% N/A 0 298 Truck 100% 100% 0.00% 0 0 0 298 N/A 0% 0.00% N/A 0 0 0 N/A 0% 0.00% N/A 0 0 0 0 0 N/A 0% 0.00% N/A 0		(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
0.004 Truck 3.5% 100% 0.00% N/A 1821 Truck 100% 0.00% N/A 0.00% N/A 298 N/A 0% 0.00% N/A 0.00% N/A 0 298 N/A 0% 0.00% N/A 0 0 N/A 0% 0.00% N/A 0 0.00% N/A 0 N/A 0% 0.00% N/A 0.00% 0.0%	_	Aluminum	E 344	Ship	36.5 %	100%	%00 .0	N/A	0	
1821 Truck 100% 100% 0.00% N/A 100% 0.00% N/A 100% 0.00% N/A 100%		(Unknown)	++	Truck	3.5%	100%	%00 .0	N/A	0	0
102 I N/A 0% 0.00% N/A 298 Truck 100% 0.00% N/A 0 N/A 0% 0.00% N/A	_	DE (Linknoum)	1001	Truck	100%	100%	0.00%	N/A	0	0
298 Truck 100% 100% 0.00% N/A 0 N/A 0% 0.00% N/A 0 0 N/A 0% 0.00% N/A 0 0 N/A 0% 0.00% N/A 0	_		1 201	N/A	%0	%0	0.00%	N/A	0	0
Contraction Display="block">Display="block Display="block">Display="block">Display="block">Display="block Display="block">Display="block">Display="block">Display="block Display="block">Display="block">Display="block"/Display="Disp	-	PE (i Inknown)	000	Truck	100%	100%	0.00%	N/A	0	0
0 N/A 0% 0% 0.00% N/A 0.00% N/A 0.00% N/A 0.00% N/A			067	N/A	%0	%0	0.00%	N/A	0	0
VIA 0% 0% 0.00% N/A 0.00%		N/A (N/A)	C	N/A	%0	%0	0.00%	N/A	0	0
			>	N/A	%0	%0	%00.0	N/A	0	0

	Seal Material Transport	Fransport							
(Material			Transport				Packaging	
Juo	(Supplier)	Distance	Mode of Trans.	ns. Fraction	Efficiency	Loss Rate Ty	Type	Mat/Package	Pkg. Wt. (kg)
<u>-</u>		•	Truck	%0	%0	0.00% N/A	A		0
۔ ۱۱	PE (Unknown)	D	N/A	%0	%0	0.00% N/A	A	0	0
	PET	•	Truck	%0	%0	0.00% N/A	A)	0 0
bitu	(Unknown)	5	N/A	%0	%0	V/N %00.0	A)	0 0
	Other		Truck	%0	%0	0.00% N/A	A)	0 0
	(Unknown)	D	N/A	%0	%0	0.00% N/A	A)	0 0
		•	N/A	%0	%0	0.00% N/A	A)	0 0
	(N/A (N/A)	0	N/A	%0	%0	0.00% N/A	A		0
1									
1	Component	Manufacturer	Process	Scrap Rate	Recycle				
•6	Cup	Polytainers	Injection Moldin	3.76%	100.0%				
łM	Lid	Winpak	LDPE Coating	15.70%	68.4%				
	Soal			%00°0	0.0%				

Qea	Transport	Component Distance		Cup				Seal	Packaging	Component Type	Box	Liner	Cup Pallet		N/A	Box	Box	Lid Pallet		N/A
						4/0 N	-	D D		S	₹		>	Stretch Wrap A	Γ				Stretch Wrap	Γ
		Mode of Trans.	Truck	N/A	Truck	N/A	Truck	N/A		Supplier	Atlantic	Regency	Woodbridge	Artic	N/A	Unknown	Unknown	Unknown	Unknown	N/A
		Fraction	100%	%0	100%	%0	%0	%0		Dist. to Mfg.	9	9.4	23	18	0	15	15	16.8	12.4	0
		Efficiency	100%	%0	100%	%0	%0	%0		Units/Package Material					0			768000 Wood		
		Loss Rate	0.00%	%00.0	0.00%	%00.0	0.00%	%00.0		Material	1500 Corrugated (100	1500 LDPE	45000 Wood	45000 LLDPE Film	0 N/A	2000 Corrugated(100	24000 Corrugated (100	Wood	768000 LLDPE Film	0 N/A
										Weight (g)	1451	110.5858	18144	635	0	92	687	13000	227	0
										Reuse Rate	0%	0%	1 94%	5 0%	0%0	0%	/ 0%	94%	% 0	%0
										Recycle Rate	100%	%0	71%	0%	0%	100%	100%	71%	0%	%0

	Rate	%0	%0	%0	%0	%0	
	Recycle Rate						
	Reuse Rate	0%0	0%0	0%0	0%0	0 0%	
	Weight	0)))		
	Material	Paper Board	Wood	LLDPE Film	0 Paper Board	0 LLDPE Film	
	Units/Package	0	0	0	0	0	
	Dist. to Mfg.	0	0	0	0	0	
	Supplier	Unknown	Unknown	Unknown	Unknown	Unknown	
nt.)	Type	Core Tube	Pallet	Stretch Wrap	Slip Sheet	Roll Wrap	
Packaging (Cont.)	Component			Seal			
	(.tr	10());	t. 2	siC]	

		Engineered	Process Scrap	
61	Component	Scrap Rate	Rate	Recycle Rate
llir	Cup	%00'0	%00:0	0%0
17	Lid	%00'0	%00:0	%0
	Seal	%00'0	0.00%	%0

Distance	Mode	Fraction	Efficiency	Loss Rate				
552	Truck	100%	100%	0.00%				
0	N/A	%0	%0	0.00%				
Packaging								
Type	Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight	Reuse	Recycle	
H Box	Smurfit-Stone	47.6		12 Corrugated (229	137		%0	95%
Pallet	Pallet Services	10	2016	2016 Wood	18144		94%	71%
Stretch Wrap	Brown	138.2		LLDPE Film	331		%0	7%
N/A	N/A	0	0	0 N/A	0		0	%0
N/A	N/A	0	0	0 N/A	0		%0	%0

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	Fraction Other	%0	68%	%0
	Fraction Paper	%0	%0	%0
	Fraction Plastic Fraction Paper Fraction Other	100%	32%	%0
hing wave-up	Recycle Rate	%0	%0	%0
FIIIIALY FACKAULIY INANG-UP	Component	Cup	Lid	Seal
əļ	ill îo	pu	Ξ	

6 oz Paper Lid

Units/Comp. 0.753 7.800 Manufacturer Weight (g) Apple Converti Polytainers Name Component 1 Cup Component 2 Lid Component 3 Seal Designation

6 oz Paper Lid 1000 lb 6 oz.

Data Set Designation Functional Unit Container Size

General

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Compositi	un No	-	Lid Composition	,	-	Seal Composition		
ทลเ	weight %	Supplier	Material	weight %	Supplier	Material	weignt %	supplier
	%0.79	Monteli	Acrylic	1.5%	1.5% Unknown	PE	%0.0	0.0% Unknown
on Color	3.0% Sp	Spartech	Paper	63.3%	63.3% Unknown	PET	0.0%	0.0% Unknown
	%0.0	N/A	LDPE	35.2%	35.2% Unknown	Other	%0'0	0.0% Unknown
	%0.0	N/A	N/A	V/N %0'0	N/A	N/A	V/N %0:0	N/A

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Jup Material Transport Material			Transport				Packaging	
(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type		Pkg. Wt. (kg)
110400	105	Rail	%66	100%	0.00% N/A	N/A	0	0
	624	Truck	1%	100%	0.00% N/A	N/A	0	0
Cotton Color	ĉ	Truck	100%	100%	%00'0	0.00% Bag & Pallet	449	20
(Spartech)	ß	N/A	%0	%0	0.00% N/A	N/A	0	0
	~	N/A	%0	%0	0.00% N/A	N/A	0	0
	5	N/A	%0	%0	0.00% N/A	N/A	0	0
(41/4)	-	N/A	%0	%0	0.00% N/A	N/A	0	0
	D	N/A	%0	%0	0.00% N/A	N/A	0	0
-id Material Transport	ansport							
Material			Transport				Packaging	
(Supplier)	Distance	Mode of Trans.		Efficiency	Loss Rate	Type		Pkg. Wt. (kg)
Acrylic	000	Truck	100.0%	100%	0.00% N/A	N/A	0	0
(Unknown)	802	N/A	%0.0	%0	0.00% N/A	N/A	0	0
Paper	AAEC	Truck	10%	100%	0.00% N/A	N/A	0	0
Unknown)	00000	Ship	%06	100%	0.00% N/A	N/A	0	0
LDPE	1160	Truck	10%	100%	0.00% N/A	N/A	0	0
(Unknown)	004450	Ship	%06	100%	0.00% N/A	N/A	0	0
	-	N/A	%0	%0	0.00% N/A	N/A	0	0
	5	N/A	%0	%0	0.00% N/A	N/A	0	0

	Rate	%0	%0	%0	%0	%0
	Recycle Rate					
	Reuse Rate	%0	%0	%0	%0	%0
	Weight	0	0	0	0	0
	Material	Paper Board	Mood	LLDPE Film	Paper Board	LLDPE Film
	Units/Package	0	0	0	0	0
	Dist. to Mfg.	0	0	0	0	0
	Supplier	Unknown	Unknown	Unknown	Unknown	Unknown
int.)	Type	Core Tube	Pallet	Stretch Wrap	Slip Sheet	Roll Wrap
Packaging (Cont	Component	-		Seal		
	(.11	uo;	; (כ	r. 2	si(נ

		Engineered	Process Scrap	
6	Component	Scrap Rate	Rate	Recycle Rate
uill	Cup	%00'0	%00'0	%0
Ŀ	Lid	%00'0	%00'0	%0
	Seal	0.00%	%00:0	%0

				Recycle	0% 95%	94% 71%	0% 7%	0 0%	0%0
				Reuse					
				Weight	132	18144	331	0	0
Loss Rate		0.00%		Material	12 Corrugated (229	3360 Wood	LLDPE Film	0 N/A	0 N/A
Efficiency	100%	%0		Units/Package	12	3360	3360 L	0	0
Fraction	100%	%0		Dist. to Mfg.	47.6	10	138.2	0	C
Mode	Truck	N/A		Supplier	Smurfit-Stone	Pallet Services	Brown	N/A	N/A
Distance	552	0	Packaging	Type	Box	Pallet	Stretch Wrap	N/A	N/A

I	e	%0	%0	%0
	Fraction Othe			
	Fraction Paper	%0	%£9	%0
23.5%	Fraction Plastic Fraction Paper Fraction Other	100%	37%	%0
rated jing Make-up	Recycle Rate	%0	%0	%0
Fraction Incinerated Primary Packaging Make-up	Component	Cup	Lid	Seal
ə,	아디	pu	E	

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8 oz Paper Lid

Units/Comp. 9.100 0.753 Manufacturer Weight (g) Polytainers Apple Converti Name Cup Seal Component 1 (Component 2 1 Component 3 5 Designation

8 8 oz Paper Lid 1000 lb 8 oz.

Data Set Designation Functional Unit Container Size

General

Seal Composition	Supplier Material weight % Supplier	nown PE 0.0% Unknown	nown PET 0.0%]Unknown	nown Other 0.0% Unknown	N/A 0.0% N/A
Lid Composition	Material weight % S	Acrytic 1.5% Unknown	Paper 63.3% Unknown	LDPE 35.2% Unknown	A 0.0% N/A
	weight % Supplier M	98.0% Montell Ac	2.0% Spartech Pa	0.0% N/A	0.0% N/A N/
- Cup Composition	Q Material V	PP	White Color	ate N/A	M/A

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	Transport	Mode of Trans. Fraction Efficiency Loss Rate Type [Mat/Package Pkg. Wt. (kg)	Rail 99% 100% 0.00% N/A 0	Truck 1% 100% 0.00% N/A 0	Truck 100% 100% 0.00% N/A 0	N/A 0% 0.00% N/A 0	N/A 0% 0.00% N/A 0	N/A 0% 0.00% N/A 0	NA [N/A [] 0% 0.00% N/A [] 0]	N/A 0% 0.00% N/A 0 0		Transport Packaging	Mode of Trans. Fraction Efficiency Loss Rate Type Mat/Package Pkg. Wt. (kg)	Truck 100.0% 100% 0.00% N/A 0 0.00%	N/A 0.0% 0% 0.00% N/A 0 0	Truck 10% 100% 0.00% N/A 0 0.00	Ship 90% 100%	Truck 10% 100% 0.00% N/A 0]	Ship 90% 100% 0.00% N/A 0	
anspor		Distance	A DE			ß	Z		Z	Z	Insport		Distance	1 000				1 166		N
Cup Material Iransport	Material	(Supplier)	(Natadi)		White Color	(Spartech)	NI/A /NI/A)				Lid Material Transport	Material	(Supplier)	Acrylic	(Unknown)	Paper	(Unknown)	LDPE	(Unknown)	

Scenario H

(Material			Transport				Packaging	
1u	(Supplier)	Distance	Mode of Trans.	ns. Fraction	Efficiency	Loss Rate T	Type	Mat/Package	Pkg. Wt. (kg)
07		•	Truck	%0	%0	0.00% N/A	A\	0	
) [PE (Unknown)	0	N/A	%0	%0		/A	0	
	PET		Truck	%0	%0	0.00% N/A	/A	0	
h	(Unknown)	0	N/A	%0	%0	0.00% N/A	٧A	0	
	Other		Truck	%0	%0	0.00% N/A	V/A	0	
ne	(Unknown)	0	N/A	%0	%0		VA	0	
			N/A	%0	%0		VA	0	
	(N/A) (N/A)	0	N/A	%0	%0	0.00% N/A	V/A	0	
1									
	Component	Manufacturer	Process	Scrap Rate	Recycle				
۰ĥ	Cup	Polytainers	Injection Moldin	3.76%	100.0%				
ţΜ	Lid	Apple Convertin LDPE Coatin	ILDPE Coating	20.00%	100.0%				
	Seal			%00'0	%0.0				

									Recycle Rate	100%	%0	71%	%0	%0	100%	100%	71%	%0	%0
										%0	%0	94%	%0	%0	%0	%0	94%	%0	%0
									Reuse Rate		~	+	9	0	0	2	1	5	
									Weight (g)	1451	110.5858	18144	635	0	20	325	18144	635	
	Loss Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		Material	1500 Corrugated (100	1500 LDPE	Nood	45000 LLDPE Film	0 N/A	1350 Paper Board	21600 Corrugated(100	Nood	864000 LLDPE Film	0 N/A
	Efficiency	100%	%0	100%	%0	%0	%0		Units/Package Material	1500	1500	45000 Wood	45000	0	1350	21600	864000 W ood	864000	0
	Fraction	100%	%0	100%	%0	%0	%0		Dist. to Mfg.	2	9.4	23	18	0	55	55	10	17	0
	Mode of Trans.	Truck	N/A	Truck	N/A	Truck	N/A		Supplier	Atlantic	Regency	Woodbridge	Artic	N/A	Unknown	Unknown	Unknown	Unknown	N/A
	Distance	L L	/90	LOO	C87	c	D		Type	Box	Liner	Pallet	Stretch Wrap	N/A	Box	Box	Pallet	Stretch Wrap	N/A
Transport	Component		Cup	-	LIG		Seal	Packaging	Component			Cup					Lid		
	(ա	18 ⁻	I P	l9i1	λu	oté	5 0			joe	ŋn	ue	W)	2 L	ioi;	inc	trit	si(]

	Recycle Rate	%0	%0	%0	%0	%0	
	Reuse Rate Re	%0	%0	%0	%0	%0	
	Weight	0	0	0	0	0	
	Material	0 Paper Board	poo M (0 LLDPE Film	0 Paper Board	ILLDPE Film	
	Units/Package I	0	0	0	0	C	
	Dist. to Mfg.	0	0	0	0	0	
	Supplier	Unknown	Unknown	Unknown	Unknown	Unknown	
nt.)	Type	Core Tube	Pallet	Stretch Wrap	Slip Sheet	Roll Wrap	
Packaging (Cont.)	Component			Seal			
	(. 1n	00	5 ((; .1	eiQ		

		Engineered	Process Scrap	
6ι	Component	Scrap Rate	Rate	Recycle Rate
1111	Cup	%00.0	%00.0	%0
FI	Lid	%00'0	%00:0	%0
	Seal	%00.0	%00.0	%0

	Mode	Eraction	Efficiency	l oce Bate			
	Truck	100%	100%				
	N/A	%0	%0	00.00%			
Packaging							
	Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight	Reuse	Recycle
	Smurfit-Stone	47.6		12 Corrugated (229	137	%0	%96 %
	Pallet Services	10		2016 Wood	18144	94%	% 71%
/rap	Brown	138.2		2016 LLDPE Film	331	%0	%/ 2%
	N/A	0	0	0 N/A	0		%0 0
	N/A	0	0	N/A	0	%0	%0 %

Primary Packaging Make-up

23.5%

action Other	%0	%0	%0
Fraction Plastic Fraction Paper Fraction Other	%0	63%	%0
Fraction Plastic F	100%	37%	%0
Recycle Rate	%0	%0	%0
Component	Cup	Lid	Seal

6 oz. Dist. 3 Cd 🕈

3.900 7.800 0.332 Weight (g) Manufacturer Polytainers Polytainers Clear-Lam Name Lid Dup Seal 6 oz. Dist. 3 Corr. 30% Reduction Component 1 t 1000 lb Component 2 b 6 oz. Designation ÷ Designation 6 Functional Unit Container Size Data Set

General

Units/Comp.

	olier	nwor	uwor	uwou	
	Supplier	65.0% Unknown	30.1% Unknown	4.9% Unknown	0.0% N/A
ion	weight %	9	ñ		
Seal Composition	Material	PE	PET	Other	N/A
	Supplier	97.0% Novacor	3.0% Spartech	0.0% N/A	0.0% N/A
u	weight %	%0.79	3.0%	0.0%	0.0%
Lid Composition	Material	ILLDPE	Cotton Color	N/A	N/A
	Supplier	97.0% Montell	3.0% Spartech	0% N/A	0.0% N/A
ion	weight %	97.0		0	0.0
Cup Compositi	Material	РР	Cotton Color	N/A	N/A
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_	Material			Transport				Packaging	
	(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate 7	Type	Mat/Package	Pkg. Wt. (kg)
		LO T	Rail	%66	100%	0.00% N/A	4/A	0	
	PP (Montell)	425	Truck	1%	100%	0.00% N/A	4/A	0	
	Cotton Color		Truck	100%	100%	0.00%	0.00% Bag & Pallet	449	20
	(Spartech)	3	N/A	%0	%0	0.00% N/A	4/A	0	
		(N/A	%0	%0	0.00% N/A	4/A	0	
	N/A (N/A)	Ð	N/A	%0	%0	0.00% N/A	V/A	0	
		•	N/A	%0	%0	0.00% N/A	4/A	0	
	(N/A) (N/A)	5	N/A	%0	%0	0.00% N/A	4/A	0	
	Lid Material Transport	ansport							
_	Material			Transport				Packaging	
	(Supplier)	Distance	Mode of Trans.		Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
_	LLDPE		Rail	92.0%	100%	0.00% N/A	4/A	0	
	(Novacor)	061	Truck	8.0%	%0	0.00% N/A	4/A	0	
	Cotton Color		Truck	100%	100%		0.00% Bag & Pallet	449	20
	(Spartech)	5	N/A	%0	%0	0.00% N/A	V/A	0	
			N/A	%0	%0	0.00% N/A	V/A	0	
	N/A (N/A)	0	N/A	%0	%0	0.00% N/A	V/A	0	
			N/A	%0	%0	0.00% N/A	V/A	0	
	N/A (N/A)	>	N/A	%0	%0	0.00% N/A	A/A	0	

Scenario I

,≃L	Seal Material Transport		Transmet				Doolooding	
Ï								
nis	Uistance	Mode of Irans.	Fraction	Efficiency	Loss Ha	I ype	Mat/Package	Pkg. Wt. (kg)
	001	Truck	100%	100%	%00.0	N/A	0	0
	436	N/A	%0	%0	%00'0	N/A	0	0
	ççı	Truck	100%	100%	%00'0	N/A	0	0
	432	N/A	%0		V/N %00'0	N/A	0	0
	COV	Truck	100%	100%	V/N %00.0	N/A	0	0
	436	N/A	%0	%0	V/N %00.0	N/A	0	0
	c	N/A	%0	%0		N/A	0	0
	>	N/A	%0	%0	0.00% N/A	N/A	0	0
Σ	Manufacturer	Process	Scrap Rate	Recvcle				
ĕ	Polytainers	Moldin	3.76%	100.0%				
۵	Polytainers			100.0%				
0	Clear-Lam	Extrusion	2.00%	%0.0				
	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate			
	587	Truck	100%	10				
	100	N/A	%0	%0	%00.0			
	587	Truck	100%	10				
		N/A	%0					
	1050	Truck	100%	100%	0.00%			
	0001	N/A	%0	%0	0.00%			
L	Type	Supplier	Dist. to Mfg.	Units/Package	Material	Weight (g)	Reuse Rate	Recycle Rate
1	Box	Atlantic	5	2130	Corrugated(100	1497	%0	100%
	Liner	Regency	9.4	2130	ЭДОЛ	110.5858	%0	%0
	Pallet	Woodbridge	23	51120 Wood	Mood	18144	64%	71%
0	Stretch Wrap	Artic	18		51120 LLDPE Film	635	%0	%0
2	N/A	N/A	0	0	0 N/A	0	%0	%0
ш	Box	Atlantic	5	1500	1500 Corrugated (100	862	%0	100%
<u>α</u>	Pallet	W oodbridge	23		Nood	18144	94%	71%
<u>က</u>	Stretch Wrap	Artic	18		72000 LLDPE Film	635		%0
တ	Sleeve	Regency	9.4		50 LDPE	e		%0
2	I/A	N/A	0		0 N/A	0	%0	%0

	Reuse Rate Recycle Rate	0%	94% 71%	0%	0% 85%	%0 %0
	Weight	635	13608	181	1361	18.143696
	Units/Package Material	20800 Paper Board	665600 Wood	665600 LLDPE Film	665600 Paper Board	20800 LLDPE Film
	Dist. to Mfg.	2	22	22	22	77
	Supplier	Unknown	Unknown	Unknown	Unknown	Unknown
int.)	Type	Core Tube	Pallet	Stretch Wrap	Slip Sheet	Roll Wrap
Packaging (Cont.)	Component			Seal		
	(.h	uo;) i	r. 2	si(ב

mponent Scrap Rate Rate I 0.00% 0.00% 0.00% 0.00% 150.00% 0.00% 0.00% 0.00%			Engineered	Process Scrap	
Cup 0.00% Lid 0.00% Seal 150.00%	6	Component	Scrap Rate	Rate	Recycle Rate
Lid 0.00%	uill	Cup	%00'0		0%
150.00%	Fi	Lid	%00'0	-	%0
		Seal	150.00%	0.00%	%0

Distance	Mode	Fraction	Efficiency	Loss Rate						
552	Truck	100%	100%							
0	N/A	%0	%0	0.00%						
Packaging										
Type	Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight	Ľ	Reuse	<u>R</u>	Recycle	
Box	Smurfit-Stone	47.6		12 Corrugated (229		92)		%0		95%
Pallet	Pallet Services	10		3360 Wood	-	18144		94%		71%
Stretch Wrap	Brown	138.2		3360 LLDPE Film		331		%0		7%
N/A	N/A	0		0 N/A		0		0		%0
N/A	N/A	0		0 N/A		0		%0		%0

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23.5%

ComponentRecycle RateFraction PlasticFraction PaperFraction OtherCup0%100%0%0%Lid0%100%0%0%Seal0%100%0%0%	ſ	<u> </u>	0	<u>`</u> 0	<u>`</u>
mponent Recycle Rate 0%		Fraction Othe	%0	%0	%0
mponent Recycle Rate 0%		Fraction Paper			
mponent Recycle Rate 0%		Fraction Plastic		100%	100%
Component Cup Lid Seal	JILIN INIANO-UP	Recycle Rate	%0	%0	%0
	FILLIAL & CAR	Component	Cup	Lid	Seal

8 oz. Dist. 3 Cd 🕈

Designatio	Componen	Componen	Componen
12	8 oz. Dist. 3 Corr. 30% Reduction Componen	1000 lb	8 oz.
Data Set	Designation 8 oz.	Functional Unit	Container Size
	ere.	uəi	ອ

	Designation	Name	Manufacturer	Weight (g)	Units/Comp.
Reduction	% Reduction Component 1	Cup	Polytainers	9.100	1
	Component 2	Lid	Polytainers	3.900	
	Component 3 Seal		Clear-Lam	0.332	L
-					
	Lid Composition	ç		Seal Composition	on

	Supplier	65.0% Unknown	30.1% Unknown	4.9% Unknown	٨
	ທີ	0% Ur	1% Ur	9% Ur	0.0% N/A
tion	weight %	65.(30.	4.9	0.0
Seal Composition	Material	PE	PET	Other	N/A
	r	r	ĸ		
	Supplier	98.0% Novacor	2.0% Spartech	A/N	N/A
		98.0%	2.0%	0.0% N/A	0.0% N/A
L	weight %				
Lid Composition			Color		
Lid Cor	Material	TLDPE	White Color	N/A	N/A
			_		
	Supplier	Aontell	2.0% Spartect	4/A	4/A
	S	98.0% N	2.0% S	0.0% N	0.0% N
on	weight %	סֿ			
up Compositio	31		Color		
Cup C	Materia	ЬP	White Color	N/A	N/A
. b	01	4 II	BİTE	əte	W

Transport	
Aaterial Tra	-toulot
up M	

Material (Supplier) Distan (Supplier) White Color (Spartech) N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) Distan LLDPE (Supplier) LLDPE (Novacor) White Color (Spartech)	Distance 425 90 90 0 190 190	Mode of Trans. Rail Truck N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	Transport Fraction 99% 100% 0% 0% 0% 0% 0% 1ansport 100% 8.0% 0% 100% 0%	Efficiency 100% 100% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0% 0%	Loss Rate Type 0.00% N/A 0.00% N/A	Packaging Mat/Package 0	Pkg. Wt. (kg) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
N/A (N/A)	0	N/A N/A	%0 %0	%0 %0	0.00% N/A 0.00% N/A	00	0
(N/A (N/A)	0	N/A N/A	%0 %0	%0 %0	0.00% N/A 0.00% N/A	00	0

ſ	Ī	(<u>6</u>	0	이	0	0	0	0	0	0	
	Packaging	Mat/Package Pkg. Wt. (kg)	0	0	0	0	0	0	0	0	
		Loss Rate Type	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	0.00% N/A	
		Efficiency Loss	100%	%0	100%	%0	100%	%0	%0	%0	Recycle
	Transport		100%	%0	100%	%0	100%	%0	%0	%0	Scran Rate
		Mode of Trans. Fraction	Truck	N/A	Truck	N/A	Truck	N/A	N/A	N/A	Process
ransport		Distance		492		492		492		0	Manufacturer
Seal Material Transport	Material	(Supplier)		PE (Unknown)	PET	(Linknown)	Other	(I Inknown)	((N/A) (N/A)	Component
	(יז u	იე) L	uc	oitu	ıdi	nje	D!		

	Component	Manufacturer	Process	Scrap Rate	Recycle
۰ɓ	Cup	Polytainers	Injection Moldin	3.76%	100.0%
łM	Lid	Polytainers	Injection Moldin	3.76%	100.0%
	Seal	Clear-Lam	Extrusion	2.00%	0.0%

									Recycle Rate	100%	%0	71%	%0	%0	100%	71%	%0	%0	%0
									Reuse Rate Re	%0	%0	94%	%0	%0	%0	94%	%0	%0	%0
									Weight (g) F	1451	110.5858	18144	635	0	862	18144	635	8	0
	Loss Rate	0.00%	%00:0	0.00%	0.00%	00.00%	0.00%		Material	1500 Corrugated (100	1500 LDPE	45000 Wood	45000 LLDPE Film	0 N/A	1500 Corrugated (100	72000 Wood	72000 LLDPE Film	50 LDPE	0 N/A
	Efficiency	100%	%0	100%	%0	100%	%0		Units/Package Material										
	Fraction	100%	%0	100%	%0	100%	%0		Dist. to Mfg.	5	9.4	23	18	0	S	23	18	9.4	0
	Mode of Trans.	Truck	N/A	Truck	N/A	Truck	N/A		Supplier	Atlantic	Regency	Woodbridge	Artic	N/A	Atlantic	Woodbridge	Artic	Regency	N/A
	Distance	Ľ	/80		/80	0101	neni		Type	Box	Liner	Pallet	Stretch Wrap	N/A	Box	Pallet	Stretch Wrap	Sleeve	N/A
Transport	Component	. (dno		LIG	-	Seal	Packaging	Component			Cup)				Lid		
	(ພ	18 ⁻	J P	lei'	μÂu	oté	5 0	t te	an	jor	ŋn	uB	M)	21	ioi	ind	lini	si(3

	Recycle Rate	%0	71%	%0	85%	0%	
	Reuse Rate Rec	%0	94%	%0	%0	%0	
	Weight	635	13608	181	1361	18.143696	
	Material	20800 Paper Board	Wood	LLDPE Film	665600 Paper Board	LLDPE Film	
	Units/Package	20800	665600	665600	665600	20800	
	Dist. to Mfg.	22	77	22	22	77	
	Supplier	Unknown	Unknown	Unknown	Unknown	Unknown	
int.)	Type	Core Tube	Pallet	Stretch Wrap	Slip Sheet	Roll Wrap	
Packaging (Cont.	Component			Seal			
	(.tr) (C	r. 2	si(ו	

		Engineered	Process Scrap	
6	Component	Scrap Rate	Rate	Recycle Rate
nill	Cup	%00'0	%00.0	%0
Fi	Lid	%00'0	00.00%	%0
	Seal	150.00%	0.00%	%0

	96 Reuse 331 331 0	Weight	Loss Rate 0.009 Material Corrugated(2 Wood LLDPE Film N/A	Efficiency 100% 0% Units/Package 2016 2016 0	88 990	Mode Truck N/A Supplier Smurfit-Stone Pallet Services Brown N/A	(rap
	0		N/A	0	0	N/A	
	331		LLDPE Film	2016	138.2	Brown	Nrap
Brown 138.2 2016 LLDPE Film 331	18144		Wood	2016	10		
Pallet Services 10 2016 Wood 18144 Brown 138.2 2016 LDPE Film 331	96		Corrugated(2:	12	47.6	rfit-Sto	
Smurfit-Stone 47.6 12 Corrugated(22% 96 Pallet Services 10 2016 Wood 18144 9 Brown 138.2 2016 LLDPE Film 331	Reuse	~	Material	Units/Package	Dist. to Mfg.		
Supplier Dist. to Mfg. Units/Package Material Weight Reuse Smurfit-Stone 47.6 12 Corrugated(22? 96 96 Pallet Services 10 2016 Wood 181.44 9 Brown 138.2 2016 LLDPE Film 331							jing
SupplierDist. to Mfg.Units/PackageMaterialWeightReuseSmurfit-Stone47.612Corrugated(22?96Pallet Services102016Wood1814496Brown138.22016LLDPE Film331		%		0%0	%0	N/A	0
N/A 0% 0.00% Supplier Dist. to Mfg. Units/Package Material Weight Smurfit-Stone 47.6 12 Corrugated(229 96 Pallet Services 10 2016 Wood 18144 96 Rown 138.2 2016 LLDPE Film 331		%		100%	100%	Truck	552
Truck 100% 0.00% N/A 0% 0.00% N/A 0% 0.00% Supplier Dist. to Mfg Units/Package Material Weight Smurfit-Stone 47.6 12 Corrugated(22 96 Pallet Services 10 2016 Wood 18144 2 Brown 138.2 2016 LLDPE Film 331 2			Loss Rate	Etticiency		Mode	Islai Ive
		Beuse 331 0 0	Weight 1814	te 0.00% 0.00% ted(229 1814 1814 1814 33	Loss Hate 00% 0.00% 0% 0.00% 0% 0.00% 12 Corrugated(22% 2016 Wood 2016 LLDPE 0 N/A	Etriciency Loss Hate % 100% 0.00% % 0.00% 0.00% % 0% 0.00% % 0% 0.00% % 12 Veight 10 2016 Wood 1814 % 2016 LLDPE Film 33 0 0 N/A 0	Dist. to Mfg. Units/Package Material Weight Stone 47.6 12 Corrugated(22 9 Store 138.2 2016 Wood 1814 Store 0 0 0 0 Store 0 12 Corrugated(22 9 Store 138.2 2016 LLDPE Film 33 0 0 0 0 0 0

ated	inc Moleo
n Incinerated	Drimon, Doolsoning Moleo
Fraction	

23.5%

Primary Packaging Make-up

	Component	Recvcle Rate	Fraction Plastic Fraction Paper Fraction Other	Fraction Paper	Fraction Other
nu	Cup	%0	100%	%0	%0
	Lid	%0		%0	%0
	Seal	%0	100%	%0	%0

.

6 oz. Dist. 3 Cd 🛡

Units/Comp.

Weight (g)

Manufacturer Polytainers Polytainers

Name

3.900 0.332 7.800

i oz. Dist. 3 Corrugated Eliminatio Component 1 Cup Component 3 Seal Component 2 |Lid Designation 1000 lb 6 oz. 13 Functional Unit Container Size Designation Data Set General

30.1% Unknown 4.9% Unknown 65.0% Unknown Supplier 0.0% N/A weight % Seal Composition Material Other N/A PET PET Clear-Lam 97.0% Novacor 3.0% Spartech Supplier 0.0% N/A weight % Lid Composition Cotton Color Material LLDPE **N**A 3.0% Spartech Supplier 97.0% Montell 0.0% N/A weight % Cup Composition Cotton Color Material AN 4

0.0% N/A

N/A

0.0% N/A

AN

Material Prod.

TCinn Material Transport

	Cup Material I ransport	ransport							
(Di	Material			Transport				Packaging	
in	_	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
-to			Rail	%66	100%	0.00% N/A	N/A	0	0
etu	PP (Montell)	425	Truck	1%	100%	0.00% N/A	N/A	0	0
1UE	Cotton Color		Truck	100%	100%	%00.0	0.00% Bag & Pallet	449	20
•M		06	N/A	%0	%0	0.00% N/A	N/A	0	0
		•	N/A	%0	%0	0.00% N/A	N/A	0	0
u	N/A (N/A)	D	N/A	%0	%0	0.00% N/A	N/A	0	0
			N/A	%0	%0	0.00% N/A	N/A	0	0
onp	N/A (N/A)	0	N/A	%0	%0	0.00% N/A	N/A	0	0
	Eid Material Transport	ansport							
4 I	Material			Transport				Packaging	
ei1:		Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
 916			Rail	92.0%	100%	0.00% N/A	N/A	0	0
W)	<u>ج</u>	190	Truck	8.0%	%0	0.00% N/A	N/A	0	
11	P		Truck	100%	100%		0.00% Bag & Pallet	449	20
uoļ		B	N/A	%0	%0	0.00% N/A	N/A	0	0
110			N/A	%0	%0	0.00% N/A	N/A	0	0
		0	N/A	%0	%0	0.00% N/A	N/A	0	0
tei(•	N/A	%0	%0	V/N %00.0	N/A	0	0
_		5	N/A	%0	%0	0.00% N/A	N/A	0	0

INIAUT ACNAYE TAY. WI. (NY)	0	0	0																				Recycle Rate	100%		71%			100%	71%		%0	
)	0	0	0	0	0	- - - 														Reuse Rate R	%0	%0	94%	%0	%0	%0	94%	%0	%0	
Buly	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A															Weight (g)	1497	110.5858	18144	635	0	862	18144	635	e	
	0.00%	0.00% N/A		%00.0	0.00%	0.00% N/A	0.00% N/A	0.00% N/A						Loss Rate	Loss Rate	0.00%	%00.0	0.00%	0.00%	%00.0	0.00%		Material	Corrugated(100	LDPE		LLDPE Film	N/A	1500 Corrugated (100	Nood	72000 LLDPE Film	50 LDPE	
_	100%	%0	100%	%0	100%	%0	%0	%0		несусіе	100.0%	100.0%	0.0%	Efficiency		100%	%0	100%	%0	100%	%0		Units/Package	2130	2130	51120	51120	0	1500	72000 Wood	72000	20	
_	100%	%0	100%	%0	100%	%0	%0	%0			3.76%	3.76%	2.00%	Fraction		100%	%0	100%	%0	100%	%0		Dist. to Mfg.	5	9.4	23	18	0	5	23	18	9.4	
INIOUE OF FLATIS.	Truck	N/A	Truck	N/A	Truck	N/A	N/A	N/A		Ì	Injection Moldin	Injection Moldin	Extrusion	of Trans.	JS.	Truck	N/A	Truck	N/A	Truck	N/A		Supplier	Atlantic	Regency	W oodbridge	Artic	N/A	Atlantic	W oodbridge	Artic	Regency	
DISIGNE	COV	432	ę	436	402	432	•	D		manuracturer	Polytainers	Polytainers	Clear-Lam	Distance	Distance	607	100	£07	/00	1050	0001		Type	Box	Liner	Pallet	Stretch Wrap	N/A	Box	Pallet	Stretch Wrap	Sleeve	
(Supplier)	(mhann)		РЕТ	(Unknown)	Other	(Unknown)				Component	Cup	Lid	Seal	Component	Component	ç	dub	<u>,</u>	L	Seal	000	Packaging	Component			Cup					Lid		_
			PE (Unknown) 492			PE (Unknown) PET (Unknown) Other					PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) Component	(Unknown) PET nknown) Other Nknown) /A (N/A) ponent	(Unknown) PET Other Nknown) /A (N/A) /A (N/A)	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Lid Cup Lid Seal Transport	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Seal Transport	(Unknown) PET Other Nknown) (A (N/A) ponent sport mponent	(Unknown) PET Other Nknown) (A (N/A) A (N/A) ponent ponent sport	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Transport Component Component Component	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Transport Component Component Component	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Transport Component Cup Lid Seal Lid Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Lid Cup Cup Cup Cup Lid Cup Lid Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Lid Lid Cup Lid Cup Lid Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Lid Component Cup Lid Cup Lid Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Lid Component Component Lid Cup Lid Seal Lid Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) Lid Cup Cup Cup Cup Lid Cup Cup Cup Cup Cup Cup Cup Cup Cup Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) Component Cup Lid Lid Lid Lid Lid Cup Lid Cup Lid Cup Lid Cup Cup Cup Cup Cup Cup Cup Cup	PE (Unknown) PET (Unknown) Other (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) Component Cup Lid Lid Lid Lid Cup Lid Cup Cup Cup Cup Cup Cup Cup Cup	Cup Cup Cup Cup Cup Cup Cup Cup Cup Cup	(Unknown) PET Other Nknown) A (N/A) A (N/A) A (N/A) A (N/A) Cup Cup Cup Cup	PE (Unknown) PET (Unknown) Other N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) Component Cup Cup Cup Cup Cup Cup Cup Cup Cup Cup	PE (Unknown) PET (Unknown)	Lid Lid	PE (Unknown) PET (Unknown) (Unknown) N/A (N/A) N/A (N/A) N/A (N/A) N/A (N/A) Lid Cup Cup Cup Cup Cup Cup Cup Cup Cup Cup

component	Type	Supplier	Dist. to Mfg. 1	Units/Package Material	ial	Weight	Reuse Rate	Recycle Hate
	Core Tube	Unknown	1	20800 Paper Board	r Board	635	%0	
	Pallet	Unknown	11	665600 Wood		13608	94%	71%
Seal	Stretch Wrap	Unknown	12	665600 LLDP	LLDPE Film	181	%0	%0
1	Slip Sheet	Unknown	11	665600 Paper Board	r Board	1361	%0	85%
	Roll Wrap	Unknown	4	20800 LLDPE Film	Ē Film	18.143696	%0	%0

	Rate	%0	%0	%0
	Recycle Rate			
Process Scrap	Rate	%00'0	%00.0	0.00%
Engineered	Scrap Rate	%00.0	00.0%	150.00%
	Component	Cup	Lid	Seal
	6	nill	Fi	

stance	Mode	Fraction	Efficiency	Loss Rate				
552	Truck	100%	100%					
0	N/A	%0	%0	0.00%				
ackaging								
	Supplier	Dist. to Mfg.	Units/Package Material	Material	Weight 🖌	Reuse	Recycle	ie
	Smurfit-Stone	47.6		12 Corrugated (229		0	%0	95%
	Pallet Services	10		3360 W ood	18144	44	94%	71%
Wrap		138.2	3360	LLDPE Film	3	331	%0	7%
	A/A	0	0	0 N/A		0	0	%0
	N/A	0	0	0 N/A		0	%0	0%

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Fraction Incinerated	ć
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23.5%

Primary Packaging Make-up

_				_
	Fraction Other	%0	0%	0%
	Fraction Paper	%0	%0	%0
	Fraction Plastic Fraction Paper Fraction Other	100%	100%	100%
jing make-up	Recycle Rate	%0	%0	%0
Primary Packaging Make-up	Component	Cup	Lid	Seal
ə,	hi to	pu	Ξ	

Stonyfield Farm Master's Project LCI Model Inputs

8 oz. Dist. 3 Cd 🕈

Units/Comp. 9.100 3.900 0.332 <u>Weight (g)</u> Manufacturer Polytainers Polytainers Clear-Lam Name Cup Seal Lid Component 3 Component 2 Component 1 Designation 8 oz. Dist. 3 Corrugated Elimination 1000 lb 8 oz. 4 Functional Unit Container Size Designation Data Set General

Cup Composition	on		Lid Composition	Ľ		Seal Composition	tion	
aterial	weight %	Supplier	Material	weight %	Supplier	Material	weight %	Supplier
ЬР	>	98.0% Montell	ILLDPE	98.0%	98.0% Novacor	PE	65.0%	65.0% Unknown
hite Color		2.0% Spartech	White Color	2.0%	2.0% Spartech	РЕТ	30.19	30.1% Unknown
A		0.0% N/A	N/A	0.0% N/A	N/A	Other	4.9%	4.9% Unknown
A		0.0% N/A	N/A	0.0% N/A	N/A	N/A	60.0	0.0% N/A

ransport	
Ц Ш	
lateria	
2 dr	

(Cup Material Transport	ansport							ſ
βı	Material			Transport				Packaging	
iin	(Supplier)	Distance	Mode of Trans.	Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
ųə		L	Rail	%66	100%	0.00% N/A	N/A	0	0
etu	PP (Montell)	425	Truck	1%	100%	0.00% N/A	N/A	0	0
nue	White Color		Truck	100%	100%	0.00% N/A	N/A	0	0
W	(Spartech)	3	N/A	%0	%0	0.00% N/A	N/A	0	0
oT			N/A	%0	%0	0.00% N/A	N/A	0	0
uc	N/A (N/A)	0	N/A	%0	%0	0.00% N/A	N/A	0	0
bit			N/A	%0	%0	0.00% N/A	N/A	0	0
onp	N/A (N/A)	D	N/A	%0	%0	0.00% N/A	N/A	•	0
01	Lid Material Transport	ansport							
d I	Material			Transport				Packaging	
sire	(Supplier)	Distance	Mode of Trans.	ns. Fraction	Efficiency	Loss Rate	Type	Mat/Package	Pkg. Wt. (kg)
918			Rail	92.0%	100%	0.00% N/A	N/A	0	0
M)	(Novacor)	0.61	Truck	8.0%	100%	0.00% N/A	N/A	0	0
Ļ	White Color	ę	Truck	100%	10	0.00% N/A	N/A	0	0
lor	(Spartech)	5	N/A	%0	%0	0.00% N/A	N/A	0	0
ind		<	N/A	%0	%0	0.00%	N/A	0	0
lin	N/A (N/A)	5	N/A	%0	%0	0.00% N/A	N/A	0	0
si(4	N/A	%0	%0	0.00% N/A	N/A	0	0
נ	N/A (N/A)	>	N/A	%0	0%	0.00% N/A	N/A	0	0

Scenario L

	t. (kg)	0	0	0	0	0	0	0	0														e Rate	100%	%0	71%	%0	%0	100%	71%	%0	0%	òò
	Pkg. Wt.	0	0	0	0	0	0	0	0														Recycle Rate	%	%	%	%	%	%	%	%	%	
Packaging	Mat/Package																						Reuse Rate	%0	0%	94%	%0	%0	%0	94%	%0	%0	
	Type	V/A	V/A	N/A	N/A	N/A	V/A	V/A	V/A														Weight (g)	1451	110.5858	18144	635	0	862	18144	635	3	
	Loss Rate	0.00% N/A	0.00% N/A	0.00%	0.00%	0.00%	0.00% N/A	0.00% N/A	0.00% N/A						Loss Rate	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%			1500 Corrugated (100	DPE	Nood	LLDPE Film	0 N/A	Corrugated(100	Nood	LLDPE Film	50 LDPE	
	Efficiency L	100%	%0	100%	%0	100%	%0	%0	%0	Recycle	100.0%	100.0%	%0.0		Efficiency L	100%	%0	100%	%0	100%	%0		Units/Package Material	1500 (1500 LDPE	45000 Wood	45000 LLDPE	10	1500	72000 Wood	72000 LLDPE	201	
Transport	Fraction	100%	%0	100%	%0	100%	%0	%0	%0	Scrap Rate	3.76%	3.76%	2.00%		Fraction	100%	%0	100%	%0	100%	%0		Dist. to Mfg.	5	9.4	23	18	0	5	23	18	9.4	
	Mode of Trans.	Truck	N/A	Truck	N/A	Truck	N/A	N/A	N/A	Process	Injection Moldin	Injection Moldin	Extrusion		Mode of Trans.	Truck	N/A	Truck	N/A	Truck	N/A		Supplier	Atlantic	Regency	Woodbridge	Artic	N/A	Atlantic	Woodbridge	Artic	Regency	
	Distance	çç	492	9	434	Ş	434	c	D	Manufacturer	Polytainers	Polytainers	Clear-Lam		Distance	L C L	/00	101	/00	1050			Type	Box	Liner	Pallet	Stretch Wrap	N/A	Box	Pallet	Stretch Wrap	Sleeve	
Material	(Supplier)			PET	(Unknown)	Other	(Unknown)	NI/A (NI/A)	(M/N) M/N	Component	Cup	Lid	Seal	Transport	lent	!	dno	-		000	Ocal	Packaging	Ŧ			Cup					Lid		
([.]	tuc			uo						ပိ		E) WI	Se	T _n				əit	λu	ote	; oi			DB	յու	ısı	N) ;	z u		nq	linta	si(-

	Weight Reuse Rate	635 0%	13608 94%	181 0%	1361 0%	18.143696 0%
	Units/Package Material W	20800 Paper Board	665600 Wood	665600 LLDPE Film	665600 Paper Board	20800 LLDPE Film
	Dist. to Mfg. Unit	17	17	77	17	77
	Supplier	Unknown	Unknown	Unknown	Unknown	Unknown
ont.)	Type	Core Tube	Pallet	Stretch Wrap	Slip Sheet	Roll Wrap
Packaging (Cont.)	Component			Seal		

Engineered Scrap Process Scrap Rate Recycle Rate 0.00% 0.00% 0% 150.00% 0.00% 0%
Process
neered Scrap Rate 0.00% 150.00%
Engi
Component Cup Lid Seal
6uilli7

	Efficiency Loss Rate	100%	% 0% 0.00%		Units/Package Material Weight Cheuse Recycle	.6 12 Corrugated(229 0/ 0% 95%	10 2016 Wood 18144 94% 71%	.2 2016 LLDPE Film 331 0% 7%	0 0 0 V/A 0 0 0	0 0 0 N/A 0 0 0% 0%	8
	Fraction	100%	%0		Dist. to Mfg.	47.6	7	138.2			03 E%
	Mode	Truck	N/A		Supplier	Smurfit-Stone	Pallet Services	Brown	N/A	N/A	
Transport	Distance	552	0	Packaging	Type		Pallet	Stretch Wrap	N/A	N/A	Eraction Incinerated

ъŤіЛ	Fraction Incinerated Primary Packaging Make-up	ated ing Make-u
ło	Component	Recycle R
pu	Cup	
Э	lid	

Primary Packaging Make-up	лпg маке-up			
Component	Recvcle Rate	Fraction Plastic Fraction Paper Fraction Other	Fraction Paper	Fraction Other
Cup	8	100%	%0	%0
Lid	%0	100%	%0	%0
Seal	%0	100%	%0	%0

APPENDIX B

RESULT FORMS

Content Description:

Scenario A:	6 oz. Current System
Scenario B:	8 oz. Current System
Scenario C:	6 oz. Seal Only
Scenario D:	8 oz. Seal Only
Scenario E:	6 oz. Laminated Foil
Scenario F:	8 oz. Laminated Foil
Scenario G:	6 oz. Coated Paper
Scenario H:	8 oz. Coated Paper
Scenario I:	6 oz. Distribution 3 Corrugated Packaging – 30% reduction
Scenario J:	8 oz. Distribution 3 Corrugated Packaging – 30% reduction
Scenario K:	6 oz. Distribution 3 Corrugated Packaging – Eliminated (0 kg)
Scenario L:	8 oz. Distribution 3 Corrugated Packaging – Eliminated (0 kg)

	Material	Weight (kg)	%	Rank	Mat. Prod.	%	Rank
	Acrylic	0.000	%0.0	N/A	00.0	0.0%	N/A
	Aluminum	0.000	0.0%	N/A	00.0	0.0%	N/A
	Corrugated	32.638	32.638 47.3%	1	937.31	25.5%	2
;	Cotton Color	0.971	1.4%	5	45.34	1.2%	6
stu	LLDPE Film	0.327	0.5%	8	29.41	0.8%	7
du	LDPE	0.305	0.4%	6	25.01	0.7%	9
l le	LLDPE	10.467	15.2%	3	868.58	23.6%	3
eria	Paper Board	0.217	0.3%	10	10.52	0.3%	10
	PE	1.467	2.1%	4	116.59	3.2%	4
Ŵ	PET	0.680	1.0%	2	49.31	1.3%	5
	ЬР	20.935	30.4%	2	1567.59	42.6%	1
	White Color	0000	%0'0	N/A	0.00	0.0%	N/A
	Wood	0.969	1.4%	9	27.58	0.7%	8
	Total	68.98	100%	N/A	3677.24	100%	N/A

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	Phase	Energy (MJ)	%	Rank	Renewable %
	Material Production	2647.40	56%	1	0.73%
	Distribution 1	6.73	%0	5	0.09%
	Manufacturing	630.02	13%	3	28.00%
	Distribution 2	188.45	4%	4	38.73%
	Filling	0.16	%0	6	0.00%
١λ	Distribution 3	1495.10	31%	2	40.91%
erg	End of Life	-211.57	-4%	2	3.43%
uΞ	Total	4756.29	100%	N/A	N/A
		1			
	ICommonent Allocation - Energy	n - Fnerov			

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Component Allocation - Energy	n - Energy			
Component	Energy (MJ)	%	Rank	Renewable %
Cup	1939.59	62%	1	6.77%
Lid	1063.53	34%	2	5.54%
Seal	148.79	5%	3	6.80%
Total	3151.91	100%	N/A	N/A

Segment Allocation - Energy

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Segment Anocanon - Energy	Iciuy			
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	1824.69	38%	1	N/A
Material Production	822.71	17%	3	N/A
D1 Transport	6.73	%0	11	0.09%
D1 Pkg. Transport	0.01	%0	13	0.09%
Manufacturing	630.02	13%	4	28.00%
D2 1Pkg. Transport	41.28	1%	8	0.09%
D2 2Pkg. Production	140.06	3%	9	52.08%
D2 2Pkg. Transport	7.10	%0	10	%60.0
Filling	0.16	%0	12	0.00%
D3 Product Transport	501.15	11%	5	0.09%
D3 1Pkg. Transport	35.44	1%	6	%60.0
D3 2Pkg. Production	910.03	19%	2	67.15%
D3 2Pkg. Transport	48.48	1%	7	%60.0
End of Life	-211.57	-4%	14	3.43%
Total	4756.29	100%	N/A	A/N

Rank Recycled (kg)	7 0.0000	8 0.0000	13 0.0000	14 0.0000	4 1.1731			12 3.4930		3 0.000			9 28.4025		N/A 33.0686		Crit	303.83 1203.46			0,		102.67 877.09	-47.75 -67.30	451.05 2335.54		Crite		40.39 369.39	
4 %	2%	1%			5%	%0		%0		%C			1	Į	100%		Sox										SC			
Waste (kg)	0.6308	0.2844	0.0252	0.0000	1.8318	0.1549	0.9745	0.0266	1.3284	1.8802	0.1330	4.4388	0.1819	22.4000	34.2906		Particulates	63.32		46.87	4.48	0.07	38.89	-32.16	121.77		Particulates		17.78	
Segment Waste (÷	Material Production	sport	D1 Pkg. Transport	cturing	D2 1Pkg. Transport	D2 2Pkg. Production	g. Transport		υŗ	g. I ransport	D3 2Pkg. Production	D3 2Pkg. Transport	Life			NOX	328.58	5.77	73.74	50.24	0.28	536.87	-21.39	974.10		XON	294.14	126.33	
0	Feedstock	Material	D1 Transport	D1 Pkg.	Manufacturing	D2 1PK	D2 2Pk(D2 2Pkg.	Filling	D3 Prod	U3 1rkg.	D3 2Pk(D3 2PK	End of L	Total		Hydrocarbons	468.33	0.59	5.46	14.50	0.02	77.44	-1.24	565.09		Hydrocarbons	288.22	156.80	
Recycled (kg)	0.0000	0.0000	1.1731	3.4930	0.0000	28.4025	0.0000	33.0686			Hecycled (kg)	2.6966	1.9521	0.0174	4.6661		co	39.41	1.34	11.80	12.42	2.10	121.23	35.24	223.53		СО	55.58	28.08	
Bank	9		e	5		~		NIA			Hank	-			N/A		Rank	-	2	e	4	9	2	5	N/A		Rank	1	2	
%	3%	%0	5%	3%	4%	19%		100%		-	%	61%			100%		%	45%		10%	4%		36%	4%	100		%	%99	27%	
Waste (kg)	0.9153	0.0253	1.8318	1.1561	1.3284	6.6339	22.4000	34.2906		n - Solid Waste	Waste (kg)	16.7245	8.2606	2.3951	27.3803	· Emissions	Emissions (g)	1219.19	8.99	284.07	109.14	13.76	968.46	108.14	2711.75	n - Air Emissions	Emissions (g)	1109.07	452.56	
Phase Waste	Material Production	Distribution 1	Manufacturing	Distribution 2	Fillina	Distribution 3	End of Life	Tota		Component Allocation - Solid Waste	Component	Cup	Lid	Seal	Total	Phase Allocation - Air Emissions	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Fillina	Distribution 3	End of Life	Total	Component Allocation - Air Emissions	Component	Cup	Lid	i

ock	Emissions (g)	%	Bank	8	Hydrocarbons	XON	Particulates	sox	Criteria
-l D-odi iotion	840.32	31%	-	27.16	322.79	226.47	43.64	209.41	829.47
Material Production	378.88	14%	e	12.25	145.54	102.11	19.68	94.42	373.99
D1 Transport	8.98	%0	13	1.33	0.59	5.76	0.31	0.61	8.60
01 Pkg. Transport	0.01	%0	14	00.0	00.0	0.01	0.00	0.00	0.01
Manufacturing	284.07	10%	4	11.80	5.46	73.74	46.87	77.69	215.56
D2 1Pkg. Transport	52.79	2%	8	7.16	3.60	33.89	1.95	3.74	50.34
D2 2Pkg. Production	47.26	2%	6	4.02	10.28	10.52	2.20	9.57	36.60
D2 2Pkg. Transport	9.08	%0	12	1.23	0.62	5.83	0.33	0.64	8.66
-illing	13.76	1%	1	2.10	0.02	0.28	0.07	0.04	2.51
D3 Product Transpor	640.84	24%	2	86.96	43.69	411.23	23.62	45.41	610.91
D3 1Pkg. Transport	45.32	2%	9	6.15	3.09	29.08	1.67	3.21	43.20
D3 2Pkg. Production	220.31	8%	5	19.70	26.43	56.78	11.32	49.65	163.88
D3 2Pkg. Transport	62.00	2%	2	8.41	4.23	39.78	2.28	4.39	59.10
End of Life	108.14	4%	9	35.24	-1.24	-21.39	-32.16	-47.75	-67.30
	2711.75 100	100%	N/A	223.53	565.09	974.10	121.77	451.05	2335.54

[ls	14.42	0.00	-0.54	0.17	0.00	0.88	0.0 0	14.92		lis	6.56	7.49	-0.09	13.96
	Metals										Metais				
	TDS	7.93	0.00	00.00	0.04	0.00	0.06	0.00	8.03		TDS	6.34	1.40	0.15	7.89
	COD	14.63	0.50	1.48	15.53	0.12	204.02	1.68	237.96		COD	14.45	6.34	9.20	30.00
	BOD	2.20	90.06	0.19	2.00	0.03	72.83	0.50	77.80		BOD	2.17	0.58	1.03	3.78
	Acid	2.44	00.0	00.0	0.02	00.0	0.02	00.00	2.49		Acid	1.91	0.44	0.10	2.45
	Rank	2	5	4	e	9	-	7	N/A		Rank	-	2	3	N/A
	%	8%	%0	2%	7%	%0	83%	%0	100%	suc	%	58%	29%	12%	100%
ater Emissions	Emissions (g)	93.51	5.42	17.30	83.19	0.16	947.01	-4.18	1142.42	1 - Water Emisssions	Emissions (g)	104.87	52.88	21.92	179.67
Phase Allocation - Water Emis	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Fotal	Component Allocation - Water	Component	Cup	Lid	Seal	Total
<u> </u>			<u> </u>		[oia			ler	'sV	\		<u>. – .</u>	197	d)

	COD TDS Metals	10.086 5.465 9.936	4.547 2.464 4.480		0.001 0.000 0.000	1.481 0.000 -0.537		11.943 0.040 0.143	0.526 0.000 0.004	0.115 0.000 0.000	37.087 0.010 0.255	2.623 0.001 0.018	160.726 0.050 0.578	3.588 0.001 0.025	1.679 0.001 -0.001	227 055 2 0201 14 025
	BOD	1.514	0.683	0.059	0.000	0.186	0.361	1.572	0.062	0:030	4.383	0.310	67.715	0.424	0.503	1000 22
	Acid	1.683	0.759	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.023	0.000	0.000	101 0
	Rank	e	~	11	13	6	9	4	<u>0</u>	12	2	œ	-	5	14	
	%	6%	3%	%0	%0	2%	3%	4%	1%	%0	35%	2%	42%	3%	%0	
Vater Emissions	Emissions (g)	64.45	29.06	5.42	0.01	17.30	33.26	44.21	5.72	0.16	403.74	28.55	475.66	39.06	-4.18	
Segment Allocation - Water	Segment	Feedstock	Material Production	D1 Transport	D1 Pka. Transport	Manufacturing	D2 1 Pkg. Transport	D2 2Pka. Production	D2 2Pkg. Transport	Filing	D3 Product Transport	D3 1Pkg. Transport	D3 2Pka. Production	D3 2Pkg. Transport	End of Life	
	i	1		(p,1				ois) T	ote'				

	Phase Use (I	Material Production	Distribution 1	Aanufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
	(liter)	167.14	3.28	83.87	76.50	0.00	588.62	-3.11	916.29
	%	18%	%0	9%	8%	0%	64%	%0	100%
I	Rank	2	5	3	4	6	1	7	N/A

Phase Allocation - Impact Categories

_	-										
						ODP					
	SO	Phase	GWP(kg CO ₂)	%	Rank	(mg CFC-11)	%	Rank	MAC (m ³)	%	Rank
	ino	Material Production	49.20	31%	2	00.0	%0	9	68.508	42%	2
	6ə	Distribution 1	0.48	%0	7	00.0	%0	5	0.766	%0	5
	teC	Manufacturing	21.68	14%	9	0.36	%6	3	19.275	12%	с С
)	Distribution 2	7.23	5%	5	0.38	10%	2	7.561	5%	4
_	bec	Fillina	0.58	%0	9	00.0	%0	4	0.114	%0	9
	lwj	Distribution 3	64.66	41%	-	3.42	88%	F	75.774	46%	-
		End of Life	15.40	10%	4	-0.28	%2-	7	-8.053	-5%	7
		Total	159.23	100%	N/A	3.89	100%	N/A	163.944	100%	N/A

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Data Set	Designation	Functional Unit	Container Size		Material	Acrylic	Aluminum	Corrugated	Cotton Color	LLDPE Film	LDPE	LLDPE	Paper Board	PE	PET	ЬР	White Color	Wood
5	PP 8 oz WH IM (Current	1000 lb	80		Weight (kg)	0.000	0.000	25.953	0000	0.380	0.273	7.931	0.163	1.101	0.510	18.507	0.540	1.165
	Current	q	8 oz.		%	%0.0	%0.0	45.9%	%0.0	0.7%	0.5%	14.0%	0.3%	1.9%	0.9%	32.7%	1.0%	2.1%
				•	Rank	N/A	N/A	1	N/A	8	9	3	10	5	7	2	6	4
Designation	Component 1	Component 2	Component 3		Mat. Prod.	0.00	00.0	745.31	0.00	34.18	22.33	658.15	7.89	87.44	36.98	1385.78	22.50	33.14
Nam					%	0.0%	0.0%	24.6%	0.0%	1.1%	0.7%	21.7%	0.3%	2.9%	1.2%	45.7%	0.7%	1.1%
FI																	_ I	

- Energy	
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Allocation	
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N/A	A/A	100%	4019.17	Total	En
3.43%	7	-4%	-175.82	End of Life	erć
37.26%	2	33%	1310.66	Distribution 3	λÊ
0.00%	6	%0	0.12	Filling	
39.24%	4	4%	164.08	Distribution 2	
28.08%	3	13%	523.54	Manufacturing	
0.09%	5	%0	5.74	Distribution 1	
0.76%	1	55%	2190.85	Material Production	
Rank Renewable %	Rank	%	Energy (MJ)	Phase	

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Allocation	
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		6	Jaco	Donowohlo 0/
Colliboriell		%		
Cup	1702.96	65%	1	6.75%
Lid	800.00	31%	2	5.53%
Seal	111.59	4%	3	6.80%
Total	2614.56	100%	N/A	N/A

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N/A

100% 1.1%

3033.71

N/A

100%

56.52

Total

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Renewable % N/A N/A N/A 0.09% 0.00% 0.09% 0.00%	Rank 11 12 12 10 6 8 8 4 11 3 3 11 13 11 10 10 10 10 10 10 10 10 10 10 10 10	% 37% 17% 13% 13% 13% 12% 12%	Segment Energy (MJ) Feedstock 1491.11 Material Production 699.74 D1 Transport 5.74 D1 Pkg. Transport 5.74 D1 Pkg. Transport 5.74 D1 Pkg. Transport 5.74 D1 Pkg. Transport 5.34.01 D2 2Pkg. Transport 34.01 D2 2Pkg. Transport 6.13 D2 2Pkg. Transport 123.94 D2 2Pkg. Transport 523.54 D2 2Pkg. Transport 523.54 D2 2Pkg. Transport 523.54 D3 Product Transport 0.12 D3 1Pkg. Transport 501.15
66.40%	2 1	18%	734.56
66.40%		18%	734.56
0.00 /0	00	10%	C4.62
%60.0 0.09%	n o	1%	29.45
0.00%	12	%0	0.12
0.09%	10	%0	6.13
51.92%	9	3%	23.94
0.09%	8	1%	34.01
28.08%	4	13%	23.54
0.09%	N/A	%0	0.00
0.09%	11	%0	5.74
N/A	3	17%	99.74
N/A	1	37%	91.11
Renewable %	Rank	%	NJ)

	Process	Injection Molding	Injection Molding	n Extrusion
	Manufacturer	Polytainers	Polytainers	Clear-Lam
	Name	Cup	Lid	Seal
► WI HW ZO 8 PP	Designation	Component 1	Component 2	Component 3

2

Stonyfield Farm Master's Project - Results

N/A N/A

Rank

N/A

9 9

<u>10</u>

4 5

Waste (kg) % Rank Recycled (kg) Segment Waste (kg) % Rank Recycled (kg)	22.516 0.000 0.0002.1 1002.1 177.5 80.5 843.0 2057.0 Criteria	SOX 257.87 0.52 63.63 12.03 93.83 93.83 93.83 93.83 93.83 93.83 93.83 93.83 93.83 93.83 88.24 SOX	Particulates 52.81 52.81 0.26 38.69 37.69 37.03 37.03 -26.73 105.89 Particulates	NOX 273.42 4.92 61.08 61.08 42.16 0.21 519.93 -17.77 883.95 NOX	Aydrocarbons 386.59 0.50 12.52 74.30 -1.03 -1.03 Hydrocarbons	31.43 1.14 9.76 9.76 10.34 1.57 1.57 18.22 29.29 01.75	Hank NA NA NA NA NA		Emissions (g) 1014.04 7.67 234.57 92.46 92.366 923.86 923.86 89.87 89.87 89.87 7 - Air Emissions (d)
85 3% 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.0000 0% N13 0.5330 2% 7 0 15 5% 3 0.5176 0.117 0.0000 0% N13 0 15 5% 1 0.0000 0% N14 0	829.3	222.23	47.10	258.21	253.09	48.74	-	%69	973.87
55 3% 6 0.0000 Feedstock 0.5230 2% 7 0 55 3 0.9776 D1 Fransport 0.02455 1% 8 13 0 33 5% 3 0.9776 D1 Fransport 0.0001 0% NA 0 0.0216 0% NA 0 0.0001 0% NA 0 0.0001 0% NA 0 0.0001 0% NA 0 0 0.1515 0% 13 0 0 0.1276 0% 13 0	829.36	222.23	47 10	258.21	253.09	<u>48 74</u>		60%	
55 3% 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.0001 Material Production 0.2455 1% 8 0 13 3% 5 3 0.9776 D1 Transport 0.0001 0% N/A 0 13 3% 5 0.0000 0% N/A 0 <	Criteria	sox	Particulates	XON	-Iydrocarbons		Bank	%	Emissions (g)
55 3% 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.0001 0.4151 17ansport 0.0215 0% NA 33 5% 3 0.9776 011 Transport 0.0215 0% NA 9 0 0.0215 0% NA 9 0 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1 - Air Emissions</td>									1 - Air Emissions
55 3% 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.9776 Naterial Production 0.2455 1% 8 0 53 5% 3 0.9776 01 Transport 0.0215 0% 13 0 51 5% 1 0.0000 0% N/A 13 0 0.2455 1% 8 0 0 51 65% 1 0.0000 D2 2Pkg. Froduction 0.0230 0% N/A 0 <td< td=""><td>2057.(</td><td>388.24</td><td>105.89</td><td>883.95</td><td>477.26</td><td>201.75</td><td></td><td>100%</td><td>2372.78</td></td<>	2057.(388.24	105.89	883.95	477.26	201.75		100%	2372.78
35 3% 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.0000 Material Production 0.2455 1% 8 0 33 5% 3 0.5776 01 Pkg. Transport 0.0000 0% N/A 0<	-55.(-39.68	-26.73	-17.77	-1.03	29.29		4%	89.87
35 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0 15 0% 7 0.0000 Material Production 0.2455 1% 8 0.0 13 5% 5 3.1529 0.9776 0.17ansport 0.0000 0% 13 0.0 13 3% 5 3.1529 0.0000 0% 13 0.0 13 3% 5 0.1000 0% 14 0.0 13 3% 5 0.0000 0% 14 0.0 16 5% 1 0.0000 0% 13 0.0 16 5% 1 0.0000 0% 13 0.0 16 5% 1 0.0000 0% 12 3% 0.0 16 10% NA 2518 Transport 0.1280 7% 10 0.0 16 10% 13 13802 7% 13% <td>843.</td> <td>93.83</td> <td>37.03</td> <td>519.93</td> <td>74.30</td> <td>118.22</td> <td></td> <td>39%</td> <td>923.86</td>	843.	93.83	37.03	519.93	74.30	118.22		39%	923.86
35 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0 15 0% 7 0.0000 Material Production 0.2455 1% 8 0.0 55 5% 3 0.9776 D1 Transport 0.0215 0% 13 0.0 55 5% 4 0.0000 0% N/A 0.0 0.0 55 1 0.0000 0% N/A 0.0233 0% 13 0.0 55 1 0.0000 0% N/A 0.0233 0% 12 3.1 55 1 0.0233 0% 12 3.1 0.0 55 1 0.0233 0% 12 3.1 0.0 55 1 0.0233 0% 12 3.1 0.0 55 1 0.0233 0% 12 3.1 0.0 56 1 0.0233 0% 12 3.1	1.8	0.03	0.05	0.21	0.02	1.57			10.32
35 3% 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.0000 Material Production 0.2455 1% 8 0 53 5% 3 0.9776 01 Transport 0.0215 0% 13 0 53 5% 4 0.0000 0% N/A 0.0000 0% N/A 0	80.8	12.03	3.78	42.16	12.52	10.34			92.46
35 6 0.0000 Feedstock 0.5230 2% 7 0 15 0% 7 0.09776 0.9776 0.9776 0.9776 0% 13 0 53 5% 3 0.9776 0.9776 0.9776 0% 13 0 53 5% 4 0.0000 0% N/A 0.01215 0% 13 0 53 3% 4 0.0000 0% N/A 0.0000 0% N/A 0 0.0000 0% N/A 0 0.0000 0% N/A 0 0.0000 0% N/A 0 <td< td=""><td>177.5</td><td>63.63</td><td>38.69</td><td>61.08</td><td>4.36</td><td>9.76</td><td></td><td>10%</td><td>234.57</td></td<>	177.5	63.63	38.69	61.08	4.36	9.76		10%	234.57
85 3% 6 0.0000 Feedstock 0.5230 2% 7 15 0% 7 0.0000 Material Production 0.2455 1% 8 33 5% 3 0.9776 01 Pkg. Transport 0.0215 0% 13 33 5% 4 0.0000 0% NA 33 5% 1 0.0000 0% NA 21 65% 1 0.0000 0% NA 25 22.5160 02 15/153 5% 4 20% 1 0.0000 0% NA 10 10 10 10 31 100% N/A 26.5464 1 0.0000 0% 10 0 31 100% N/A 26.5464 1 1.5153 5% 4 0 31 100% N/A 26.5464 1 1.5153 5% 4 0 31 100% </td <td>7.5</td> <td>0.52</td> <td>0.26</td> <td>4.92</td> <td>0.50</td> <td>1.14</td> <td></td> <td>%0</td> <td>7.67</td>	7.5	0.52	0.26	4.92	0.50	1.14		%0	7.67
S5 3% 6 0.0000 Feedstock 0.5230 2% 7 55 3 0.9776 Material Production 0.2455 1% 8 53 5% 3 0.9776 D1 Transport 0.0215 0% 13 53 5% 4 0.0000 D1 Pkg. Transport 0.0215 0% NA 53 3% 4 0.0000 D2 1Pkg. Transport 0.0235 5% 4 51 65% 1 0.0000 D2 1Pkg. Transport 0.1276 0% 12 51 65% 1 0.00230 0% 12 3% 6 51 65% 1 2.548. Transport 0.1276 0% 12 54 100% NA 2.6533 3% 6 7% 3 54 1 2.6533 1.6802 7% 3% 5 1 54 2 1.65% 1.74802 7% 3%	1002.1	257.87	52.81	273.42	386.59	31.43	-	43%	1014.04
35 3% 6 0.0000 Feedstock 0.5230 2% 7 15 0% 7 0.0000 Material Production 0.5230 2% 7 15 0% 7 0.0000 Material Production 0.2455 1% 8 13 3% 5 3.1529 D1 Pkg. Transport 0.0215 0% 13 23% 2 2.5160 D2 1Pkg. Transport 0.0233 5% 4 55% 1 0.0000 D2 1Pkg. Transport 0.1276 0% 12 51 65% 1 0.0033 3% 5 4 55 100% N/A 26.5464 0.0233 0% 12 51 65% 7% 0.0333 3% 5 5 51 65% 7% 0.0333 3% 5 51 100% 17 0.0333 3% 5 51 100% 10% 0.0333	Criteria	SOX	Particulates	XON	Aydrocarbons		Bank	%	Emissions (g)
35 3% 6 0.0000 Feedstock 0.5230 2% 7 15 0% 7 0.0000 Material Production 0.5230 2% 7 53 5% 3 0.9776 D1 Transport 0.0215 0% NA 53 5% 4 0.0000 D1 Pkg. Transport 0.0215 0% NA 53 3% 4 0.0000 D2 1Pkg. Transport 0.0000 0% NA 51 65% 1 0.0000 D2 1Pkg. Transport 0.1276 0% 10 51 65% 1 0.0000 D2 2Pkg. Transport 0.1276 0% 12 54 100% NA 26.6464 D2 2Pkg. Transport 0.0230 0% 12 55% 4 0.0000 D2 2Pkg. Transport 0.0230 0% 12 65% 1 0.0230 0% 12 13% 5 14 65% 1 0.10530	0.00				Total	4.1305			22.6524 Emissions
35 3% 6 0.0000 Feedstock 0.5230 2% 7 15 0% 7 0.0000 Material Production 0.2455 1% 8 31 5% 3 0.9776 D1 Transport 0.0215 0% 13 41 3% 5 3.1529 D1 Pkg. Transport 0.0000 0% NA 53 3% 4 0.0000 D2 1Pkg. Transport 0.0000 0% NA 51 65% 1 0.0000 D2 1Pkg. Transport 0.1276 0% 10 51 65% 1 0.0000 D2 1Pkg. Transport 0.1276 0% 10 51 65% 1 0.0000 D2 2Pkg. Production 0.1276 0% 12 54 100% NA 26.6464 D2 2Pkg. Transport 0.0230 0% 12 54 100% NA 26.6464 D3 2Pkg. Transport 0.02330 0% 12 54	22.516				End of Lit Total	0.0130 4.1305			1.7964 22.6524 Emissions
35 3% 6 0.0000 Feedstock 0.5230 2% 7 15 0% 7 0.00000 Material Production 0.2455 1% 8 31 5% 3 0.9776 D1 Transport 0.0215 0% 13 41 3% 5 3.1529 D1 Pkg. Transport 0.0000 0% NA 33 4 0.0000 D2 1Pkg. Transport 0.0000 0% NA 51 65% 1 0.0000 D2 1Pkg. Transport 0.1276 0% 10 51 65% 1 0.0000 D2 2Pkg. Transport 0.1276 0% 10 51 65% 1 0.0000 D2 2Pkg. Transport 0.1276 0% 12 51 65% NA 0.0230 0% 12 0 5 1 51 65% 7% 0.0230 0% 12 0 5 1 5 5 5		Ň		Transport	D3 2Pkg. End of Lit Total	1.4641 0.0130 4.1305			6.1946 1.7964 22.6524 Emissions
35 3% 6 0.0000 Feedstock 0.5230 2% 7 15 0% 7 0.0000 Material Production 0.5230 2% 7 53 5% 3 0.9776 D1 Transport 0.0215 0% 13 41 3% 5 3.1529 D1 Pkg. Transport 0.0000 0% N/A 53 3% 4 0.0000 D2 I Pkg. Transport 0.0215 0% N/A 53 3% 2 2.5160 D2 I Pkg. Transport 0.1276 0% 10 56 1 0.0000 D2 I Pkg. Transport 0.1276 0% 10 56 1 0.0000 D2 I Pkg. Transport 0.1276 0% 10 56 1 0.0000 D2 I Pkg. Transport 0.1276 0% 10 56 1 0.0000 D2 2 Pkg. Production 0.0233 3% 6 6 0% N 0.0233 3%	0.00			Production Transport fe	D3 2Pkg. D3 2Pkg. End of Li Total	2.6533 1.4641 0.0130 4.1305	NA 32 1		14.6614 6.1946 1.7964 22.6524 Emissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.5230 2% 7 1.5153 5% 3 0.9776 D1 Transport 0.2455 1% 8 0.0841 3% 5 3.1529 D1 Pkg. Transport 0.0215 0% NA 0.9963 3% 4 0.0000 D2 IPkg. Transport 0.02155 0% NA 0.9963 3% 4 0.0000 D2 IPkg. Transport 0.02000 0% NA 5.8826 20% 1 0.0000 D2 IPkg. Transport 0.1276 0% 10 18.6151 65% 1 0.0000 D2 2Pkg. Transport 0.1276 0% 10 28.7834 100% N/A 26.5464 D2 2Pkg. Transport 0.0230 0% 12	0.00			Transport Production Transport e	D3 1Pkg. D3 2Pkg. D3 2Pkg. Total	Recycled (kg) 2.6533 1.4641 0.0130 4.1305	Rank 1 N/A		Waste (kg) 14.6614 6.1946 1.7964 22.6524 Emissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.5230 2% 7 1.5153 5% 3 0.9776 D1 Transport 0.2455 1% 8 0.9841 3% 5 3.1529 D1 Pkg. Transport 0.0215 0% 13 0.9963 3% 4 0.0000 D2 I Pkg. Transport 0.02153 0% N/A 5.8826 20% 2 22.5160 D2 I Pkg. Transport 0.1276 0% 10 18.6151 65% 1 0.00000 D2 2Pkg. Production 0.8335 3% 6 28.7834 100% N/A 26.5464 D2 2Pkg. Transport 0.0230 0% 10	0.00			ct Transport Transport Transport e	D3 Produ D3 1Pkg. D3 2Pkg. D3 2Pkg. Total	Tecycled (kg) 2.6533 1.4641 0.0130 4.1305	Rank 33 NA		n - Solid Waste Waste (kg) 6.1946 1.7964 22.6524 Emissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.5230 2% 7 1.5153 5% 3 0.9776 D1 Transport 0.2455 1% 8 0.0215 0% 5 3.1529 D1 Pkg. Transport 0.0215 0% 13 0.9963 3% 4 0.0000 D2 Pkg. Transport 0.0000 0% N/A 5.8826 20% 2 22.5160 D2 1Pkg. Transport 0.1276 0% 10 18.6151 65% 1 0.0000 D2 2Pkg. Production 0.8335 3% 6	0.000			ct Transport Transport Production Transport e	Filling D3 Produ D3 2Pkg. D3 2Pkg. Total	Tecycled (kg) 2.6533 1.4641 0.0130 4.1305	Rank NA 22 1		n - Solid Waste Waste (kg) 14.6614 6.1946 1.7964 22.6524 Emissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.5230 2% 7 1.5153 5% 3 0.9776 D1 Transport 0.2455 1% 8 0.09841 3% 5 3.1529 D1 Pkg. Transport 0.0000 0% 13 0.9963 3% 4 0.0000 D2 Pkg. Transport 0.0000 0% N/A 5.8826 20% 2 22.5160 D2 1Pkg. Transport 0.1276 0% 10	3.152 0.000 0.000			Transport ct Transport Transport Production Transport 6	D2 2Pkg. Filling D3 1Pkg. D3 2Pkg. D3 2Pkg. Total	26.6464 Recycled (kg) 2.6533 1.4641 0.0130 4.1305	NVA Aank NVA 33		28.7834 n - Solid Waste Waste (kg) 14.6614 6.1946 6.1946 1.7964 22.6524 Fmissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.5236 2% 7 1.5153 5% 3 0.9776 D1 Transport 0.0215 0% 13 0.9841 3% 5 3.1529 D1 Pkg. Transport 0.0000 0% NA 0.9963 3% 4 0.0000 Manufacturing 1.5153 5% 4	0.000 0			Production Transport Transport Production Transport 6	D2 2Pkg. D2 2Pkg. D3 Produ D3 1Pkg. D3 2Pkg. D3 2Pkg. Total	0.0000 26.6464 3ecycled (kg) 2.6533 1.4641 0.0130 4.1305	NVA NVA NA 33211		18.6151 28.7834 28.7834 28.7834 14.6614 6.1946 6.1946 6.1946 1.7964 22.6524 Emissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.2455 1% 8 1.5153 5% 3 0.9776 D1 Transport 0.0215 0% 13 0.9841 3% 5 3.1529 D1 Pkg. Transport 0.0000 0% NA	0.000 0.0000 0.0000 0.0000 0.0000			Transport Production Transport Transport Production Transport fe	D2 1Pkg. D2 2Pkg. D2 2Pkg. D3 Produ D3 2Pkg. D3 2Pkg. Total	22.5160 0.0000 26.6464 26.533 2.6533 1.4641 1.4641 4.1305 4.1305	NA 332 - 12 NA 332 - 12		5.8826 5.8826 18.6151 28.7834 28.7834 28.7834 28.7834 6.1946 6.1946 1.7964 1.7964 22.6524 Fmissions
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.2455 1% 8 1.5153 5% 3 0.9776 D1 Transport 0.0215 0% 13	0.977 0.000 0.000 0.000 0.000 0.000			uring Transport Production Transport Production Transport fe	Manufact D2 1Pkg. D2 2Pkg. D3 Produ D3 1Pkg. D3 2Pkg. D3 2Pkg. Total	0.0000 22.5160 0.0000 26.6464 26.533 1.4641 1.4641 1.4641 1.4641 1.4641 1.4641	NA 22 - 12 4		0.9963 5.8826 5.8826 5.8826 28.7834 28.7834 28.7834 28.7834 28.614 6.1946 6.1946 6.1946 1.7964 7.7964 7.7964
0.7685 3% 6 0.0000 Feedstock 0.5230 2% 7 0.0215 0% 7 0.0000 Material Production 0.2455 1% 8	0.000 0.0000 0.0000 0.0000 0.0000 0.0000	Z		Transport Transport Production Transport Transport Production Transport Ee	D1 Pkg. 1 Manufact D2 1Pkg. D2 2Pkg. D3 Produ D3 2Pkg. D3 2Pkg. D3 2Pkg. Total	3.1529 0.0000 22.5160 0.0000 26.6464 26.6464 1.4641 1.4641 1.4641 1.4641 1.4641 1.4641 1.4641 1.4641	NA 80 1 2 4 5		0.9841 0.9963 5.8826 5.8826 5.8826 18.6151 28.7834 28.7834 28.7834 0.1946 6.1946 6.1946 1.7964 22.6524 Fmissions
0.7685 3% 6 0.0000 [Feedstock 0.5230] 2% 7	0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000	Z		port Transport Transport Transport Transport Production Transport	D1 Trans D1 Pkg. 1 D2 2Pkg. D2 2Pkg. D3 2Pkg. D3 2Pkg. D3 2Pkg. Total	0.9776 3.1529 0.0000 22.5160 0.0000 26.6464 26.533 1.4641 1.4641 0.0130 4.1305	NA NA NA NA		1.5153 0.9841 0.9863 5.8826 5.8826 5.8826 5.8826 5.8826 5.8826 14.6614 6.1946 6.1946 6.1946 1.7964 5.1946 5.1946 1.7964
	0.000 0.0000 0.000000			Production port ransport Transport Transport Transport Production Transport e	Material F D1 Trans D1 Pkg. D1 D2 2Pkg. D2 2Pkg. D3 2Pkg. D3 2Pkg. D3 2Pkg. Total	0.0000 0.9776 0.9776 0.0000 0.0000 0.0000 22.5160 0.0000 26.6464 1.4641 1.4641 1.4641 0.0130 4.1305	NA 22 - 1 2 4 5 3 3 7		0.0215 1.5153 1.5153 0.9841 0.9864 5.8826 5.8826 5.8826 18.6151 18.6151 14.6614 6.1946 6.1946 6.1946 1.7964 22.6524 Fmissions

Emissions
- Water
Allocation
Phase /

			-0.40	0.15	00.00	0.75	0.00	12.12		Metals	5.73	5.64	-0.07	11.30
TDS	6.78	0.00	0.00	0.04	0.00	0.07	0.00	6.89		TDS	5.59	1.06	0.11	6.76
COD	12.08	0.42	1.18	12.79	0.09	168.63	1.40	196.59		COD	12.75	4.78	6.90	24.43
BOD	1.82	0.05	0.15	1.68	0.02	58.05	0.42	62.19		BOD	1.92	0.44	0.77	3.13
Acid	2.08	00.00	00.00	0.02	00.0	0.03	0.00	2.13		Acid	1.68	0.33	0.08	2.09
Rank	2	5	4	S	9	-	7	N/A		Rank	1	2	3	N/A
%	8%	%0	1%	%2	%0	84%	%0	100%	su	%	62%	27%	11%	100%
ter Emissions Emissions (g)	76.89	4.62	14.26	70.89	0.12	836.93	-3.47	1000.25	1 - Water Emisssions	Emissions (g)	92.25	39.89	16.44	148.58
Phase Allocation - water Emiss	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	otal	Component Allocation - Water	Component	dn	Lid	Seal	Total

Segment Allocation - Water Emission Segment Emission Feedstock Emission Material Production D1 D1 Transport Manufacturing D2 1Pkg. Transport D2 D2 2Pkg. Transport D2 D2 2Pkg. Transport D2 D2 2Pkg. Transport D2 D2 2Pkg. Transport D3 D3 Product Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport D3 D3 2Pkg. Transport		% Rank Acid BOD COD TDS Meta	52.33 5% 3 1.417 1.236 8.222 4.617 7.912	24.56 2% 7 0.665 0.580 3.859 2.166 3.713	0% 11 0.000 0.050 0.425 0.000	0% N/A 0.000 0.000 0.000 0.000	0.147 1.178 0.000 -	6 0.000 0.298 2.518 0.001	4% 4 0.020 1.328 9.822 0.035	0% 10 0.000 0.054 0.454 0.000	0.12 0% 12 0.000 0.023 0.086 0.000 0.000	40% 1	2% 8	37% 2 0.028 5	4% 5 0.000 0.398 3.367 0.001	
	er Emissions	Rank				%0	1%	3%		%0	%0		2%	37%		-3.47 0% 14

	Rank	2	5	ю	4	9	-	2	N/A
	% Ra	16%	%0	9%	8%	%0	67%	%0	100%
	Use (liter)	129.04	2.79	66.39	63.65	0.00	521.57	-2.59	783.86
I HADO MICOMIONI	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
			əs	U 1	ieti	вW	l		

Phase Allocation - Impact Categories

F		10.	10	~	_	10	-		
	Rank		3	0	4	9	-	<u> </u>	N/A
	%	39%	%0	11%	4%	0%	50%	-5%	100%
	MAC (m ³)	57.354	0.653	15.896	6.370	0.085	72.916	-6.692	146.582
	Bank	9	5	e	2	4	1	7	N/A
ļ	%	°0%	%0	10%	11%	%0	87%	-7%	100%
	(md CFC-11)	00.0	00.0	0:30	0.34	00.0	2.68	-0.23	3.09
	Bank	2	2	e	5	9	-	4	N/A
	%	30%	%0	13%	4%	%0	43%	%6	100%
aduat minado adoganad	GWP(kg CO _c)	41.76	0.41	18.03	6.14	0.43	59.86	12.80	139.42
	Dhaco	Material Production	Distribution 1	Manufacturing	Distribution 2	Filina	Distribution 3	End of Life	Total
	S	orie	6 0	te()	980	lu	ł	
-									

	Process	Injection Molding	0	Extrusion	
	Manufacturer	Polytainers II	0	Clear-Lam	
	Name	Cup	Lid	Seal	
PP 6 oz CF IM (Designation	Component 1	Component 2	Component 3	

Material	Weight (kg)	%	Bank	Mat. Prod.	%	Rank
Acrylic	000.0	%0.0	N/A	0.00	0.0%	N/A
Aluminum	0000	%0.0	N/A	0.00	0.0%	N/A
Corrugated	31.106	55.1%	1	893.30	32.7%	2
Cotton Color	0.647	1.1%	9	30.23	1.1%	5
LDPE Film	0.304	0.5%	7	27.30	1.0%	9
DPE	0.138	0.2%	6	11.34	0.4%	8
DPE	0000	%0.0	N/A	00.0	0.0%	N/A
Paper Board	0.217	0.4%	8	10.52	0.4%	6
	1.467	2.6%	3	116.59	4.3%	S
	0.680	1.2%	5	49.31	1.8%	4
	20.935	20.935 37.1%	2	1567.59	57.4%	1
White Color	0000	%0.0	N/A	00.0	0.0%	N/A
Nood	0.929	1.6%	4	26.43	1.0%	7
lotal	56.42	100%	N/A	2732.60	100%	N/A

Energy	
Phase Allocation - En	Dhood

N/A	N/A	100%	3649.81	Total	uЗ
3.43%	7	-4%	-142.99	End of Life	erg
41.22%	2	41%	1483.61	Distribution 3	λĒ
0.00%	6	%0	0.16	Filling	
39.18%	4	3%	113.43	Distribution 2	
27.63%	3	12%	425.93	Manufacturing	
0.09%	5	%0	2.96	Distribution 1	
1.01%	1	48%	1763.71	Material Production	
Henewable %	Hank	%	Energy (MJ)	Phase	

Energy	
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Compor	

Component	Energy (MJ)	%	Rank	Renewable %
Cup	1939.59	93%	1	6.77%
Lid	0.00	%0	3	00.00%
Seal	148.79	7%	2	6.80%
Total	2088.38	100%	N/A	N/A

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Segment Allocation - Energy	nergy			
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	1072.75	29%	1	A/N
Material Production	690.96	19%	3	N/A
D1 Transport	5.95	%0	10	%60.0
D1 Pkg. Transport	0.01	%0	13	%60.0
Manufacturing	425.93	12%	5	27.63%
D2 1Pkg. Transport	29.11	1%	8	%60:0
D2 2Pkg. Production	80.08	2%	9	55.46%
D2 2Pkg. Transport	4.24	%0	11	%60:0
Filling	0.16	%0	12	0.00%
D3 Product Transport	501.15	14%	4	0.09%
D3 1Pkg. Transport	23.95	1%	6	%60.0
D3 2Pkg. Production	910.03	25%	2	67.15%
D3 2Pkg. Transport	48.48	1%	7	%60.0
End of Life	-142.99	-4%	14	3.43%
Total	3649.81	100%	N/A	N/A

Material Production			Rank	Recycled (kg)	- Se	Segment	Waste (kg)	% F	Rank	Recycled (kg)
	0 7954		5	0.0000	Feedstock	×	0.4838	2%	7	0.0000
	0.0223	%0		0.0000	Material F	Material Production	0.3116	1%	8	0.0000
Manufacturing	1.2658	5%	4	0.7821	D1 Transport	port	0.0223	%0	12	0.0000
Distribution 2	0.7382	3%	9	1.9319	D1 Pkg. Transport	Fransport	0.0000	%0	4	00000
	1.3284	5%	e	0.0000	Manufacturing	uring	1.2658	5%	2	0.7821
Distribution 3	6.5908	25%	~	28.4025	D2 1Pkg.	Transport	0.1092	%0	₽	0.0000
End of Life	15.1393	58%	-	0.0000	D2 2Pkg.	Production	0.6131	2%	ø	0.0000
	25.8802	100%	N/A	31.1165	D2 2Pkg.	Transport	0.0159	%0	13	1.9319
			1		Filling		1.3284	5%	4	0.0000
Component Allocation - Solid Waste	 Solid Waste 				D3 Produ	D3 Product Transport	1.8802	7%	σ	00000
Component	Waste (ka)	1 %	Rank	Recycled (kg)	D3 1 Pkg.	D3 1Pkg. Transport	0.0899	%0	11	0000
	16.7246	8	-	2.6966	D3 2Pkg.	D3 2Pkg. Production	4.4388	17%	2	0.0000
		%0	e	0.0000	D3 2Pkg.	D3 2Pkg. Transport	0.1819	1%	6	28.4025
	2.3951	13%	5	0.0174	End of Lit	Life	15.1393	58%		0.0000
	19.1197	100%	N	2.7140	Total		25.8802	100%	N/A	31.1165
Phase Allocation - Air Emissions	Emissions	ŀ	ļ		-	A CH		700	ļ	Critoria
Phase	Emissions (g)	%	Rank	8	Hydrocarbons	XON	Particulates			
Material Production	934.47	42%	N	31.87	318.68	243.39	51.21	N	2/3.80	20.818 2 2 2
Distribution 1	7.93	%0	~	1.17	0.52	5.09	0.27		0.54	1.59
Manufacturing	198.01	9%	m	8.19	4.38	20.04	32.12			
Distribution 2	69.84	3%	5	8.47	8.20	33.32	2.87		8.45	61.31
Filling	13.76	1%	9	2.10	0.02	0.28	0.07		0.0	2.51
Distribution 3	953.77	42%	1	119.23	76.44	527.45	38.35		101.63	863.09
End of Life	73.09	3%	4	23.82	-0.84	-14.45	-21.74		-32.27	-45.49
	2250.86	100%	N/A	194.85	407.40	845.72	103.75	4	408.47	1960.19
onent Allocatior	Component Allocation - Air Emissions									
Component	Emissions (g)	%	Bank	S	Hydrocarbons	XON	Particulates	SOX	Ì	Criteria
	1109.07	%06	-	55.58	288.22	294.14	53.71		252.52	944.18
	00.0	%0	3	0.00	00.0	00.00	0.00		0.0	0.00
	121.00	10%	2	7.85	34.24	28.40	7.30		23.92	101.72

Segment Allocation - Air Emissions	Segment Emissions (g) % Rank	Feedstock 568.38 25% 2	Material Production 366.09 16% 3	D1 Transport 7.92 (S Manufacturing 198.01 9% 5	D2 1Pkg. Transport 37.23 2% 8	D2 2Pkg. Production 27.18 1	6 D2 2Pkg. Transport 5.42 0% 13		-	30.63 1	n 220.31 1(62.00	End of Life 73.09 3% 6	Total 2250.86 100% N/A
	00	19.39	12.49	1.17	00.0	8.19	5.05	2.69	0.74	2.10	86.96	4.16	19.70	8.41	23.82	194.85
	Hydrocarbons	193.83	124.85	0.52	0.00	4.38	2.54	5.29	0.37	0.02	43.69	2.09	26.43	4.23	-0.84	407.40
	XON	148.04	95.35	5.08	0.01	50.64	23.90	5.94	3.48	0.28	411.23	19.65	56.78	39.78	-14.45	845.72
-	Particulates	31.15	20.06	0.27	0.00	32.72	1.37	1.29	0.20	0.07	23.62	1.13	11.32	2.28	-21.74	103.75
2	sox	166.57	107.29	0.54	0.00	56.22	2.64	5.42	0.38	0.04	45.41	2.17	49.65	4.39	-32.27	408.47
	Criteria	558.98	360.04	7.58	0.01	152.15	35.51	20.63	. 5.17	2.51	610.91	29.20	163.88	59.10	-45.49	1960.19

Jebsen Allocation - Water Emissions

ssions ons (g) % Bank Acid BOD COD	7 6% 2		12.14 1% 4 0.00 0.15 1.21	55.22 5% 3 0.01 1.42 11.82	0.16 0% 6 0.00 0.03 0.12	937.75 87% 1 0.02 72.73 203.17	-2.82 0% 7 0.00 0.34 1.13	1074.42 100% N/A 2.05 76.82 229.33	Emisssions	ons (g) % Rank Acid BOD COD	104.88 83% 1 1.91 2.17 14.45	0:00 0% 3 0:00 0:00 0:00	21.92 17% 2 0.10 1.03 9.20	<u>126 76 100% N/A 2 01 3 20 23 65 </u>
Phase Allocation - Water Emissi	ction	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	Component Allocation - Water	Component Emissi	Cup	Lid	Seal	Tatal

40.00	%	Bank	Acid 1 227	BOD 1 272	COD 6 959	TDS 3.983	Metals 4 247
26.32		n o	0.790	0.819	4.482	2.565	2.735
4.79		10	0.000	0.052	0.440	000.0	0.003
0.01	1 0%	13	0.000	0.000	0.001	0.000	0.000
12.14	4 1%	ი	0.000	0.154	1.210	0.000	-0.540
23.45	5 2%	2	0.000	0.255	2.156	0.001	0.015
28.35	5 3%	5	0.011	1.128	9.347	0.020	0.075
3.42	2 0%	11	0.000	0.037	0.314	0000	0.002
0.16	S 0%	12	0.000	0.030	0.115	0.000	0.000
403.74	4 38%	2	0.000	4.383	37.087	0.010	0.255
19.30		ω	0.000	0.209	1.773	0.000	0.012
475.66	6 44%	-	0.023	67.715	160.726	0.050	0.578
39.06	6 4%	4	0.000	0.424	3.588	0.001	0.025
-2.82	2 0%	14	0.000	0.340	1.135	0.001	-0.001
1074.42	2 100%	N/A	2.051	76.818	229.331	6.630	7.406

ſ			10	0	-	(0)	1		
	Rank		4,	.,	7	Ű	•		N/A
	%	14%	0%	7%	7%	0%	72%	%0	100%
	Use (liter)	115.30	2.90	57.94	55.07	00.0	583.02	-2.10	812.12
	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
_			əs	U 1	iðti	вW			

Phase Allocation - Impact Categories

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Pha:	ase	GWP(kg CO ₂)	%	Rank	(mg CFC-11)	%	Bank	MAC (m ³)	%	Rank
Mat	erial Production	42.53	31%	2	0.00	%0	9	54.968	38%	2
Dis	tribution 1	0.42	%0	2	00.0	%0	5	0.676	%0	5
Ra	nufacturing	14.61	11%	e	0.24	%9	2	13.515	6%	3
Dis	tribution 2	4.70	3%	2	0.24	%9	З	4.947	3%	4
	ina	0.58	%0	9	00.0	%0	4	0.114	%0	6
Ö	stribution 3	63.83	47%	-	3.42	92%	1	74.522	52%	1
Ē	d of Life	10.41	8%	4	-0.19	-5%	7	-5.443	-4%	7
P	tal	137.09	100%	N/A	3.71	100%	N/A	143.298	100%	N/A
	Tota	137.09			3./1			-		143.230

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Result	
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Stonyfield Farm Master's Project - Hesults	roject - Results
Data Set	7
Designation	PP 8 oz WH IM
Functional Unit	1000
Container Size	ω
	field Farm Master's F Data Set Designation Functional Unit Container Size

_	ပိ	ပိ	ပိ
4	VH IM (Seal Only)	1000 lb	8 oz.

► WI HA	Name Manufacturer	nent 1 Cup Polytainers Injection Molding	nent 2 Lid 0 0	nent 3 Seal Clear-Lam Extrusion	
► WI HM zo 8 dd	Designation	Component 1	Component 2	Component 3	

Rank	N/A	N/A	2	N/A	5	8	N/A	9	3	4	1	7	9	N/A
%	0.0%	0.0%	30.7%	0.0%	1.4%	0.5%	0.0%	0.3%	3.8%	1.6%	59.7%	0.7%	1.4%	100%
Mat. Prod.	00.0	0.00	712.31	0.00	32.59	12.08	00.00	7.89	87.44	36.98	1385.78	15.75	32.28	2323.10
Rank	N/A	N/A	ł	N/A	2	6	N/A	8	4	5	2	9	З	N/A
%	0.0%	0.0%	52.7%	0.0%	0.8%	0.3%	0.0%	0.3%	2.3%	1.1%	18.507 39.3%	0.8%	2.4%	100%
Weight (kg)	000.0	0.000	24.803	0.000	0.362	0.147	0.000	0.163	1.101	0.510	18.507	0.378	1.134	47.11
Material	Acrylic	Aluminum	Corrugated	Cotton Color	LLDPE Film	LDPE	LLDPE	Paper Board	PE	PET	РР	White Color	Wood	Total
	•				sin	du	1 16	eris	del	W				

Energy	
	1
Allocation	
Phase	

N/A	N/A	100%	3186.95	Total	uЗ
3.43%	7	-4%	-124.39	End of Life	<u>êrç</u>
37.50%	2	41%	1302.04	Distribution 3	λf
%00.0	6	%0	0.12	Filling	
39.86%	4	3%	107.82	Distribution 2	
27.79%	3	12%	370.47	Manufacturing	
%60.0	5	%0	4.93	Distribution 1	
1.02%	1	48%	1525.95	Material Production	
Renewable %	Rank	%	Energy (MJ)	Phase	

Π

Energy	
Allocation	
Component	

Component	Energy (MJ)	%	Rank	Renewable %
Cup	1702.97	94%	1	6.75%
Lid	00.0	%0	3	%00.0
Seal	111.59	%9	2	6.80%
Total	1814.55	100%	N/A	N/A

Segment Allocation - Energy

Segment Allocation - Erleigy	ieiyy			
Segment	Energy (MJ)	%	Rank	Rank Renewable %
Feedstock	924.83	29%	1	N/A
Material Production	601.13	19%	3	N/A
D1 Transport	4.93	%0	10	0.09%
D1 Pkg. Transport	00.0	%0	N/A	%60.0
Manufacturing	370.47	12%	5	27.79%
D2 1 Pkg. Transport	24.87	1%	8	%60.0
D2 2Pkg. Production	78.96	2%	9	54.40%
D2 2Pkg. Transport	3.99	%0	11	0.09%
Filling	0.12	%0	12	0.00%
D3 Product Transport	501.15	16%	4	0.09%
D3 1Pkg. Transport	20.84	1%	9	0.09%
D3 2Pkg. Production	734.56	23%	2	66.40%
D3 2Pkg. Transport	45.50	1%	7	0.09%
End of Life	-124.39	-4%	14	3.43%
Total	3186.95	100%	N/A	N/A

Phase Phase Waste	Waste (kg)	%	Rank	Recycled (kg)		Segment Waste (Waste (kg)	%	Rank	Recycled (kg)
Material Production	0.6802	3%	5	0.0000	Feedstock	ck	0.4122	2%	7	0.0000
Distribution 1	0.0185	%0		0.0000	Material	Material Production	0.2679	1%	8	0.0000
Manufacturing	1.0909	5%	e	0.6843	D1 Transport	sport	0.0185	%0	12	0.0000
Distribution 2	0.6707	3%	9	1.9821	D1 Pkg.	D1 Pkg. Transport	0.0000	%0	N/A	0.0000
Filling	0.9963	4%	4	0.0000	Manufacturing	cturing	1.0909	5%	4	0.6843
Distribution 3	5.8503		2	22.5160	D2 1 Pk(D2 1 Pkg. Transport	0.0933	%0	10	0.0000
End of Life	13.1697		-	0.0000	D2 2Pk(D2 2Pkg. Production	0.5624	3%	9	0.0000
Total	22.4764	100%	N/A	25.1823	D2 2Pk(D2 2Pkg. Transport	0.0150	%0	13	1.9821
					Filling		0.9963	4%	2	0.0000
Component Allocation - Solid Waste	- Solid Waste				D3 Proc	D3 Product Transport	1.8802	8%	3	0.0000
Component	Waste (kg)	%	Bank	Recycled (kg)	D3 1 Pk(D3 1Pkg. Transport	0.0782	%0	11	0.0000
Cup	14.6614	89%	-	2.6533		D3 2Pkg. Production	3.7212	17%	2	0.0000
Lid	0.0000	%0	e	0.0000		D3 2Pkg. Transport	0.1707	1%	6	22.5160
Seal	1.7964	11%		0.0130	End of L	Life	13.1697	29%	1	0.0000
Total	16.4578	100%	NA	2.6664	Total		22.4764	100%	NIA	25.1823
Phase Allocation - Air Emissions	r Emissions									
Phase	Emissions (g)	%	Rank	co	Hydrocarbons	XON	Particulates	SOX	×	Criteria
Material Production	800.64	39%	2	25.78	274.13	209.59	43.80		235.63	788.94
Distribution 1	6.58	%0	2	0.98	0.43	4.22	0.23		0.45	6.30
Manufacturing	170.02	8%	e	7.05	3.55	43.76	28.08		47.53	129.96
Distribution 2	62.98		5	7.39	7.80	29.47	2.57		7.90	55.12
Filling	10.32	1%	9	1.57	0.02	0.21	0.05		0.03	1.89
Distribution 3	912.84	45%	+	116.72	73.55	512.86	36.63		93.05	832.81
End of Life	63.58	3%	4	20.72	-0.73	-12.57	-18.91		-28.07	-39.57
Total	2026.96	100%	N/A	180.20	358.75	787.53	92.44		356.52	1775.45
Component Allocation - Air Emissions	n - Air Emissions									
Component	Emissions (g)	%	Rank	co	Hydrocarbons	XON	Particulates	SOX	×	Criteria
Cup	973.87	91%	1	48.74	253.09	258.21	47.10		222.23	829.36
Lid	0.00		3	0.00		00.00			0.0	0.00
Seal	90.75	%6	2	5.89	25.68	21.30	5.48		17.94	76.29
Total	1064.63	100%	N/A	54.63	278.77	279.51	52.57		240.17	905.65

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	Criteria	478.15	310.79	6.30	00.0	129.96	30.33	19.92	4.87	1.89	610.91	25.40	141.03	55.47	-39.57	1775.45
	SOX	142.81	92.82	0.45	0.00	47.53	2.25	5.28	0.36	0.03	45.41	1.89	41.63	4.12	-28.07	356.52
	Particulates	26.55	17.25	0.23	0.00	28.08	1.17	1.21	0.19	0.05	23.62	0.98	9.89	2.14	-18.91	92.44
	XON	127.03	82.57	4.22	0.00	43.76	20.42	5.77	3.28	0.21	411.23	17.10	47.20	37.34	-12.57	787.53
	Hydrocarbons	166.14	107.99	0.43	00.00	3.55	2.17	5.28	0.35	0.02	43.69	1.82	24.08	3.97	-0.73	358.75
	co	15.63	10.16	0.98	0.00	7.05	4.32	2.38	0.69	1.57	86.96	3.62	18.25	7.90	20.72	180.20
	Rank	2	Э	12	N/A	5	8	10	13	11	1	6	4	7	6	N/A
	%	24%	16%	%0	%0	8%	2%	1%	%0	1%	32%	1%	%6	3%	3%	100%
Air Emissions	Emissions (g)	485.24	315.40	6.58	00.0	170.02	31.80	26.08	5.10	10.32	640.84	26.64	187.17	58.19	63.58	2026.96
Segment Allocation - Air Emissions	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transpor	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total
				-		<u>ده</u>			esi			1				

Phase Allocation - Water Emissions

COD TDS	5.866 3.481	3.813 2.263	0.365 0.000	0.000 0.000	0.975 0.000	1.842 0.000	7.874 0.020	0.296 0.000 0.002	0.086 0.000 0.000	37.087 0.010 0.255	1.542 0.000	126.000 0.062 0.453	3.367 0.001 0.023	0.987 0.000	400 400 E 0071 E 4E0
BOD	1.052	0.684	0.043	0.000	0.123	0.218	0.995	0.035	0.023	4.383	0.182	53.015	0.398	0.296	
Acid	1.068	0.694	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.028	0.000	0000	000
Rank	4	9	10	N/A	6	7	5	E	12	-	œ	~	e	14	
%	4%	2%	%0	%0	1%	2%	3%	%0	%0	43%	2%	39%	4%		
Emissions (g)	34.59	22.48	3.97	00.0	10.39	20.04	26.67	3.22	0.12	403.74	16.79	372.80	36.66	-2.46	
Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg Transnort	Filling	D3 Product Transport	D3 1 Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	
	sions (g) % Rank Acid BOD	sions (g) % Rank Acid BOD COD TDS 34.59 4% 4 1.068 1.052 5.866	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 Material Production 22.48 2% 6 0.694 0.684 3.813	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 D1 Pko. Transport 0.00 0% NA 0.000 0.000 0.000	sions (g) % Rank Acid BOD COD TDS 34.59 4% 4 1.068 1.052 5.866 133 22.48 2% 6 0.694 0.684 3.813 3.813 3.97 0% 10 0.000 0.043 0.365 1365 10.30 0% N/A 0.000 0.000 0.000 0.000 10.39 1% 9 0.000 0.123 0.975	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 13.313 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 Manufacturing 10.30 0% 10 0.000 0.043 0.365 Manufacturing 10.36 1% 9 0.000 0.123 0.975 D2 1 Pkg. Transport 20.04 2% 7 0.000 0.123 0.975	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 1.866 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 Manufacturing 10.39 1% 9 0.000 0.000 0.000 D2 1 Pkg. Transport 20.04 2% 7 0.000 0.123 0.975 Manufacturing 10.39 1% 9 0.000 0.123 0.975 D2 1 Pkg. Transport 20.04 2% 7 0.000 0.123 0.975 D2 2 Pkg. Production 26.67 3% 5 0.011 0.995 7.874	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 5.866 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.684 3.813 Material Production 22.48 2% 6 0.694 0.365 5.866 D1 Fausport 3.97 0% NA 0.000 0.043 0.365 Manufacturing 10.39 1% 9 0.000 0.123 0.975 D2 1 Pkg. Transport 20.04 2% 7 0.000 0.123 1.842 D2 1 Pkg. Transport 26.67 3% 5 0.011 0.995 7.874 D2 2 Pkg. Froduction 2.26 7.87 7.874 0.296 7.876	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 3.813 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 Manufacturing 0.00 0% N/A 0.000 0.043 0.365 Manufacturing 10.39 1% 9 0.000 0.123 0.975 D2 1Pkg. Transport 20.04 2% 7 0.000 0.123 0.975 D2 1Pkg. Transport 20.04 2% 7 0.000 0.975 7.874 D2 2Pkg. Transport 26.67 3% 5 0.011 0.995 7.874 D2 2Pkg. Transport 3.22 0% 11 0.000 0.035 0.296 D2 2Pkg. Transport 0.12 0% 12 0.001 0.035 0.29	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 5.866 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% N/A 0.000 0.043 0.365 Manufacturing 10.39 1% 9 0.000 0.0218 1.842 D2 1Pkg. Transport 20.04 2% 7 0.000 0.995 7.874 D2 2Pkg. Transport 26.67 3% 5 0.011 0.995 7.874 D2 2Pkg. Transport 3.22 0% 11 0.000 0.023 0.296 D2 2Pkg. Transport 0.12 0% 1 0.000 0.023 0.296 D2 2Pkg. Transport 0.12 0% 1 0.000 0.023 0	Šegment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 5.866 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% NA 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% NA 0.000 0.043 0.365 Manufacturing 10.39 1% 9 0.000 0.123 0.365 D2 1Pkg. Transport 20.04 2% 5 0.011 0.995 7.874 D2 2Pkg. Production 26.67 3% 5 0.011 0.995 7.874 D2 2Pkg. Transport 3.22 0% 11 0.000 0.035 0.296 D2 2Pkg. Transport 3.23 0% 1 0.000 0.035 0.	Šegment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 10 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% N/A 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% 1% 9 0.000 0.050 0.975 Manufacturing 10.39 1% 9 0.000 0.123 0.975 D2 1Pkg. Transport 20.04 2% 7 0.000 0.218 1.842 D2 2Pkg. Transport 26.67 3% 5 0.011 0.995 7.874 D2 2Pkg. Transport 2.26.67 3% 5 0.011 0.995 7.874 D2 2Pkg. Transport 3.22 0% 12 0.0000 0.023	Segment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 13.813 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 D1 Pkg. Transport 3.97 0% NA 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% NA 0.000 0.013 0.365 D1 Pkg. Transport 0.00 0% 1% 9 0.000 0.123 0.975 D2 1Pkg. Transport 20.04 2% 7 0.000 0.123 0.975 D2 2Pkg. Froduction 22.86 7 7 0.000 0.035 0.296 D2 2Pkg. Transport 3.22 0% 11 0.000 0.035 0.296 D2 2Pkg. Transport 0.12 0% 12 0.000 0	Šegment Emissions (g) % Rank Acid BOD COD TDS Feedstock 34.59 4% 4 1.068 1.052 5.866 13.813 Material Production 22.48 2% 6 0.694 0.684 3.813 D1 Transport 3.97 0% 10 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% N/A 0.000 0.043 0.365 D1 Pkg. Transport 0.00 0% NA 0.000 0.043 0.365 D2 Pkg. Transport 0.039 1% 9 0.000 0.123 0.975 D2 2Pkg. Production 22.667 3% 5 0.011 0.395 7.874 D2 2Pkg. Transport 22.86 11 0.000 0.023 0.296 7.874 D2 2Pkg. Transport 3.22 0% 12 0.000 0.023 0.296 D2 2Pkg. Transport 3.28 3.7087 1.874 0.0000 0.023

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	Rank		47		7	÷			N/A
	%	13%	0%	7%	7%	0%	73%	%0	100%
arei 030	Use (liter)	92.10	2.40	49.94	47.58	00.00	517.38	-1.83	707.56
FILASE AILUCATION - WALL USC	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
			əs	n ·	ıətı				

Thase Allocation - Impact Categories

		% Rank	36%	%0	9%	3%	%0	55%	-4%	100% N/A
		MAC (m ³)	47.231	0.560	11.576	4.409	0.085	71.977	-4.735	131.104
		Rank	9	5	З	2	4	1	7	N/A
		%	%0	%0	%L	8%	%0	91%	-5%	100%
	ODP	(mg CFC-11)	00.0	00.0	0.21	0.23	0.00	2.68	-0.16	2.96
		Rank	2	2	e	5	9	-	4	N/A
		%	30%	%0	10%	3%	%0	48%	7%	122.82 100%
allul - Illipaci valeguies		GWP(kg CO ₂)	36.78	0.35	12.73	4.24	0.43	59.24	9.05	122.82
FIIASE AIIOCAUUI - IIII		Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
		sə	orio	69	te() t)BC	յա	1	

stonyfield Farm Master's Project - Results	ъ	6 oz Foil Lid	1000 lb	6 oz.
yfield Farm Master	Data Set	Designation	Functional Unit	Container Size
Ston	le	s:19	uə	อ

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	Process	Injection Molding	LDPE Coating	0	
	Manufacturer	Polytainers	Winpak	0	
	Name	Cup	Lid	Seal	
6 oz Foil Lid	Designation	Component 1	Component 2	Component 3	

Rank	N/A	3	2	5	9	8	N/A	N/A	4	N/A	-	N/A	7	N/A
%	0.0%	9.6%	31.1%	1.0%	0.9%	0.4%	0.0%	0.0%	1.9%	0.0%	54.2%	0.0%	0.9%	100%
Mat. Prod.	0.00	277.86	899.02	30.23	26.68	11.34	0.00	0.00	55.65	0.00	1567.59	0.00	26.27	2894.63
Rank	N/A	3	1	9	7	8	N/A	N/A	5	N/A	2	N/A	4	N/A
%	%0.0	2.7%	55.4%	1.1%	0.5%	0.2%	%0.0	%0.0	1.2%	%0.0	37.1%	%0.0 %	1.6%	100%
Weight (kg)	0000	1.516	31.305	0.647	0.297	0.138	000.0	000.0	0.700	0.000	20.935	000.0	0.923	56.46
Material	Acrylic	Aluminum	Corrugated	Cotton Color	LLDPE Film	LDPE	LLDPE	Paper Board	PE	PET	РР	White Color	Wood	Total
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N/A	N/A	100%	3956.60	Total	uЭ
3.42%	7	-4%	-143.79	End of Life	elć
41.19%	2	38%	1484.75	Distribution 3	λ£
0.00%	6	%0	00.0	Filling	
37.11%	4	3%	104.29	Distribution 2	
20.49%	3	14%	573.04	Manufacturing	
0.09%	5	%0	6:90	Distribution 1	
5.86%	1	49%	1931.32	Material Production	
Renewable %	Bank	%	Energy (MJ)	Phase	

Component Allocation - Energy

Component	Energy (MJ)	%	Rank	Renewable %
Cup	1939.59	85%	1	6.77%
Lid	333.14	15%	2	28.79%
Seal	00.0	%0	3	0.00%
Total	2272.73	100%	N/A	N/A

Segment Allocation - Energy

oegineni Ailocauori - Energy	ieiyy			
Segment	Energy (MJ)	%	Rank	Rank Renewable %
Feedstock	1033.17	26%	1	N/A
Material Production	898.15	23%	3	N/A
D1 Transport	6:9	%0	10	%60.0
D1 Pkg. Transport	0.01	%0	12	0.09%
Manufacturing	573.04	14%	4	20.49%
D2 1Pkg. Transport	26.24	1%	8	%60.0
D2 2Pkg. Production	74.31	2%	9	52.04%
D2 2Pkg. Transport	3.74	%0	11	%60.0
Filling	00.0	%0	N/A	0.00%
D3 Product Transport	501.15	13%	5	%60.0
D3 1Pkg. Transport	25.09	1%	6	%60.0
D3 2Pkg. Production	910.03	23%	2	67.15%
D3 2Pkg. Transport	48.48	1%	7	0.09%
End of Life	-143.79	-4%	14	3.42%
Total	3956.60	100%	N/A	A/N

Recycled (kg)	00000							2.1154				0.0000	3 28.4025	0.0000	v 31.5058		Criteria	1171.28	10.84	156.91	54.16	0.00	864.48	-44.23	2213.43		Criteria	944.18	393.87	0.00	
Rank	3	4	-	13	9	6		12	Ż		10	2	8	-	A/N		SOX	362.92	2.58	45.71	7.58	0.00	101.73	-32.39	488.13		SOX	252.52	128.36	0.00	
%	12%	11%	%0	%0	2%			%0		%9	%0	14%	1%	50%	100%		S										S				
Waste (kg)	3.9196	3.4074	0.0257	0.0000	1.4393	0.0984	0.4020	0.0140	0.0000	1.8802	0.0941	4.4388	0.1819	15.9663	31.8679		Particulates	106.61	0.34	30.72	2.39	0.00	38.40	-21.80	156.65		Particulates	53.71	62.91	0.00	
Segment Anocauor - Joint Waste (ck	Material Production	sport	D1 Pkg. Transport	sturing	D2 1Pkg. Transport	 Production 	J. Transport		D3 Product Transport	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	ife			XON	282.69	6.08	61.38	29.78	00.0	528.38	-14.27	894.04		XON	294.14	72.99	0.00	
S	Feedstock	Material	D1 Transport	D1 Pkg.	Manufacturing	D2 1Pkg	D2 2Pkg.	D2 2Pkg.	Filling	D3 Prod	D3 1Pkg	D3 2Pkg	D3 2Pkg	End of Life	Total		Hydrocarbons	295.79	0.56	4.25	7.58	0.00	76.54	-0.83	383.89		Hydrocarbons	288.22	17.97	0.00	
Recycled (kg)	00000	00000	0.9878	2.1154	0.0000	28.4025	0.0000	31.5058			Recycled (kg)	2.6966	0.4067	0.0000	3.1032		co	123.27	1.28	14.84	6.83	00.0	119.43	25.06	290.72		СО	55.58	111.65	00.00	
Rank	2	9	4	5	2	e	-	N/A			Rank	1	~	n	NIA		Bank	-	9	3	5	7	2	4	N/A		Rank	-	2	3	
%	23%	%0	5%	2%	%0	21%	50%	100%			%	67%	33%	%0	100%		%	47%	%0	10%	2%	%0	37%	3%	100%		%	71%	29%	%0	
Waste (kg)	7.3270	0.0257	1.4393	0.5144	0.0000	6.5950	15.9663	31.8679		1 - Solid Waste	Waste (kg)	16.7246	8.2232	0.0000	24.9477	. Emissions	Emissions (g)	1208.77	11.21	255.44	60.80	00.0	955.23	80.92	2572.37	n - Air Emissions	Emissions (g)	1109.07	442.96	00.00	
Phase Allocation - Solid Waste	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total		Component Allocation - Solid Waste	Component	Cup	Lid	Seal	Total	Phase Allocation - Air Emissions	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	Component Allocation - Air Emissions	Component	Cup	Lid	Seal	

4 25% 1 66.95 158.23 151.23 57.03 194.14 6 3 22% 3 57.33 137.56 131.46 49.58 168.77 5 1 0% 11 1.28 0.56 6.07 0.34 2.56 168.77 5 1 0% 13 0.00 0.001 0.00	ent Allocation Segment	Segment Allocation - Air Emissions Segment Emissions (g)	%	Rank	co	Hvdrocarbons	XON	Particulates	SOX	Criteria
(%) 3 57.33 137.56 131.46 49.58 168.77 5 (%) 11 1.28 0.56 6.07 0.34 2.58 168.77 5 (%) 13 0.00 0.00 0.01 0.00 0.00 0.00 (%) 13 0.00 0.00 0.01 0.00 0.00 0.00 (%) 14 14.84 4.25 2.29 21.54 1.24 2.38 (%) 12 0.65 0.33 3.07 0.18 0.34 (%) 12 0.65 0.33 3.07 0.18 2.38 (%) 12 0.65 0.33 3.07 0.18 0.34 (%) 12 0.65 43.69 411.23 23.62 45.41 6 (%) 12 0.00 0.00 0.00 0.00 0.00 (%) 12 0.43.69 411.23 23.62 45.41 6		646.64	25%	-	65.95		151.23	57.03	194.14	626.58
% 11 1.28 0.56 6.07 0.34 2.58 % 13 0.00 0.00 0.00 0.00 0.00 % 4 14.84 4.25 61.38 30.72 45.71 % 8 4.55 2.29 21.54 1.24 2.38 % 10 1.62 4.96 5.17 0.98 4.87 % 12 0.65 0.33 3.07 0.18 0.34 % 12 0.65 0.33 3.07 0.18 0.34 % 12 0.65 0.33 3.07 0.18 0.34 % 12 0.65 0.33 3.07 0.18 4.87 % 12 0.66 43.69 411.23 23.62 45.41 6 % 9 4.35 21.9 20.59 11.32 45.65 7 % 7 8.41 4.23 56.78 11.32 <td< td=""><td></td><td>562.13</td><td>22%</td><td>e</td><td>57.33</td><td>137.56</td><td>131.46</td><td>49.58</td><td>168.77</td><td>544.70</td></td<>		562.13	22%	e	57.33	137.56	131.46	49.58	168.77	544.70
% 13 0.00		11.20	%0	11	1.28		6.07	0.34	2.58	10.82
% 4 14.84 4.25 61.38 30.72 45.71 45.71 % 8 4.55 2.29 21.54 1.24 2.38 % 10 1.62 4.96 5.17 0.98 4.87 % 12 0.65 0.33 3.07 0.18 0.34 % 12 0.065 0.33 3.07 0.18 0.34 % 12 0.06 0.00 0.00 0.00 0.00 % 9 4.35 2.19 20.75 41.23 23.62 45.41 6 % 9 4.35 2.19 20.59 1.18 2.27 45.65 % 7 8.41 4.23 56.78 11.32 43.65 7 % 6 25.06 -0.83 39.78 2.23.62 43.65 7 % 6 2.19.70 26.43 56.78 11.32 49.65 7 %		0.01	%0	13	0.00	00.0	0.01	00.00	0.00	0.01
% 8 4.55 2.29 21.54 1.24 2.38 % 10 1.62 4.96 5.17 0.98 4.87 % 12 0.65 0.33 3.07 0.18 0.34 % 12 0.65 0.33 3.07 0.18 0.34 % NA 0.00 0.00 0.00 0.00 0.00 % 2 86.96 43.69 411.23 23.62 45.41 6 % 9 4.35 2.19 20.59 1.18 2.27 6 % 7 8.41 4.23 39.78 23.62 45.61 6 % 7 8.41 4.23 39.78 2.362 43.65 1 % 6 25.06 -0.83 39.78 2.3.62 43.65 1 % 6 25.06 -0.83 39.78 2.3.62 43.65 1 % 1 4.23		255.44	10%		14.84	4.25	61.38	30.72	45.71	156.91
% 10 1.62 4.96 5.17 0.98 4.87 % 12 0.65 0.33 3.07 0.18 0.34 % N/A 0.00 0.00 0.00 0.00 0.00 % 2 86.96 43.69 411.23 23.62 45.41 6 % 9 4.35 2.19 20.59 1.18 2.27 % 5 19.70 26.43 56.78 11.32 49.65 % 7 8.41 4.23 39.78 2.28 43.65 % 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.89 894.04 156.65 488.13 22		33.55	1%		4.55	2.29	21.54	1.24	2.38	32.00
% 12 0.65 0.33 3.07 0.18 0.34 % N/A 0.00 0.00 0.00 0.00 0.00 % N/A 0.00 0.00 0.00 0.00 0.00 % 2 86.96 43.69 411.23 23.62 45.41 6 % 9 4.35 2.19 20.59 1.18 2.27 % 5 19.70 26.43 56.78 11.32 49.65 % 7 8.41 4.23 39.78 2.28 43.65 % 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.89 894.04 156.65 488.13 22		22.47	1%	10	1.62		5.17	0.98	4.87	17.60
% N/A 0.00 0.0		4.78	%0	12	0.65		3.07	0.18	0.34	4.56
% 2 86.96 43.69 411.23 23.62 45.41 6 % 9 4.35 2.19 20.59 1.18 2.27 % 5 19.70 26.43 56.78 11.32 49.65 1 % 7 8.41 4.23 39.78 2.28 43.65 1 % 7 8.41 4.23 39.78 2.28 4.39 % 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.389 894.04 156.65 488.13 22		0.00	%0		00.0		0.00	00.0	0.00	0.00
% 9 4.35 2.19 20.59 1.18 2.27 % 5 19.70 26.43 56.78 11.32 49.65 1 % 7 8.41 4.23 39.78 2.28 4.36 1 % 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.89 894.04 156.65 488.13 22		640.84	25%	2	86.96		411.23	23.62	45.41	610.91
% 5 19.70 26.43 56.78 11.32 49.65 1 % 7 8.41 4.23 39.78 2.28 4.39 % 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.89 894.04 156.65 488.13 22		32.08	1%		4.35	2.19	20.59	1.18	2.27	30.59
% 7 8.41 4.23 39.78 2.28 4.39 % 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.89 894.04 156.65 488.13 25		220.31	9%	5	19.70	26.43	56.78	11.32	49.65	163.88
% 6 25.06 -0.83 -14.27 -21.80 -32.39 % N/A 290.72 383.89 894.04 156.65 488.13 22		62.00	2%	7	8.41	4.23	39.78	2.28	4.39	59.10
% N/A 290.72 383.89 894.04 156.65 488.13		80.92	3%		25.06	-0.83	-14.27	-21.80	-32.39	-44.23
		2572.37	100%		290.72	383.89	894.04	156.65	488.13	2213.43

Emissions
- Water
Allocation
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A der Emissions	Emissions (g) % Rank Acid BOD COD TDS Metals	85.33 8% 2 1.95 1.36 9.18 6.39	5.60 1% 2 0.00 0.05 0.46 0.00	10.97 1% 4 0.00 0.07 0.60 0.00	45.33 4% 3 0.01 0.84 5.60 0.02	0:00 0% 6 0:00 0:00 0:00 0:00	938.67 87% 1 0.02 72.74 203.26 0.06	-2.75 0% 7 0.00 0.36 1.20 0.00	083.15 100% N/A 1.98 75.44 220.30 6.47	in - Water Emisssions	Emissions (g) % Rank Acid BOD COD TDS Metals	104.88 74% 1 1.91 2.17 14.45 6.34	37.73 26% 2 0.05 0.19 1.28 0.07		
Phase Allocation - Water Em	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	Component Allocation - Water	Component	Cup	Lid	Seal	0001

Segment Allocation - Water	- Water Emissions							
Segment	Emissions (g)	%	Rank	Acid	BOD	cop	TDS	Metals
	45.65	4%	e	1.041	0.730	4.910	3.418	3.595
Aaterial Production	39.68	4%	4	0.905	0.634	4.268	2.972	3.125
01 Transport	5.59	1%	10	0.000	0.054	0.459	0.000	0.004
01 Pkg. Transport	0.01	%0	12	0000	0.000	0.001	0.000	0.000
Manufacturing	10.97	1%	6	0000	0.072	0.601	0.000	0.007
D2 1Pkg. Transport	21.14	2%	2	0.000	0.230	1.943	0.000	0.013
22 2Pkg. Production		2%	9	0.011	0.582	3.377	0.019	0.070
D2 2Pkg. Transport		%0	1	0.000	0.033	0.277	0.000	0.002
	0.00	%0	N/A	0.000	0000	0.000	0.000	0.000
03 Product Transpor	4	37%	2	0000	4.383	37.087	0.010	0.255
03 1Pkg. Transport	20.21	2%	80	0.000	0.219	1.857	0.000	0.013
D3 2Pkg. Production	V	44%		0.023	67.715	160.726	0.050	0.578
D3 2Pkg. Transport	39.06	4%	5	0.000	0.424	3.588	0.001	0.025
	-2.75	%0	14	0.000	0.358	1.203	0.001	0.000
	1083.15	100%	N/A	1.979	75.435	220.296	6.471	7.686
- 100 - 1	and an and an and an and an and an and an an and an an and an an an an an an an an an an an an an							

- HASE ANUCANUT - VARIEN USE	Phase Use	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	
	Jse (liter)	121.47	3.03	52.21	31.65	0.00	583.58	-2.12	789.81
	%	15%	%0	7%	4%	0%	74%	%0	100%
	Rank	2	5	З	4	6	1	7	N/A

Thase Allocation - Impact Categories

P				_						_
	Bank		-	5	e	4	9	8	2	N/A
	%	۶	46%	1%	9%6	3%	%0	46%	-3%	100%
	MAC (m ³)		74.830	0.953	13.929	4.382	0.000	74.646	-5.395	163.344
	Bank		5	4	2	З	5	1	7	N/A
	%	ę	0%	%0	7%	5%	%0	93%	-5%	100%
	ODP (ma CEC_11)		0.00	00.0	0.25	0.20	00.0	3.42	-0.19	3.69
			2	9	e	5	7	-	4	N/A
	6	<u></u>	36%	%0	15%	2%	%0	40%	7%	100%
audii - IIIIpadi Galegoiles		aver (ny 202)	26.57	0.49	23.28	3.88	00.0	63.92	10.88	159.02
LIIDASE AILOCAUOLI - IIII		rnase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
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. Results	
Project -	
Master's	
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	9	8 oz Foil Lid	1000 lb	8 oz.	
Stonyfield Farm Master's Project - Results	📕 📕 Data Set	Designation	E Functional Unit	Container Size	

8 oz Foil Lid			
Designation	Name	Manufacturer	Process
Component 1	Cup	Polytainers	Injection Molding
Component 2	Lid	Winpak	LDPE Coating
Component 3	Seal	0	0

Rank	N/A	e	2	N/A	9	8	N/A	N/A	4	N/A	-	7	5	N/A
%	%0.0	8.5%	29.3%	0.0%	1.3%	0.5%	0.0%	0.0%	1.7%	0.0%	56.7%	0.6%	1.3%	100%
Mat. Prod.	00.0	208.39	716.59	00.0	32.13	12.08	00.0	00.0	41.74	00.0	1385.78	15.75	32.16	2444.63
Rank	N/A	3	1	N/A	2	8	N/A	N/A	5	N/A	2	9	4	N/A
%	0.0%	2.4%	52.9%	0.0%	0.8%	0.3%	%0.0	0.0%	1.1%	0.0%	39.3%	0.8%	2.4%	100%
Weight (kg)	000.0	1.137	24.953	000.0	0.357	0.147	000.0	000.0	0.525	000.0	18.507	0.378	1.130	47.13
Material	Acrylic	Aluminum	Corrugated	Cotton Color	LLDPE Film	LDPE	ГГДРЕ	Paper Board	ЪЕ	PET	РР	White Color	Wood	Total
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	Phase	Energy (MJ)	%	Rank	Renewable %
	Material Production	1651.66	48%	1	5.27%
	Distribution 1	5.71	%0	5	0.09%
	Manufacturing	480.80	14%	3	21.37%
	Distribution 2	100.96	%E	4	38.31%
	Filling	00.0	%0	6	0.00%
λĒ	Distribution 3	1302.90	38%	2	37.48%
eri	End of Life	-124.99	-4%	7	3.42%
μЭ	Total	3417.04	100%	N/A	N/A
	Component Allocation - Energy	n - Enerav			

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VUILIPUITORIA ARIVARIANI - LITORY	י – הופוטא			
Component	Energy (MJ)	%	Rank	Rank Renewable %
Cup	1702.97	87%	1	6.75%
Lid	249.85	13%	2	28.79%
Seal	0.00	%0	3	000%
Total	1952.82	100%	N/A	N/A

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Segment Allocation - Energy	nergy			
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	895.14	26%	1	N/A
Material Production	756.52	22%	2	N/A
D1 Transport	5.71	%0	10	%60.0
D1 Pkg. Transport	00.0	%0	N/A	%60.0
Manufacturing	480.80	14%	2	21.37%
D2 1Pkg. Transport	22.74	1%	ω	%60.0
D2 2Pkg. Production	74.63	2%	9	51.79%
D2 2Pkg. Transport	3.59	%0	11	%60.0
Filling	00'0	%0	A/A	0.00%
D3 Product Transport	501.15	15%	4	%60:0
D3 1Pkg. Transport	21.69	1%	ი	%60.0
D3 2Pkg. Production	734.56	21%	e	66.40%
D3 2Pkg. Transport	45.50	1%	7	%60.0
End of Life	-124.99	-4%	14	3.42%
Total	3417.04	100%	N/A	N/A

Segment Allocation - Air Emissions	Segment Emissions (g) % Rank CO	Feedstock 545.41 24% 2 51.13	Material Production 460.95 20% 3 43.21	D1 Transport 9.04 0% 11 1.0	D1 Pkg. Transport 0.00 0% N/A 0.00	Manufacturing 213.10 9% 4 12.04	D2 1 Pkg. Transport 29.08 1% 8 3.95	n 22.54 1% 10	D2 2Pkg. Transport 4.59 0% 12 0.62	0.00	D3 Product Transport 640.84 28% 1 86.96	D3 1 Pkg. Transport 27.74 1% 9 3.76	D3 2Pkg. Production 187.17 8% 5 18.25	D3 2Pkg. Transport 58.19 3% 7 7.90	End of Life 69.45 3% 6 21.65	Total 258.09 100% N/A 252.1
	Hydrocarbons	13 139.27	21 117.70	1.06 0.46	00.00	3.46	35 1.98	1.58 5.03	32 0.31	00.00	96 43.69	76 1.89	25 24.08	3.97	35 -0.72	11 341.12
	XON	129.56	109.50	4.96	00.00	51.81	18.67	5.20	2.95	00.00	411.23	17.80	47.20	37.34	-12.44	823.78
	Particulates	46.25	39.09	0.27	0.00	26.58	1.07	0.97	0.17	0.00	23.62	1.02	68.6	2.14	-18.96	132.11
	sox	163.90	138.52	1.98	00.0	39.65	2.06	4.86	0.33	00.0	45.41	1.97	41.63	4.12	-28.16	416.27
	Criteria	530.11	448.02	8.73	0.0	133.54	27.73	17.64	4.38	0.0	610.91	26.44	141.03	55.47	-38.63	1965.38

Emissions
- Water
Allocation
Phase /

LIIASE AII	FIIASE AIIOCALIULI - VAREI ETIT								
Ч	Phase	Emissions (g)	%	Rank	Acid	BOD	COD	TDS	Metals
Material P	Material Production	70.69	%L	2	1.71	1.19	7.98	5.62	5.83
Distribution 1	n 1	4.57	%0	5	00.0	0.04	0.38	0.00	0.00
Manufacturing	uring	9.51	1%	4	00.0	90.0	0.52	00.00	0.01
Distribution 2	n 2	42.50	4%	e	0.01	0.82	5.35	0.02	0.09
Filling		0.00	%0	9	00.00	0.00	00.00	0.00	0.00
Distribution 3	n 3	830.68	87%	-	0.03	57.99	168.06	0.07	0.74
End of Life	e	-2.40	%0	7	0.00	0.31	1.04	00.00	00.0
Total		955.55	100%	N/A	1.75	60.41	183.32	5.72	6.67
Compone	Component Allocation - Water	A - Water Emisssions	su						
Com	Component	Emissions (g)	%	Rank	Acid	BOD	COD	TDS	Metals
oup		92.25	%17	-	1.68	1.92	12.75	5.59	5.73
Lid		28.30	23%	2	0.04	0.14	0.96	0.05	0.17
Seal		0.00	%0	3	0.00	00.00	0.00	0.00	0.00
Total		120.55	100%	N/A	1.72	2.06	13.70	5.65	5.90

	Segment Allocation - Water	Water Emissions							
	Segment	Emissions (g)	%	Rank	Acid	BOD	COD	TDS	Metals
	Feedstock	38.31	4%	e	0.926	0.645	4.326	3.048	3.160
(Material Production	32.38	3%	5	0.783	0.545	3.656	2.576	2.671
b'tı	D1 Transport	4.57	%0	10	0.000	0.045	0.379	0.000	0.003
uo;	D1 Pkg. Transport	0.00	%0	N/A	0.000	0.000	0.000	0.000	0.000
c)	Manufacturing	9.51	1%	6	0.000	0.062	0.518	0.000	0.006
su	D2 1 Pkg. Transport	18.32	2%	2	0.000	0.199	1.684	0.000	0.012
ois	D2 2Pkg. Production	21.29	2%	9	0.011	0.585	3.397	0.019	0.072
sir	D2 2Pkg. Transport	2.89	%0	11	0.000	0.031	0.266	0.000	0.002
uΞ	Filling	0.00	%0	N/A	0.000	0.000	0.000	0000	0.000
J9	D3 Product Transpor	403.74	42%		0.000	4.383	37.087	0.010	0.255
tsV	D3 1Pkg. Transport	17.47	2%	80	0000	0.190	1.605	0.000	0.011
٨	D3 2Pkg. Production	372.80	39%	2	0.028	53.015	126.000	0.062	0.453
	D3 2Pkg. Transport	36.66	4%	4	0.000	0.398	3.367	0.001	0.023
	End of Life	-2.40	%0	14	0.000	0.309	1.038	0.000	0.000
	Total	955.55	100%	N/A	1.748	60.409	183.324	5.718	6.667

Control Use (liter) % Re rial Production 96.73 14% 14% bution 1 2.50 0% 7% fracturing 45.64 7% 14% bution 2 30.02 4% 14% bution 3 517.79 75% 16% bution 3 517.79 75% 10% bution 3 517.79 75% 10%	1					-	6			
Phase Use (liter) 9 Material Production 05.73 1 Distribution 1 2.50 3 Manufacturing 45.64 30.02 Distribution 2 30.02 3 Filling 0.00 0 Distribution 3 517.79 7 End of Life -1.84 7		Rank	L.V	ι,	0	4	e	F	2	N/A
Phase Antocation Water Ose Interest Production Use (lit Manufacturing Distribution 2 Filling Distribution 3 Find of Life		%	14%	0%	7%	4%	%0	75%	0%	100%
	a(c) 030	Use (liter)	96.73	2.50	45.64	30.02	00.0	517.79	-1.84	690.83
esU ater Use	I HASE SHOCKHOIL - VY	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filing	Distribution 3	End of Life	Total
				əs	ب ۱	əte	?M			

Phase Allocation - Impact Categories

					ADO					
səi	Phase	GWP(kg CO ₂)	%	Rank	(mg CFC-11)	%	Rank	MAC (m ³)	%	Rank
lot	Material Production	47.31	34%	2	00.0	%0	5	62.127	43%	2
591 591	Distribution 1	0.40	%0	9	00.0	%0	4	0.768	1%	5
вЭ	Manufacturing	19.23	14%	3	0.22	8%	2	11.887	8%	3
to.	Distribution 2	3.62	3%	5	0.20	%2	3	3.985	3%	4
ed	Filling	00.0	%0	7	00.0	%0	5	0.000	%0	6
ալ	Distribution 3	59.30	43%	1	2.68	91%	1	72.070	49%	1
	End of Life	9.41	7%	4	-0.16	-6%	7	-4.699	-3%	7
	Total	139.27	100%	N/A	2.94	100%	N/A	146.138	100%	N/A

- Results	7
er's Project - R	
tonyfield Farm Master's Project - F	Data Set
Stonyf	ls

16	Data Set	
ers	Designation 6 oz P	۵
uə	Functional Unit	
ຄ	Container Size	

Desi	Comp	Comp	Comp
7	aper Lid	1000 lb	6 oz.

,			_	_	l
	Process	Injection Molding	LDPE Coating	0	
	Manufacturer	Polytainers	Apple Converting	0	
	Name	Cup	Lid	Seal	
6 oz Paper Lid	Designation	Component 1	Component 2	Component 3	

	Material	Weight (kg)	%	Hank	Mat. Prod.	%	Hank
	Acrylic	0.036	0.1%	8	3.70	0.1%	ω
	Aluminum	0.000	%0.0	N/A	0.00	0.0%	N/A
	Corrugated	31.146 56.5%	56.5%	1	894.45	33.9%	2
\$	Cotton Color	0.647	1.2%	5	30.23	1.1%	4
sin	LLDPE Film	0.298	0.5%	9	26.79	1.0%	5
du	LDPE	0.987	1.8%	3	80.82	3.1%	S
B	LLDPE	0.000	0.0%	N/A	00.0	0.0%	N/A
eris	Paper Board	0.138	0.3%	7	6.70	0.3%	7
181	PE	0.000	%0.0	N/A	0.00	0.0%	N/A
N	PET	000.0	%0.0	N/A	0.00	0.0%	N/A
	ЬР	20.935 38.0%	38.0%	2	1567.59	59.5%	-
	White Color	0.000	%0.0	N/A	00.0	0.0%	N/A
	Wood	0.924	1.7%	4	26.29	1.0%	9
	Total	55.11	100%	N/A	2636.56	100%	N/A

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N/N	N/A	100%	3705.35	Total	uЭ
3.43%	7	-4%	-144.85	End of Life	erć
41.19%	2	40%	1484.85	Distribution 3	λ£
0.00%	9	%0	00'0	Filling	
39.38%	4	3%	105.92	Distribution 2	
20.21%	3	16%	580.96	Manufacturing	
0.09%	5	%0	7.48	Distribution 1	
1.05%	1	45%	1670.99	Material Production	
Renewable %	Rank	%	Energy (MJ)	Phase	

Energ;	
- uo	
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N.	
nponent	
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Component Energy (MJ) % Rank 1939.59 96% 1 78.12 4% 2 0.00 0% 3	Component Allocation - Energy	ו - Energy			
1939.59 96% 78.12 4% 0.00 0%	Component	Energy (MJ)	%	Rank	Renewable %
78.12 4% 0.00 0%	Cup	1939.59	%96	1	6.77%
0:00 0%	Lid	78.12	4%	2	7.85%
	Seal	0.00	%0	3	0.00%
100%	Total	2017.71	100%	N/A	N/A

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Segment Allocation - Energy	nergy			-
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	996.74	27%	1	N/A
Material Production	674.25	18%	3	N/A
D1 Transport	7.47	%0	10	0.09%
D1 Pkg. Transport	0.01	%0	12	0.09%
Manufacturing	580.96	16%	4	20.21%
D2 1Pkg. Transport	25.60	1%	8	0.09%
D2 2Pkg. Production	69.97	2%	9	54.35%
D2 2Pkg. Transport	3.62	%0	11	0.09%
Filling	00.0	%0	N/A	0.00%
D3 Product Transport	501.15	14%	5	0.09%
D3 1Pkg. Transport	25.19	1%	6	0.09%
D3 2Pkg. Production	910.03	25%	2	67.15%
D3 2Pkg. Transport	48.48	1%	7	0.09%
End of Life	-144.85	-4%	14	3.43%
Total	3705.35	100%	N/A	N/A

| 2% | | | 0% | | | | 12 | AN | e i | ₽ | 2 | | | | | Criteria |
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|---------------------|----------------|---|--|--|---|--|--|--|--|---|---|---|--|---|--|--
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 | 3.05
 | 45.84 | 7.76 | 0.00
 | 101.74 | -32.69 | 367.97
 | | SOX | 252.52 | 7.85 | 00.00
 | |
| 0.421 | 0.284 | 0.027 | ğ | <u>ت</u> | | | 36 0% | %0 00 | | | 38 18% | | | 98 100% | | | 00
 | 90
 | ñ | 33 | 0
 | <u>-</u> | 0 | 32
 | | | 71 | 20 | 00
 | |
| | | | 0.0 | 1.3545 | 0.0961 | 0.3980 | 0.0136 | 0.0000 | 1.8802 | 0.0945 | 4.4388 | 0.1819 | 15.9790 | 25.1698 | | Particulates | 45.80
 |
 | en | |
 | 38.41 | -22.00 | 95.92
 | | Particulates | 53.71 | 2.07 | 0.00
 | |
| сĸ | Production | sport | Transport | sturing | . Transport | _ | J. Transport | | D3 Product Transport | . Transport | D3 2Pkg. Production | . Transport | ife | | | XON | 225.39
 | 6.50
 | 62.09 | 29.53 | 0.00
 | 528.46 | -14.50 | 837.47
 | | XON | 294.14 | 15.64 | 0.00
 | |
| Feedsto | Material | D1 Trans | D1 Pkg. | Manufac | D2 1Pkg | D2 2Pkg | D2 2Pkg | Filling | D3 Prod | D3 1Pkg | D3 2Pkg | D3 2Pkg | End of L | Total | | Hydrocarbons | 296.41
 | 0.59
 | 4.35 | 7.63 | 0.00
 | 76.54 | -0.84 | 384.68
 | | Hydrocarbons | 288.22 | 18.74 | 00.00
 | |
| 0.0000 | 0.0000 | 1.1837 | 2.0953 | 0.0000 | 28.4025 | 0.0000 | 31.6815 | | | Recycled (kg) | 2.6966 | 0.5824 | 0.0000 | 3.2790 | | co | 16.04
 | 1.35
 | 15.05 | 7.13 | 0.00
 | 119.45 | 25.15 | 184.16
 | | co | 55.58 | 4.76 | 0.00
 | |
| 4 | 9 | 3 | 5 | 7 | 2 | 1 | N/A | | ŀ | Rank | | | 3 | N/A | | Rank | 2
 |
 | | |
 | - | 4 | N/A
 | | Rank | 1 | 2 | 3
 | |
| 3% | | | | | | 1 | 100% | | | % | 92% | %8 | | F | | % | 38%
 |
 | | |
 | | | 100%
 | | % | %36 | |
 | |
| 0.7059 | 0.0274 | 1.3545 | 0.5076 | 0.0000 | 6.5954 | 15.9790 | 25.1698 | | n - Solid Waste | Waste (kg) | 16.7246 | 1.5295 | 0.0000 | 18.2540 | Emissions | Emissions (g) | 828.10
 | 12.26
 | 258.42 | 61.04 | 00.0
 | 955.36 | 80.68 | 2195.85
 | 1 - Air Emissions | Emissions (g) | 1109.07 | 62.56 | 00.00
 | |
| Material Production | Distribution 1 | Manufacturing | Distribution 2 | Filling | Distribution 3 | End of Life | l otal | | Component Allocation | Component | Cup | Lid | Seal | Total | Phase Allocation - Air | Phase | Material Production
 | Distribution 1
 | Manufacturing | Distribution 2 | Filling
 | Distribution 3 | End of Life | Total
 | Component Allocation | Component | Cup | Lid | Seal
 | |
| | 0.7059 3% 4 | 0.7059 3% 4 0.0000 0.0000 0.0000 0.0000 | 0.7059 3% 4 0.0000 0.0274 0% 6 0.0000 1.3545 5% 3 1.1837 | al Production 0.7059 3% 4 0.0000 ution 1 0.0274 0% 6 0.0000 acturing 1.3545 5% 3 1.1837 ution 2 0.5076 2% 5 2.0953 | Material Production 0.7059 3% 4 0.0000 Distribution 1 0.0274 0% 6 0.0000 Manufacturing 1.3545 5% 3 1.1837 Distribution 2 0.5076 2% 5 2.0953 Distribution 2 0.0000 0% 7 0.0000 | 0.7059 3% 4 0.0000 Feedstock 0.0274 0% 6 0.0000 Material P 1.3545 5% 3 1.1837 D1 Trans 0.5076 2% 5 2.0953 D1 Pkg. T 0.0000 0% 7 0.0000 Maturistication 6.5954 26% 2 28.4025 D2 1Pkg. | Material Production 0.7059 3% 4 0.0000 Feedstoch Distribution 1 0.0274 0% 6 0.0000 Material P Manufacturing 1.3545 5% 3 1.1837 D1 Trans Distribution 2 0.5076 2% 5 2.0953 D1 Pkg. T Filling 0.0000 0% 7 0.0000 Matufacturi | al Production 0.7059 3% 4 0.0000 Feedstock ution 1 0.0274 0% 6 0.0000 Material P acturing 1.3545 5% 3 1.1837 D1 Trans acturing 1.3545 5% 3 1.1837 D1 Pkg. T ution 2 0.5076 2% 5 2.0953 D1 Pkg. T ution 3 6.5954 26% 2 28.4025 D2 1Pkg. T ution 3 6.5954 26% 1 0.0000 D2 2Pkg. Life 15.9790 63% 1 0.0000 D2 2Pkg. 25.1698 100% N/A 31.6815 D2 2Pkg. | al Production 0.7059 3% 4 0.0000 ution 1 0.0274 0% 6 0.0000 acturing 1.3545 5% 3 1.1837 acturing 1.3545 5% 3 1.1837 ution 2 0.5076 2% 5 2.0953 ution 3 6.5954 26% 2 0.0000 ution 3 6.5954 26% 1 0.0000 Life 15.9790 63% 1 0.0000 Life 25.1698 100% N/A 31.6815 | al Production 0.7059 3% 4 0.0000 ution 1 0.0274 0% 6 0.0000 acturing 1.3545 5% 3 1.1837 acturing 1.3545 5% 3 1.1837 ution 2 0.5076 2% 5 2.0953 ution 3 6.5954 26% 2 28.4025 Life 15.9790 63% 1 0.0000 Life 25.1698 100% N/A 31.6815 | al Production 0.7059 3% 4 0.0000 ution 1 0.0274 0% 6 0.0000 acturing 1.3545 5% 3 1.1837 acturing 1.3545 5% 3 1.1837 ution 2 0.5076 2% 5 2.0953 ution 3 6.5954 26% 2 28.4025 Life 15.9790 63% 1 0.0000 Life 25.1698 100% N/A 31.6815 nent Allocation - Solid Waste 26.100% N/A 31.6815 | rial Production 0.7059 3% 4 0.0000
Ibution 1 0.0274 0% 6 0.0000
Intracturing 1.3545 5% 3 1.1837
Ibution 2 0.5076 2% 5 2.0953
Ibution 3 6.5954 26% 2 2.0953
of Life 15.9790 63% 1 0.0000
Internon 3 6.5954 26% 7 0.0000
Ibution 3 5.1698 100% N/A 31.6815
Internon 2.5.1698 100% N/A 31.6815 | al Production 0.7059 3% 4 0.0000 ution 1 0.0274 0% 6 0.0000 acturing 1.3545 5% 3 1.1837 acturing 1.3545 5% 3 1.1837 ution 2 0.5076 2% 5 2.0953 ution 3 6.5954 26% 7 0.0000 ution 3 6.5954 26% 1 0.0000 Ution 3 6.5954 26% 1 0.0000 Ution 3 6.5954 26% 1 0.0000 Utife 15.9790 63% 1 0.0000 Life 25.1698 100% N/A 31.6815 nent Allocation - Solid Waste 25.1698 100% N/A 31.6815 ornponent Waste 16.7246 92% 1 2.6966 ornponent 15.295 8% 2 0.5824 | rial Production 0.7059 3% 4 0.0000
Ibution 1 0.0274 0% 6 0.0000
Intacturing 1.3545 5% 3 1.1837
Ibution 2 0.5076 2% 5 2.0953
ibution 3 6.5954 26% 2 0.0000
Ibution 3 6.5954 26% 2 2.0953
of Life 15.9790 63% 1 0.0000
Ibution 3 6.5954 26% 2 2.0000
Ibution 3 6.5954 26% 2 2.0000
Ibution 3 6.5954 26% 2 2.0000
Ibution 3 6.5954 26% 1 0.0000
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Ibution 3 6.5954 26% 2 0.0000
Ibution 3 6.5954 26% 1 0.0000
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Ibution 1.5295 8% 2 0.5824
I 1.5295 8% 2 0.5824 | rial Production 0.7059 3% 4 0.0000
Ibution 1 0.0274 0% 6 0.0000
Infacturing 1.3545 5% 3 1.1837
bution 2 0.5076 2% 5 2.0953
pution 3 6.5954 26% 7 0.0000
bution 3 6.5954 26% 7 0.0000
bution 3 6.5954 26% 7 0.0000
bution 3 6.5954 26% 7 0.0000
potent 15.9790 63% 1 0.0000
potent Allocation - Solid Waste
Component Maste
16.7246 92% 1 2.6966
16.7246 92% 1 3.29966
16.7246 92% 1 3.29966
17.5295 8% 2 0.5824
18.2540 100% N/A 3.2.790 | rial Production 0.7059 3% 4 0.0000
Ibution 1 0.0274 0% 6 0.0000
Infacturing 1.3545 5% 3 1.1837
pution 2 0.5076 2% 5 2.0953
pution 3 6.5954 26% 7 0.0000
bution 3 6.5954 26% 7 0.0000
bution 3 6.5954 26% 7 0.0000
bution 3 1.6815
of Life 15.9790 63% 1 0.0000
ponent Allocation - Solid Waste
Component Maste
Component Naste
16.7246 92% 1 2.6966
1.5295 8% 2 0.5824
0.0000 0% 3 0.0000
blocotion - Air Emissions | rial Production 0.7059 3% 4 0.0000
buttion 1 0.0274 0% 6 0.0000
ufacturing 1.3545 5% 3 1.1837
buttion 2 0.5076 2% 5 2.0953
puttion 3 6.5954 26% 2 28.4025
of Life 15.9790 63% 1 0.0000
ponent Allocation - Solid Waste
component Allocation - S | Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 2 0.5076 2% 5 2.0953 ibution 2 0.0000 0% 7 0.0000 ibution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 ibution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 ibution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 ponent Allocation - Solid Waste 16.7246 92% 1 2.6966 Component Waste 16.7246 92% 0.5824 0.0000 Component Vaste 16.724 92% 0.5824 0.0000 f 152540 100% <t< td=""><td>Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 2 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 bution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 bution 3 6.5954 26% 2 28.4025 of Life 25.1698 100% N/A 31.6815 ponent Allocation - Solid Waste 2 0.5824 1 Component Waste (kg) % Rank Recycled (kg) f 16.7246 92% 1 2.6966 f 18.25</td><td>Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Indecturing 1.3545 5% 3 1.1837 Ibution 2 0.5076 2% 5 2.0953 Ibution 2 0.5076 2% 5 2.0953 Ibution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 of Life 25.1698 100% N/A 31.6815 of Life 25.1698 100% N/A 31.6815 ponent Allocation - Solid Waste 25.1698 100% N/A 31.6815 component Allocation - Solid Waste 1.5295 8% 2 0.5696 f 16.7246 92% 1 2.5696 1 component Allocation - Solid Waste 1.5254 1 0.0000 0.5824 component Allocation - Solid Waste 1.5254 1 2.56966 1 component Allocation</td><td>Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 1 0.0274 0% 5 3 1.1837 Ibution 2 0.5076 2% 5 2.0953 Ibution 3 6.5954 2% 1 0.0000 Ibution 3 6.5954 26% 1 0.0000 Ibution 3 6.5954 26% 1 0.0000 Ibution 4 25.1698 100% N/A 31.6815 Ibution 5 15.746 92% 1 2.6966 Ibution 6 1.52595 8% 2 0.0000 Ibution 7 18.2540 100% N/A 3.2790</td><td>rial Production 0.7059 3% 4 0.0000
button 1 0.0274 0% 6 0.0000
button 2 0.5076 2% 5 1.1837
button 2 0.5076 2% 5 2.0953
button 3 6.5954 26% 7 0.0000
g 0.0000 0% 7 0.0000
button 3 6.5954 26% 1 0.0000
of Life 25.1698 100% N/A 31.6815
of Life 25.1698 100% N/A 31.6815
component Allocation - Solid Waste
Component Allocation - Solid Was</td><td>rial Production 0.7059 3% 4 0.0000
button 1 0.0274 0% 6 0.0000
button 2 0.5076 2% 5 2.0953
button 2 0.5076 2% 5 2.0953
button 3 6.5954 26% 7 0.0000
button 3 6.5954 26% 7 0.0000
button 3 6.5954 26% 7 0.0000
button 3 6.5954 26% 7 0.0000
component Allocation - Solid Waste
Component Allocation - Solid Waste
Component Naste (kg) % Rank Recycled (kg)
16.7246 92% 1 2.6966
1.5295 8% 2 0.5824
0.0000 0% 3 0.0000
component 16.7246 92% 1 2.6966
1.5295 8% 2 0.5824
0.0000 0% 3 0.0000
component 1 2.261 10% N/A 3.2790
se Allocation - Air Emissions
e Allocation - Air Emissions
Phase Emissions (g) % Rank CO Hydrocs
rial Production 1 12.26 1% 6 1.35
button 1 12.26 1% 6 1.35
button 1 12.26 1% 6 1.35
button 2 61.04 3% 5 7.13
button 2 61.04 3% 7 0.000
button 3 955.36 44% 1 19.45</td><td>rial Production 0.7059 3% 4 0.0000 buttion 1 0.0274 0% 6 0.0000 ufacturing 1.3545 5% 3 1.1837 ufacturing 1.3545 5% 3 1.1837 ufacturing 1.3545 5% 3 1.1837 puttion 2 0.0000 0% 7 0.0000 9 0.0000 0% 7 0.0000 9 0.0000 0% N/A 31.6815 9 15.9790 6.5954 26% 2 28.4025 9 15.9790 6.3% 1 0.0000 0 9 15.9790 6.3% 1 0.0000 0 9 15.95 1 25.4025 0 0.0000 0 0 0.0000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<!--</td--><td>rial Production 0.7059 3% 4 0.0000 bution 1 0.0274 0% 6 0.0000 ifacturing 1.3545 5% 3 1.1837 bution 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 2.549 component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.6.74 3.2790 3.2790 Reading To the second Hybroid To the second Hybroid Tot the second Hybroid To the second Hybroid Tot the second Hybroid</td><td>rial Production 0.7059 3% 4 0.0000 bution 1 0.0274 0% 6 0.0000 ifacturing 1.3545 5% 3 1.1837 bution 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 2.5 of Life 16.7246 92% 1 2.6966 fill 16.7246 92% 1 2.6966 fill 16.7246 92% 0.0000 0 component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.6.74 31.6816 1 Scontetion</td><td>Initial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 2.0553 g 0.5076 2% 5 2.0000 0% 7 0.0000 g 0.5076 2% 5 2.0053 10% 7 0.0000 button 2 0.5076 2% 5 2 0.0000 0% 7 0.0000 fibutton 3 6.5954 26% 8 N/A 31.6815 5 for Life 25.1698 100% N/A 31.6815 5<td>rial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 g 0.5076 2% 5 2.0553 2.0563 g 0.5076 2% 5 2.0563 1.1837 button 2 0.5076 2% 5 2.0553 2.0563 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 component Allocation - Solid Waste 15.725 8 1 0.0000 0.0000 f 15.726 9% Rank Recycled (kg) 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000</td><td>Indication 0.7059 3% 4 0.0000 buttion 1 0.0274 0% 6 0.0000 buttion 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0050 g 0.5076 2% 5 2.0053 g 0.5060 0% N/A 31.5815 ponent Allocation - Solid Waste 25.1698 100% N/A 31.5825 ponent Allocation - Solid Waste 15.2595 8% 7 1 2.6966 Component Waste (kg) % Rank Recycled (kg) 7 0.0000 facturing 15.2595 8% 2 0.5824 1 0.0000 facturing 15.258 3 2 1.6.7246 9 0.0000 facturing 15.259 8% Rank Recycled (kg) 7 1.35 facturing 15.281 9%<td>Initial Production 0.7059 3% 4 0.0000 buttorn 1 0.0274 0% 6 0.0000 buttorn 2 0.0276 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% N/A 31.6815 ponent Allocation - Solid Waste 15.799 52% 1 0.0000 f 16.7246 92% N/A 31.6815 component Waste 1.5295 8% 2 0.5824 component Waste 1.5295 8% 1 0.0000 f 16.7246 92% 1 2.5696 1 f 16.725 8% 7.13 0.0000 0.5824</td></td></td></td></t<> | Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 2 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 bution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 bution 3 6.5954 26% 2 28.4025 of Life 25.1698 100% N/A 31.6815 ponent Allocation - Solid Waste 2 0.5824 1 Component Waste (kg) % Rank Recycled (kg) f 16.7246 92% 1 2.6966 f 18.25 | Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Indecturing 1.3545 5% 3 1.1837 Ibution 2 0.5076 2% 5 2.0953 Ibution 2 0.5076 2% 5 2.0953 Ibution 3 6.5954 26% 2 28.4025 of Life 15.9790 63% 1 0.0000 of Life 25.1698 100% N/A 31.6815 of Life 25.1698 100% N/A 31.6815 ponent Allocation - Solid Waste 25.1698 100% N/A 31.6815 component Allocation - Solid Waste 1.5295 8% 2 0.5696 f 16.7246 92% 1 2.5696 1 component Allocation - Solid Waste 1.5254 1 0.0000 0.5824 component Allocation - Solid Waste 1.5254 1 2.56966 1 component Allocation | Initial Production 0.7059 3% 4 0.0000 Ibution 1 0.0274 0% 6 0.0000 Ibution 1 0.0274 0% 5 3 1.1837 Ibution 2 0.5076 2% 5 2.0953 Ibution 3 6.5954 2% 1 0.0000 Ibution 3 6.5954 26% 1 0.0000 Ibution 3 6.5954 26% 1 0.0000 Ibution 4 25.1698 100% N/A 31.6815 Ibution 5 15.746 92% 1 2.6966 Ibution 6 1.52595 8% 2 0.0000 Ibution 7 18.2540 100% N/A 3.2790 | rial Production 0.7059 3% 4 0.0000
button 1 0.0274 0% 6 0.0000
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of Life 25.1698 100% N/A 31.6815
component Allocation - Solid Waste
Component Allocation - Solid Was | rial Production 0.7059 3% 4 0.0000
button 1 0.0274 0% 6 0.0000
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button 3 6.5954 26% 7 0.0000
component Allocation - Solid Waste
Component Allocation - Solid Waste
Component Naste (kg) % Rank Recycled (kg)
16.7246 92% 1 2.6966
1.5295 8% 2 0.5824
0.0000 0% 3 0.0000
component 16.7246 92% 1 2.6966
1.5295 8% 2 0.5824
0.0000 0% 3 0.0000
component 1 2.261 10% N/A 3.2790
se Allocation - Air Emissions
e Allocation - Air Emissions
Phase Emissions (g) % Rank CO Hydrocs
rial Production 1 12.26 1% 6 1.35
button 1 12.26 1% 6 1.35
button 1 12.26 1% 6 1.35
button 2 61.04 3% 5 7.13
button 2 61.04 3% 7 0.000
button 3 955.36 44% 1 19.45 | rial Production 0.7059 3% 4 0.0000 buttion 1 0.0274 0% 6 0.0000 ufacturing 1.3545 5% 3 1.1837 ufacturing 1.3545 5% 3 1.1837 ufacturing 1.3545 5% 3 1.1837 puttion 2 0.0000 0% 7 0.0000 9 0.0000 0% 7 0.0000 9 0.0000 0% N/A 31.6815 9 15.9790 6.5954 26% 2 28.4025 9 15.9790 6.3% 1 0.0000 0 9 15.9790 6.3% 1 0.0000 0 9 15.95 1 25.4025 0 0.0000 0 0 0.0000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 </td <td>rial Production 0.7059 3% 4 0.0000 bution 1 0.0274 0% 6 0.0000 ifacturing 1.3545 5% 3 1.1837 bution 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 2.549 component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.6.74 3.2790 3.2790 Reading To the second Hybroid To the second Hybroid Tot the second Hybroid To the second Hybroid Tot the second Hybroid</td> <td>rial Production 0.7059 3% 4 0.0000 bution 1 0.0274 0% 6 0.0000 ifacturing 1.3545 5% 3 1.1837 bution 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 2.5 of Life 16.7246 92% 1 2.6966 fill 16.7246 92% 1 2.6966 fill 16.7246 92% 0.0000 0 component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.6.74 31.6816 1 Scontetion</td> <td>Initial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 2.0553 g 0.5076 2% 5 2.0000 0% 7 0.0000 g 0.5076 2% 5 2.0053 10% 7 0.0000 button 2 0.5076 2% 5 2 0.0000 0% 7 0.0000 fibutton 3 6.5954 26% 8 N/A 31.6815 5 for Life 25.1698 100% N/A 31.6815 5<td>rial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 g 0.5076 2% 5 2.0553 2.0563 g 0.5076 2% 5 2.0563 1.1837 button 2 0.5076 2% 5 2.0553 2.0563 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 component Allocation - Solid Waste 15.725 8 1 0.0000 0.0000 f 15.726 9% Rank Recycled (kg) 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000</td><td>Indication 0.7059 3% 4 0.0000 buttion 1 0.0274 0% 6 0.0000 buttion 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0050 g 0.5076 2% 5 2.0053 g 0.5060 0% N/A 31.5815 ponent Allocation - Solid Waste 25.1698 100% N/A 31.5825 ponent Allocation - Solid Waste 15.2595 8% 7 1 2.6966 Component Waste (kg) % Rank Recycled (kg) 7 0.0000 facturing 15.2595 8% 2 0.5824 1 0.0000 facturing 15.258 3 2 1.6.7246 9 0.0000 facturing 15.259 8% Rank Recycled (kg) 7 1.35 facturing 15.281 9%<td>Initial Production 0.7059 3% 4 0.0000 buttorn 1 0.0274 0% 6 0.0000 buttorn 2 0.0276 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% N/A 31.6815 ponent Allocation - Solid Waste 15.799 52% 1 0.0000 f 16.7246 92% N/A 31.6815 component Waste 1.5295 8% 2 0.5824 component Waste 1.5295 8% 1 0.0000 f 16.7246 92% 1 2.5696 1 f 16.725 8% 7.13 0.0000 0.5824</td></td></td> | rial Production 0.7059 3% 4 0.0000 bution 1 0.0274 0% 6 0.0000 ifacturing 1.3545 5% 3 1.1837 bution 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 2.549 component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.6.74 3.2790 3.2790 Reading To the second Hybroid To the second Hybroid Tot the second Hybroid To the second Hybroid Tot the second Hybroid | rial Production 0.7059 3% 4 0.0000 bution 1 0.0274 0% 6 0.0000 ifacturing 1.3545 5% 3 1.1837 bution 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 2 28.4025 g 0.0000 0% 7 0.0000 bution 3 6.5954 26% 1 0.0000 bution 3 6.5954 26% 1 2.5 of Life 16.7246 92% 1 2.6966 fill 16.7246 92% 1 2.6966 fill 16.7246 92% 0.0000 0 component Allocation - Solid Waste 1.5295 8% 2 0.5824 Component Allocation - Solid Waste 1.6.74 31.6816 1 Scontetion | Initial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 2.0553 g 0.5076 2% 5 2.0000 0% 7 0.0000 g 0.5076 2% 5 2.0053 10% 7 0.0000 button 2 0.5076 2% 5 2 0.0000 0% 7 0.0000 fibutton 3 6.5954 26% 8 N/A 31.6815 5 for Life 25.1698 100% N/A 31.6815 5 <td>rial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 g 0.5076 2% 5 2.0553 2.0563 g 0.5076 2% 5 2.0563 1.1837 button 2 0.5076 2% 5 2.0553 2.0563 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 component Allocation - Solid Waste 15.725 8 1 0.0000 0.0000 f 15.726 9% Rank Recycled (kg) 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000</td> <td>Indication 0.7059 3% 4 0.0000 buttion 1 0.0274 0% 6 0.0000 buttion 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0050 g 0.5076 2% 5 2.0053 g 0.5060 0% N/A 31.5815 ponent Allocation - Solid Waste 25.1698 100% N/A 31.5825 ponent Allocation - Solid Waste 15.2595 8% 7 1 2.6966 Component Waste (kg) % Rank Recycled (kg) 7 0.0000 facturing 15.2595 8% 2 0.5824 1 0.0000 facturing 15.258 3 2 1.6.7246 9 0.0000 facturing 15.259 8% Rank Recycled (kg) 7 1.35 facturing 15.281 9%<td>Initial Production 0.7059 3% 4 0.0000 buttorn 1 0.0274 0% 6 0.0000 buttorn 2 0.0276 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% N/A 31.6815 ponent Allocation - Solid Waste 15.799 52% 1 0.0000 f 16.7246 92% N/A 31.6815 component Waste 1.5295 8% 2 0.5824 component Waste 1.5295 8% 1 0.0000 f 16.7246 92% 1 2.5696 1 f 16.725 8% 7.13 0.0000 0.5824</td></td> | rial Production 0.7059 3% 4 0.0000 button 1 0.0274 0% 6 0.0000 button 1 0.0274 0% 5 3 1.1837 button 2 0.5076 2% 5 2.0553 5 g 0.5076 2% 5 2.0553 2.0563 g 0.5076 2% 5 2.0563 1.1837 button 2 0.5076 2% 5 2.0553 2.0563 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 f 25.1698 100% N/A 31.6815 0.0000 component Allocation - Solid Waste 15.725 8 1 0.0000 0.0000 f 15.726 9% Rank Recycled (kg) 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 | Indication 0.7059 3% 4 0.0000 buttion 1 0.0274 0% 6 0.0000 buttion 2 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0953 g 0.5076 2% 5 2.0050 g 0.5076 2% 5 2.0053 g 0.5060 0% N/A 31.5815 ponent Allocation - Solid Waste 25.1698 100% N/A 31.5825 ponent Allocation - Solid Waste 15.2595 8% 7 1 2.6966 Component Waste (kg) % Rank Recycled (kg) 7 0.0000 facturing 15.2595 8% 2 0.5824 1 0.0000 facturing 15.258 3 2 1.6.7246 9 0.0000 facturing 15.259 8% Rank Recycled (kg) 7 1.35 facturing 15.281 9% <td>Initial Production 0.7059 3% 4 0.0000 buttorn 1 0.0274 0% 6 0.0000 buttorn 2 0.0276 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% N/A 31.6815 ponent Allocation - Solid Waste 15.799 52% 1 0.0000 f 16.7246 92% N/A 31.6815 component Waste 1.5295 8% 2 0.5824 component Waste 1.5295 8% 1 0.0000 f 16.7246 92% 1 2.5696 1 f 16.725 8% 7.13 0.0000 0.5824</td> | Initial Production 0.7059 3% 4 0.0000 buttorn 1 0.0274 0% 6 0.0000 buttorn 2 0.0276 2% 5 2.0953 g 0.0000 0% 7 0.0000 g 0.0000 0% N/A 31.6815 ponent Allocation - Solid Waste 15.799 52% 1 0.0000 f 16.7246 92% N/A 31.6815 component Waste 1.5295 8% 2 0.5824 component Waste 1.5295 8% 1 0.0000 f 16.7246 92% 1 2.5696 1 f 16.725 8% 7.13 0.0000 0.5824 |

	Criteria	492.65	333.25	11.84	0.01	158.17	31.23	18.92	4.42	0.00	610.91	30.71	163.88	59.10	-44.88	1870.21
	с П	51	75	4	0	34	32	2	33	00	11	28	35	39	60	12
	SOX	144.51	97.75	3.04	0.00	45.84	2.32	5.12	0.33	0.00	45.41	2.28	49.65	4.39	-32.69	367.97
	Particulates	27.32	18.48	0.36	0.00	30.83	1.21	1.15	0.17	0.00	23.62	1.19	11.32	2.28	-22.00	95.92
	NOX	134.44	90.94	6.50	0.01	62.09	21.02	5.53	2.98	00.00	411.23	20.67	56.78	39.78	-14.50	837.47
	Hydrocarbons	176.81	119.60	0.59	00.00	4.35	2.23	5.08	0.32	00.00	43.69	2.20	26.43	4.23	-0.84	384.68
	co	9.57	6.47	1.35	00.00	15.05	4.44	2.05	0.63	00.0	86.96	4.37	19.70	8.41	25.15	184.16
	Rank	2	3	11	13	4	8	10	12	N/A	1	6	5	7	9	N/A
	%	22%	15%	1%	%0	12%	1%	1%	0%	%0	29%	1%	10%	3%	4%	100%
Air Emissions	Emissions (g)	493.96	334.14	12.24	0.01	258.42	32.74	23.67	4.63	00.00	640.84	32.21	220.31	62.00	80.68	2195.85 100
Segment Allocation - Air Emissions	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transport	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total
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Water
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Phase

	Phase Allocation - Water EmissionsPhaseEmissions (g)957.49957.4999		% Rank Acid BOD COD TDS Metals	5% 2 1.96 1.44 9.79 6.41	1% 5 0.00 0.06 0.48 0.00	1% 4 0.00 0.07 0.59 0.00	5% 3 0.01 1.17 9.28 0.02	0% 6 0.00 0.00 0.00 0.00	89% 1 0.02 72.74 203.27 0.06	0% 7 0.00 0.36 1.21 0.00	100% N/A 1.99 75.84 224.61 6.49	S	% Rank Acid BOD COD TDS Metals	87% 1 1.91 2.17 14.45 6.34	13% 2 0.06 0.64 5.82 0.09	0% 3 0.00 0.00 0.00 0.00	
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	Metais	4.005	2.709	0.004	0.000	0.007	0.013	0.073	0.002	0.000	0.255	0.013	0.578	0.025	0.000	7.683
	_	3.822	2.585	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.010	0.000	0.050	0.001	0.001	6.488
	TDS	e			0						0			0		9
	cop	5.837	3.949	0.483	0.001	0.595	1.896	7.112	0.268	0.000	37.087	1.864	160.726	3.588	1.205	224.611
	BOD	0.857	0.580	0.057	000.0	0.071	0.224	0.917	0.032	0000	4.383	0.220	67.715	0.424	0.359	75.839
	Acid	1.167	0.789	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.023	0.000	0.000	1.990
	Rank	4	9	10	12	6	2	5	11	N/A	2	8	ł	3	14	N/A
	. %	3%	2%	1%	%0	1%	2%	2%	%0	%0	38%	2%	45%	4%	%0	100%
Water Emissions	Emissions (g)	34.29	23.20	5.97	0.01	10.99	20.63	25.39	2:92	0.00	403.74	20.30	475.66	39.06	-2.78	1059.36
Segment Allocation - Water	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transport	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total
	Water Emissions (Cont'd)															

	Rank	2	5	3	4	9	1	7	N/A
	%	13%	%0	2%	6%	%0	74%	%0	100%
מוכו טפס	Use (liter)	103.72	3.18	52.22	44.86	00.0	583.63	-2.13	785.49
I HASE MINCALINI - MAIEL USE	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
-			əs	r U	əte				

Phase Allocation - Impact Categories

Г	녿	2	5	ო	4	9	-	7	A	
	Rank									
	%	36%	1%	10%	3%	%0	54%	-4%	100%	
-	MAC (m³)	49.404	1.041	14.036	4.392	0.000	74.657	-5.460	138.070	
	Rank	5	4	2	3	5	1	7	N/A	
	%	%0	%0	7%	%9	%0	92%	-5%	100%	
ODP	(mg CFC-11)	00.0	00.0	0.26	0.22	00.0	3.42	-0.19	3.71	
	Rank	2	6	3	5	7	1	4	N/A	
	%	28%	%0	17%	3%	%0	45%	8%	100%	
	GWP(kg CO ₂)	40.09	0.53	23.68	4.11	00.0	63.92	10.89	143.21	
	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	
Impact Categories										

s Project - Results	8	8 oz Paper Lid	1000 lb	8 oz.
Stonyfield Farm Master's Project - Results	👼 Data Set	Designation	E Functional Unit	Container Size

	Material	Weight (kg)	%	Rank	Mat. Prod.	%	Rank
	Acrylic	0.027	0.1%	8	2.78	0.1%	ω
	Aluminum	000'0	%0.0	N/A	00.0	%0.0	N/A
	Corrugated	24.833	53.8%	+	713.17	31.7%	2
S	Cotton Color	0.000	%0.0	N/A	00.0	%0.0	N/A
and	LLDPE Film	0.358	%8.0	9	32.21	1.4%	4
duj	LDPE	0.784	1.7%	4	64.18	2.9%	n
l6	LLDPE	0.000	%0.0	N/A	00.0	0.0%	N/A
in9:	Paper Board	0.104	0.2%	7	5.03	0.2%	7
teN	PE	0.000	%0.0	N/A	00.0	0.0%	N/A
V	PET	0.000	%0.0	N/A	00.0	%0.0	N/A
	РР	18.507	40.1%	2	1385.78	61.6%	-
	White Color	0.378	0.8%	5	15.75	0.7%	9
	Mood	1.131	2.5%	ŝ	32.17	1.4%	5
	Total	46.12	100%	N/A	2251.07	100%	N/A

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N/A	N/A	100%	3228.60	Total	ιЗ
3.43%	2	-4%	-125.78	End of Life	Jəl
37.48%	2	40%	1302.97	Distribution 3	6λ
0.00%	9	%0	0.00	Filling	
40.06%	4	3%	102.18	Distribution 2	
21.11%	3	15%	486.74	Manufacturing	
%60:0	5	%0	6.07	Distribution 1	
1.06%	1	45%	1456.41	Material Production	
Renewable %	Rank	%	Energy (MJ)	Phase	

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Component Allocation - Energy Cup Lid Seal Total
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Segment Allocation - Energy	nergy			
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	867.82	27%	1	N/A
Material Production	588.59	18%	e	N/A
D1 Transport	6.07	%0	10	0.09%
D1 Pkg. Transport	00.0	%0	N/A	%60.0
Manufacturing	486.74	15%	5	21.11%
D2 1Pkg. Transport	22.27	1%	8	%60.0
D2 2Pkg. Production	76.42	2%	9	53.53%
D2 2Pkg. Transport	3.50	%0	11	%60.0
Filling	0.00	%0	N/A	%00:0
D3 Product Transport	501.15	16%	4	%60.0
D3 1 Pkg. Transport	21.77	1%	6	%60:0
D3 2Pkg. Production	734.56	23%	2	66.40%
D3 2Pkg. Transport	45.50	1%	7	%60.0
End of Life	-125.78	-4%	14	3.43%
Total	3228.60	100%	N/A	N/A

Recycled (kg)	0.0000	0.0000	0.0000	0.0000									8 22.5160		V 25.6061		Crite	7						9 -39.11	5 1707.97		Crite	ω		0.00	A REG 16
Rank	8		% 11	% N/A	%		% 5	% 12	% N/A		% 10	%			% N/A		sox	211.93	2.33	39.75	7.39	0.0	93.14	-28.39	326.15		sox	222.23	5.88	0.0	11 000
d Waste Waste (kg) %	0.3653 2%	0.2478 1%	0.0223 0%		1.1574 5%	0.0835 0%		0.0131 0%	0.0000 0%		0.0817 0%	3.7212 17%	0.1707 19		21.9436 100%		Particulates	39.74	0.29	26.66	2.31	0.00	36.67	-19.11	86.57			47.10	1.55	0.00	
Segment Allocation - Solid Waste Segment Vaste (>	Material Production	anort	Pkn. Transport	turina	D2 1Pkg. Transport	22 2Pkg. Production	D2 2Pkg. Transport		33 Product Transport	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	ife			XON	196.08	5.28	52.34	26.62	00.00	513.62	-12.61	781.35		XON	258.21	11.73	0.00	10000
Segment	Faadstock	Material	D1 Transport	D1 Pka.	Manufacturing	D2 1 Pkg	D2 2Pkg	D2 2Pkg	Filling	D3 Prod	D3 1Pkg	D3 2Pkg	D3 2Pkg	End of Life	Total		Hydrocarbons	257.43	0.48	3.54	7.36	00.0	73.63	-0.73	341.71		Hydrocarbons	253.09	14.06	00.0	
Recycled (ka)		00000	0.0855	2 1046		22 5160	0.0000	25.6061			Recycled (kg)	2.6533	0.4368	0.0000	3.0901		S	13.91	1.11	12.19	6.37	0.00	116.88	21.72	172.19		S	48.74	3.57	00.0	
Rank	+-	F CC	5 0	י נ	7	- 0	1-	N/A			Bank	-	~	က	NAI		Bank	2	9	e	5		-	4	N/A		Bank	-	2		
%	ور اور	° °		% 0 %	200	27%	63%	100%	2		%	93%	202	%0	100%		%	36%	%0	11%	3%	%0	46%		10		%	92%			
id Waste Waste (kg)	V 4315 (N)	101010	0.0220	4/01.1	00000	0.000	000001	21 9436	221-21-22	- Solid Waste	Waste (kg)	14 6614	1 1471	0.0000	15,80851	Emissions	Emissions (a)	720.87	9.82	215.33	56.39	00.0	914.03	69.27	1985.71	1 - Air Emissions	Emissions (g)	973.87	46.92	00.0	
Phase Allocation - Solid Waste		Material Production				Fuiling	Distribution 3			Component Allocation - Solid Waste	Component		And Fi	Seal	Total	Thase Allocation - Air Emissions	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2		Distribution 3		Total	Component Allocation - Air Emissions	Component	Cup	l id	Seal	

	Criteria	428.48	290.61	9.50	0.00	134.48	27.16	18.63	4.26	0.0	610.91	26.53	141.03	55.47	-39.11	1707.97
	sox	126.28	85.65	2.33	0.00	39.75	2.02	5.05	0.32	0.00	45.41	1.97	41.63	4.12	-28.39	326.15
	Particulates	23.68	16.06	0.29	0.00	26.66	1.05	1.10	0.16	0.00	23.62	1.03	9.89	2.14	-19.11	86.57
	XON	116.84	79.25	5.28	0.00	52.34	18.29	5.47	2.87	0.00	411.23	17.86	47.20	37.34	-12.61	781.35
	Hydrocarbons	153.39	104.04	0.48	0.00	3.54	1.94	5.11	0.31	0.00	43.69	1.90	24.08	3.97	-0.73	341.71
	CO	8.29	5.62	1.11	00.0	12.19	3.87	1.90	0.61	00.0	86.96	3.78	18.25	7.90	21.72	172.19
	Rank	2	e	11	N/A	4	8	10	12	N/A	-	6	5	7	9	N A
	%	22%	15%	%0	%0	11%	1%	1%	%0	%0	32%	1%	%6	3%	3%	100%
Air Emissions	Emissions (g)	429.54	291.33	9.82	00.0	215.33	28.47	23.44	4.47	00.0	640.84	27.83	187.17	58.19	69.27	1985.71
Segment Allocation - Air Emissions	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transport	D3 1Pkg. Transport	D3 2Pka. Production	D3 2Pkg. Transport	End of Life	Total
			-		o'tr	100) s	uoļ	SSI			A				

	Metals	5.83	0.00	0.01	0.09	0.00	0.74	0.00	6.67		Metals	5.73	0.17	0.00	5.90
	TDS	5.64	00.00	0.00	0.02	00.00	0.07	0.00	5.73		TDS	5.59	0.07	0.00	5.66
•	COD	8.44	0.40	0.51	8.11	0.00	168.07	1.04	186.56		COD	12.75	4.36	00.00	17.11
	BOD	1.25	0.05	0.06	1.06	0.00	57.99	0.31	60.71		BOD	1.92	0.48	00.0	2.39
	Acid	1.72	0.00	0.00	0.01	0.00	0.03	00.00	1.76		Acid	1.68	0.05	0.00	1.73
	Rank	2	5	4	3	9	-	7	N/A		Rank	-	2	3	N/A
	%	5%	1%	1%	5%	%0	89%	%0	100%	su	%	89%	11%	%0	100%
ater Emissions	Emissions (g)	49.81	4.86	9.53	45.20	00:0	830.74	-2.43	937.71	1 - Water Emisssions	Emissions (g)	92.25	11.44	0.00	103.69
Phase Allocation - Water Emissions	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	Component Allocation - Water	Component	Cup	Lid	Seal	Total
-	L	2						μ∃	, iei	IBV IO	٨		<u> </u>		ur <u> </u>

4 0.503 3.410 2.278 0 0.047 0.396 0.000	0.000		0.195 1.649 0.000	0.837 6.199 0.019	0.031 0.259 0.000	0.000	37.087	1.611	5 126.000 0.062	3.367 0.001	1.040 0.000	186 560 5 731
0.503 0.047									•	3.36	1.04	1 RG 5G
	0.00	0.061	0.195	0.837	8	B	8	ĮΩI		-		Ļ
40	1 I				0	0.000	4.383	0.190	53.015	0.398	0.310	60 712
0.694	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.028	0.000	0.000	1 756
10	N/A	6	2	5	11	N/A	1	8	2	3	14	
2% 1%	%0	1%	2%	3%	%0	%0	43%	2%	40%	4%	%0	100%
20.13 4.86	0.00	9.53	17.94	24.45	2.82	00.00	403.74	17.54	372.80	36.66	-2.43	037 71
erial Production	D1 Pkg. Transport	Manufacturing	D2 1 Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transport	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total
	Material Production 20.13 D1 Transport 4.86	Material Production 20.13 D1 Transport 4.86 D1 Pkg. Transport 0.00	Material Production20.13D1 Transport4.86D1 Pkg. Transport0.00Manufacturing9.53	Material Production 20.13 D1 Transport 4.86 D1 Pkg. Transport 9.53 Manufacturing 9.53 D2 1Pkg. Transport 17.94	Material Production20.13D1 Transport4.86D1 Pkg. Transport0.00Manufacturing9.53D2 1Pkg. Transport17.94D2 2Pkg. Production24.45	Material Production20.13D1 Transport4.86D1 Pkg. Transport0.00Manufacturing9.53D2 1Pkg. Transport17.94D2 2Pkg. Production24.45D2 2Pkg. Transport2.82	Material Production20.13D1 Transport4.86D1 Pkg. Transport9.53Manufacturing9.53D2 1Pkg. Transport17.94D2 2Pkg. Production24.45D2 2Pkg. Transport2.82D2 2Pkg. Transport2.82D2 2Pkg. Transport0.00Filling0.00	Material Production 20.13 D1 Transport 4.86 D1 Fkg. Transport 9.53 Manufacturing 9.53 D2 1Pkg. Transport 17.94 D2 2Pkg. Production 24.45 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82	Material Production 20.13 D1 Transport 4.86 D1 Fkg. Transport 9.53 Manufacturing 9.53 D2 1Pkg. Transport 17.94 D2 2Pkg. Transport 24.45 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D3 2Pkg. Transport 2.82 D3 2Pkg. Transport 2.82 D3 2Pkg. Transport 2.82 D3 2Pkg. Transport 4.03.74 D3 1Pkg. Transport 17.54	Material Production 20.13 D1 Transport 4.86 D1 Pkg. Transport 9.53 D1 Pkg. Transport 9.53 Manufacturing 9.53 D2 1Pkg. Transport 17.94 D2 2Pkg. Production 24.45 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D3 Product Transport 2.82 D3 Product Transport 17.54 D3 2Pkg. Transport 3.72.80 D3 2Pkg. Production 3.72.80	Material Production 20.13 D1 Transport 4.86 D1 Transport 9.53 D1 Pkg. Transport 9.53 Manufacturing 9.53 Manufacturing 9.53 D2 1Pkg. Transport 17.94 D2 2Pkg. Production 24.45 D2 2Pkg. Transport 17.94 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 2.82 D3 Product Transport 2.82 D3 1Pkg. Transport 17.54 D3 1Pkg. Transport 372.80 D3 2Pkg. Production 372.80 D3 2Pkg. Transport 36.66	Material Production 20.13 D1 Transport 4.86 D1 Fkg. Transport 4.86 D1 Pkg. Transport 9.53 Manufacturing 9.53 D2 1Pkg. Transport 17.94 D2 2Pkg. Transport 17.94 D2 2Pkg. Transport 17.94 D2 2Pkg. Transport 17.54 D2 2Pkg. Transport 2.82 D2 2Pkg. Transport 17.54 D2 2Pkg. Transport 3.000 D3 Product Transport 372.80 D3 2Pkg. Transport 372.80 D3 2Pkg. Transport 36.66 D3 2Pkg. Transport 36.66 D3 2Pkg. Transport 36.66 D3 2Pkg. Transport 36.66

	% Rank	42 12% 2	31 0% 5	55 7% 3	92 6% 4	00 0% 6	83 75% 1	.85 0% 7	59 100% N/A
114101 000	Use (liter)	ion 83.42	2.61	45.65	39.92	0.00	517.83	-1.6	687.59
	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
			əs	r ں	əti	вW			

					ODP					
SƏ	Phase	GWP(kg CO ₂)	%	Rank	(mg CFC-11)	%	Rank	MAC (m³)	%	Rank
INO	Material Production	34.95	27%	2	00.0	%0	5	43.058	34%	2
Də1	Distribution 1	0.43	%0	9	0.00	0%	4	0.835	1%	5
leC	Manufacturing	19.53	15%	S	0.22	7%	2	11.967	9%	З
) 10	Distribution	3.79	3%	5	0.22	7%	З	3.992	3%	4
bed	Filling	00.0	%0	7	0.00	%0	5	0.000	%0	9
ալ	Distribution 3	59.30	47%	-	2.68	91%	1	72.078	57%	-
	End of Life	9.41	7%	4	-0.16	%9-	7	-4.748	-4%	7
	Total	127.42	100%	N/A	2.96	100%	N/A	127.183	100%	N/A

လြ	l fo	Stonyfield Farm Master's Project - Results	^o roject - Results 11
	era	Designation	6 oz. Dist. 3 Corr. 30
	uə	Functional Unit	1000 lb
		Container Size	6 02.

11	6 oz. Dist. 3 Corr. 30%	1000 lb	6 oz.
Data Set	Designation	Functional Unit	Container Size

	Process	Injection Molding	Injection Molding	Extrusion	
	Manufacturer	Polytainers	Polytainers	Clear-Lam	
	Name	Cup	Lid	Seal	
6 oz. Dist. 3 Cd \vee	Designation	Component 1	Component 2	Component 3	

Rank Mat. Prod. % Rank	N/A 0.00 0.0%	N/A 0.00 0.0%	1 684.96 20.0%	5 45.34 1.3%	8 29.41 0.9%	9 25.01 0.7%	3 868.58 25.4%	10 10.52 0.3%	4 116.59 3.4%	7 49.31 1.4%	2 1567.59 45.8%	N/A 0.00 0.0%	6 27.58 0.8%	
% Ra	0.0%	%0'0	1 39.6%	1 1.6%	7 0.5%	5 0.5%	7 17.4%	7 0.4%	7 2.4%	0 1.1%	5 34.8%	%0.0	9 1.6%	1,000,
Weight (kg)	0.000	0000	23.851	0.971	0.327	0.305	10.467	0.217	1.467	0.680	20.935	0.000	0.969	
Material	Acrylic	Aluminum	Corrugated	Cotton Color	LLDPE Film	LDPE	ЭНОТ	Paper Board	ЪЕ	PET	dd	White Color	pooM	
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	Phase	Energy (MJ)	%	Rank	Rank Renewable %
	Material Production	2647.40	29%	ł	0.73%
	Distribution 1	6.73	%0	5	0.09%
	Manufacturing	630.02	14%	3	28.00%
	Distribution 2	188.45	4%	4	38.73%
	Filling	0.16	%0	9	0.00%
λ£	Distribution 3	1226.37	27%	2	35.40%
erç	End of Life	-211.57	-5%	7	3.43%
μЭ	Total	4487.57	100%	N/A	N/A
	Component Allocation - Energy	n - Enerav			

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Allocation	4
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Component Allocation - Energy	ation - Energy			
Component	Energy (MJ)	%	Rank	Rank Renewable %
Cup	1939.56	62%	1	6.77%
Lid	1063.52	34%	2	5.54%
Seal	148.78	5%	3	6.80%
Total	3151.86	100%	N/A	N/A

Segment Allocation - Energy

oegineni Anocanon - Energy	ieiyy			
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	1824.69	41%	1	N/A
Material Production	822.71	18%	2	N/A
D1 Transport	6.73	%0	11	0.09%
D1 Pkg. Transport	0.01	%0	13	0.09%
Manufacturing	630.02	14%	4	28.00%
D2 1Pkg. Transport	41.28	1%	2	%60.0
D2 2Pkg. Production	140.06	3%	9	52.08%
D2 2Pkg. Transport	7.10	%0	10	0.09%
Filling	0.16	%0	12	0.00%
D3 Product Transport	501.15	11%	5	0.09%
D3 1 Pkg. Transport	35.44	1%	6	0.09%
D3 2Pkg. Production	651.01	15%	3	66.61%
D3 2Pkg. Transport	38.78	1%	8	%60.0
End of Life	-211.57	-5%	14	3.43%
Total	4487.57	100%	N/A	N/A

ā	Phase Allocation - Solid Waste	olid Waste				Segmer	Segment Allocation - Solid Waste	olid Waste		1.1	
	Phase	Waste (kg)	%	Rank	Recycled (kg)	5	Segment	Waste (kg)	%	Rank	Recycled (kg)
Mate	Material Production	0.9153	3%	9	0.0000	Feedstock	ck	0.6308		2	0.0000
Distri	Distribution 1	0.0253	%0	2	00000	Material	Material Production	0.2844	1%	8	0.0000
Man	Manufacturing	1.8318	6%	3	1.1731	D1 Transport	sport	0.0252	%0	13	0.0000
Distr	Distribution 2	1.1561	3%	5	3.4930		D1 Pkg. Transport	0.0000	%0	14	0.0000
Filling	g	1.3284	4%	4	0.0000	Manufacturing	cturing	1.8318	%9	4	1.1731
Distr	Distribution 3	5.4229	16%	2	20.0548		D2 1 Pkg. Transport	0.1549		6	0.0000
Б П	End of Life	22.4000	.68%		0.0000	D2 2Pk(D2 2Pkg. Production	0.9745	3%	9	0.0000
Total		33.0796	100%	N/A	24.7209	D2 2Pk(D2 2Pkg. Transport	0.0266	%0	2	3.4930
	:					Filling		1.3284	4%	5	0.0000
5 S	Component Allocation - Solid Waste	n - Solid Waste				D3 Prod	03 Product Transport	1.8802	%9	e	0.0000
	Component	Waste (kg)	%	Rank	Recycled (kg)	D3 1Pk(D3 1Pkg. Transport	0.1330	%0	1	0.0000
d C D		16.7244	61%	1	2.6966	D3 2Pk(D3 2Pkg. Production	3.2643	10%	2	0.0000
Ľ		8.2605	30%		1.9521	D3 2Pkc	D3 2Pkg. Transport	0.1455	%0	ē	20.0548
Seal		2.3951	6%	3	0.0174	End of Life	ife	22.4000	68%	F	0.0000
Total		27.3801	100%	N/A	4.6661	Total		33.0796	100%	NA	24.7209
Pha	Phase Allocation - Air Emissions	r Emissions									
	Phase	Emissions (g)	%	Rank	co	Hydrocarbons	XON	Particulates	SOX	Ĺ	Criteria
Mate	Material Production	1219.19	46%	1	39.41	468.33	328.58	63.32	က	303.83	1203.46
Distr	Distribution 1	8.99	%0	7	1.34	0.59	5.77	0.31		0.61	8.61
Man	Manufacturing	284.07	11%	3	11.80		73.74	46.87		77.69	215.56
Distr	Distribution 2	109.14	4%	4	12.42	14.50	50.24	4.48		13.95	95.59
Filling		13.76	1%	9	2.10	0.02	0.28	0.07		0.04	2.51
Dist	Distribution 3	899.35	34%	2	115.44	70.83	513.62	35.69		88.66	824.24
End	End of Life	108.14	4%	5	35.24	-1.24	-21.39	-32.16	Ĩ	-47.75	-67.30
Total		2642.64	100%	N/A	217.74	558.49	950.85	118.57	4	437.03	2282.68
Com	Component Allocation - Air Emissions	n - Air Emissions									
	Component	Emissions (g)	%	Rank	co	Hydrocarbons	XON	Particulates	xos		Criteria
3		1109.03	66%	1	55.58	288.22	294.12	53.71	Ñ	252.52	944.14
Lid		452.54	27%	2	28.08	156.80	126.32	17.78		40.39	369.37
Seal		121.00	7%	3	7.85		28.40	7.30		23.92	101.72
Total		1682.57	100%	N/A	91.51	479.27	448.83	78.79	e	316.83	1415.23
1					• •		2222	12.22		2	20.0

	s SOX	64 209.41	19.68 94.42	0.31 0.61	0.00 0.00	87 77.69	1.95 3.74	2.20 9.57	0.33 0.64	0.07 0.04	62 45.41	1.67 3.21	8.58 36.52	1.83 3.51	16 -47.75	57 437.03
	Particulates	43.64	19.			46.87				5	23.62				-32.16	118.57
	XON	226.47	102.11	5.76	0.01	73.74	33.89	10.52	5.83	0.28	411.23	29.08	41.50	31.82	-21.39	950.85
	Hydrocarbons	322.79	145.54	0.59	00.00	5.46	3.60	10.28	0.62	0.02	43.69	3.09	20.67	3.38	-1.24	558.49
	СО	27.16	12.25	1.33	00.00	11.80	7.16	4.02	1.23	2.10	86.96	6.15	15.60	6.73	35.24	217.74
	Rank	+	3	13	14	4	7	6	12	11	2	10	5	8	9	N/A
	%	32%	14%	%0	%0	11%	2%	2%	%0	1%	24%	2%	%9	2%	4%	100%
Air Emissions	Emissions (g)	840.32	378.88	8.98	0.01	284.07	52.79	47.26	9.08	13.76	640.84	45.32	163.61	49.59	108.14	2642.64
Segment Allocation - Air Emissions	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transport	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total

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ſ	Metals	14.42	0.00	-0.54	0.17	0.00	0.70	0.00	14.75		Metals	6.56	7.49	-0.09	13.96
	Mei	8			1		6		3		Mei	1			
	TDS	7.93	00.0	00.0	0.04	00.0	0.06	00.00	8.03		TDS	6.34	1.40	0.15	7.89
	COD	14.63	0.50	1.48	15.53	0.12	155.16	1.68	189.09		COD	14.45	6.34	9.20	29.99
101	BOD	2.20	0.06	0.19	2.00	0.03	52.42	0.50	57.39		BOD	2.17	0.58	1.03	3.78
	Acid	2.44	0.00	0.00	0.02	0.00	0.02	0.00	2.49		Acid	1.91	0.44	0.10	2.45
ŀ	Rank	2	5	4	3	9	1	7	N/A		Rank	1	2	3	N/A
	%	%6	1%	2%	8%	%0	80%	%0	100%	SU	%	58%	29%	12%	100%
	Emissions (g)	93.51	5.42	17.30	83.19	0.16	796.65	-4.18	992.05	n - Water Emisssions	Emissions (g)	104.85	52.86	21.92	179.63
Phase Allocation - Water Emi	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	Component Allocation - Water	Component	Cup	Lid	Seal	Total
<u>-</u> L			س			ois	sin		191	<u> </u>	\			~~	

	Metals	9.936	4.480	0.003	0.000	-0.537	0.021	0.143	0.004	0.000	0.255	0.018	0.405	0.020	-0.001	14.747
	TDS	5.465	2.464	0.000	0.000	0.000	0.001	0.040	0.000	0.000	0.010	0.001	0.050	0.001	0.001	8.031
	COD	10.086	4.547	0.498	0.001	1.481	3.056	11.943	0.526	0.115	37.087	2.623	112.578	2.870	1.679	189.089
	BOD	1.514	0.683	0.059	0.000	0.186	0.361	1.572	0.062	0:030	4.383	0.310	47.385	0.339	0.503	57.388
	Acid	1.683	0.759	0.000	0.000	0.000	0000	0.023	0.000	0.000	0.000	0.000	0.023	0.000	0.000	2.487
	Rank	e	7	11	13	6	5	4	10	12	+	ω	2	9	14	N/A
	%	%9	3%	1%	%0	2%	3%	4%	1%	%0	41%	3%	34%	3%	%0	100%
Vater Emissions	Emissions (g)	64.45	29.06	5.42	0.01	17.30	33.26	44.21	5.72	0.16	403.74	28.55	333.11	31.24	-4.18	992.05
Segment Allocation - Water El	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transpor	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total
	<u>.</u>			1-							,19	-				<u></u>

				-		10			
	Rank	2	S.	e	4	9	-	2	N/A
	%	20%	0%	10%	9%6	%0	60%	%0	100%
alei Use	Use (liter)	167.14	3.28	83.87	76.50	00.00	464.79	-3.11	822.46
FIIASE ANOCANON - WAREN USE	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
			əs	י ח	i9ji	sW			

Phase Allocation - Impact Categories

		Rank	2	5	З	4	9	-	7	N/A
		%	43%	%0	12%	5%	%0	45%	-5%	100%
		MAC (m³)	68.508	0.766	19.275	7.561	0.114	71.580	-8.053	159.750
		Rank	9	5	e	2	4	1	2	N/A
		%	%0	%0	12%	13%	%0	84%	-10%	100%
	ООР	(mg CFC-11)	00.0	0.00	0.36	0.38	00.0	2.40	-0.28	2.87
		Bank	2	7	e	5	9	1	4	N/A
		%	32%	%0	14%	5%	%0	38%	10%	100%
audit - IIIpaci Caregoires		GWP(kg CO ₂)	49.20	0.48	21.68	7.23	0.58	57.68	15.40	152.25
LIIASE AILOCALIUL - IIII		Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
		SƏ	ori	6ə	h e C) 10	baq	ալ		

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Stonyfield Farm Master's Project - Results	12	8 oz. Dist. 3 Corr. 30%	1000 lb	8 oz.
nyfield Farm Maste	Data Set	Designation	Functional Unit	Container Size
Ston	Į.	ers	uə	อ

	Process	Injection Molding	Injection Molding	Extrusion	
-	Manufacturer	Polytainers	Polytainers	Clear-Lam	
	Name	Cup	Lid	Seal	
8 oz. Dist. 3 Cd 🕈	Designation	Component 1	Component 2	Component 3	

Rank	N/A	N/A	e	N/A	9	0	2	10	4	5	Ŧ	8	7	N/A
%	0.0%	0.0%	19.3%	0.0%	1.2%	0.8%	23.2%	0.3%	3.1%	1.3%	48.9%	0.8%	1.2%	100%
Mat. Prod.	00.00	00.00	548.06	0.00	34.18	22.33	658.15	7.89	87.44	36.98	1385.78	22.50	33.14	2836.45
Rank	N/A	N/A	1	N/A	8	6	က	10	5	7	2	9	4	N/A
%	0.0%	0.0%	38.4%	0.0%	0.8%	0.5%	16.0%	0.3%	2.2%	1.0%	37.3%	1.1%	2.3%	100%
Weight (kg)	0.000	0.000	19.084	0.000	0.380	0.273	7.931	0.163	1.101	0.510	18.507	0.540	1.165	49.65
Material	Acrylic	Aluminum	Corrugated	Cotton Color	LLDPE Film	LDPE	LLDPE	Paper Board	PE	PET	РР	White Color	Wood	Total
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	Phase	Energy (MJ)	%	Rank	Renewable %
	Material Production	2190.85	58%	1	0.76%
	Distribution 1	5.74	%0	5	0.09%
	Manufacturing	523.54	14%	3	28.08%
	Distribution 2	164.08	4%	4	39.24%
	Filling	0.12	%0	9	0.00%
Â	Distribution 3	1100.61	29%	2	31.77%
erg	End of Life	-175.82	-5%	7	3.43%
ug	Total	3809.12	100%	N/A	N/A
	Composed Allocation Energy				

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CONTRACTOR AND AND AND AND AND AND AND AND AND AND				
Component	Energy (MJ)	%	Rank	Renewable %
Cup	1702.94	65%	1	6.75%
Lid	66.667	31%	2	5.53%
Seal	111.59	4%	3	6.80%
Total	2614.52	100%	N/A	N/A

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Oedinein	Energy (MJ)	%	Rank	Renewable %
Feedstock	1491.11	39%	1	N/A
Material Production	699.74	18%	2	N/A
D1 Transport	5.74	%0	11	0.09%
D1 Pkg. Transport	00.0	%0	N/A	0.09%
Manufacturing	523.54	14%	4	28.08%
D2 1 Pkg. Transport	34.01	1%	8	0.09%
D2 2Pkg. Production	123.94	3%	6	51.92%
D2 2Pkg. Transport	6.13	%0	10	%60'0
Filling	0.12	%0	12	%00.0
D3 Product Transport	501.15	13%	5	%60:0
D3 1Pkg. Transport	29.45	1%	6	%60'0
D3 2Pkg. Production	532.09	14%	3	65.61%
D3 2Pkg. Transport	37.92	1%	7	0.09%
End of Life	-175.82	-5%	14	3.43%
Total	3809.12	100%	N/A	N/A

Phase Waste (kg)	% Rank	Recycled (ka)	Segment Allocation - Solid Waste	ent	Waste (kg)	% Rank	Recycled (ku)
385		0.0000	Feedstock		0.5230	%	
	7	00000	Material Production	luction	0.2455	1%	0.0000
1.5153 5%	3	0.9776	D1 Transport		0.0215	0% 13	
0.9841 4%	5	3.1529	D1 Pkg. Transport	sport	0.0000	0% N/A	
0.9963 4%	4	00000	Manufacturing	9	1.5153	5%	4 0.9776
_	2	15.9908	D2 1Pkg. Transport	insport	0.1276	0% 10	0.0000
	+-	0.0000	D2 2Pkg. Production	duction	0.8335		0.0000
	N/A	20.1212	D2 2Pkg. Transport	nsport	0.0230	0% 12	3.1529
			Filling		0.9963		5 0.0000
Ð			D3 Product Transport	ransport	1.8802		3 0.0000
	¥	Recycled (kg)	D3 1Pkg. Transport	nsport	0.1105	0% 1	0.0000
14.6613 65%	1	2.6533	D3 2Pkg. Production	duction	2.8031	10%	2 0.0000
	2	1.4641	D3 2Pkg. Transport	nsport	0.1423	1%	
1.7963 8%	3	0.0130	End of Life		18.6151		
22.6523 100% N/A	A	4.1305	Total		27.8368	100% N/A	
Emissions (g) % Rank		co	Hydrocarbons		Particulates	SOX	Criteria
	1	31.43	386.59	273.42	52.81	257.87	1002.12
	7	1.14	0.50	4.92	0.26	0.52	7.34
234.57 10%	3	9.76	4.36	61.08	38.69	63.63	177.53
4%	4	10.34	12.52	42.16	3.78	12.03	80.83
	6	1.57	0.02	0.21	0.05	0.03	1.89
869.83 38% 2	2	113.70	69.14	501.75	34.54	82.88	802.00
89.87 4%	5	29.29	-1.03	-17.77	-26.73	-39.68	-55.93
2318.75 100% N/A	1	197.23	472.10	865.78	103.40	377.29	2
Component Allocation - Air Emissions							
Emissions (g) % Rank		8	Hydrocarbons	XON	Particulates	xos	Criteria
973.84 69%	1	48.74	253.09	258.19	47.10	222.23	
339.54 24%	2	21.10	117.84	94.86	13.28	30.08	
90.75 6%	Э	5.89	25.68	21.30	5.48	17.94	
1404 14 100% N/A	<	75 70	306 61	37 A DE	20 20		

ent Allocation - Ai Segment I tock	Segment Allocation - Air Emissions Segment Emissions (g) Feedstock 690.16	% 30%	Rank 1	CO 21.39	Hydrocarbons 263.12	NOX 186.09	Particulates 35.94	SOX 175.51	Criteria 682.05
	323.88	14%	e	10.04	12	87.33	16.87	82.36	320.07
	7.67	%0	13	1.14	0.50	4.92	0.26	0.52	7.34
	0.00	%0	N/A	0.00	0.00	0.00	00.0	00.0	00.0
	234.57	10%	4	9.76	4.36	61.08	38.69	63.63	177.53
	43.48	2%	8	5.90	2.97	27.92	1.60	3.08	41.47
	41.14	2%	6	3.38	9.02	9.21	1.89	8.39	31.89
	7.83	%0	12	1.06	0.53	5.03	0.29	0.56	7.47
	10.32	%0	11	1.57	0.02	0.21	0.05	0.03	1.89
	640.84	28%	2	86.96	43.69	411.23	23.62	45.41	610.91
	37.66	2%	10	5.11	2.57	24.17	1.39	2.67	35.90
	142.85	6%	5	15.04	19.57	35.25	7.75	31.36	108.97
	48.49	2%	7	6.58	3.31	31.11	1.79	3.44	46.22
	89.87	4%	9	29.29	-1.03	-17.77	-26.73	-39.68	-55.93
	2318.75	100%	N/A	197.23	472.10	865.78	103.40	377.29	2015.78

Emissions
Water
Allocation -
Phase /

	issions	ns (g) % Rank Acid BOD COD TDS Metals	52.33 6% 3 1.417 1.236 8.222 4.617 7.912	24.56 3% 7 0.665 0.580 3.859 2.166 3.713	4.62 1% 11 0.000 0.050 0.425 0.000 0.003	0.00 0% N/A 0.000 0.000 0.000 0.000 0.000	14.26 2% 9 0.000 0.147 1.178 0.000 -0.402	27.40 3% 6 0.000 0.298 2.518 0.001 0.017	38.56 4% 4 0.020 1.328 9.822 0.035 0.127	4.94 1% 10 0.000 0.054 0.454 0.000 0.003	0.12 0% 12 0.000 0.023 0.086 0.000 0.000	403.74 46% 1 0.000 4.383 37.087 0.010 0.255	23.73 3% 8 0.000 0.258 2.180 0.001 0.015	261.38 30% 2 0.028 37.124 88.364 0.062 0.318	30.55 3% 5 0.000 0.332 2.806 0.001 0.019	-3.47 0% 14 0.000 0.418 1.395 0.001 -0.001	882 71 100% N/A 2130 46 220 158 306 6 803 11 081
	Nater Emissions	Emissions (g)	52.33	24.56	4.62	0.00	14.26	27.40	38.56	4.94	0.12		23.73	261.38	30.55	-3.47	882 71 1(
ſ	Segment Allocation - Water	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	-	_	E Filing		D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total

Rank	2	5	3	4	6	Ļ	7	N/A
%	18%	%0	10%	6%	0%	63%	%0	100%
Use (liter)	129.04	2.79	66'69	63.65	0.00	448.23	-2.59	710.52
Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
		əs	r U	əte	\$ M			

%	54 40%	0.653 0%	15.896 11%	6.370 4%	0.085 0%	69.638 49%	-6.692 -5%	143 304 100%
	9	6 5	ہ ع	6 2	6 4	6 1	6 7	6 N/A
			Ì	Ì				9 100%
ODP (ma CFC-11)	0.0	0.0)6.0	75.0	0.0(1.8	-0.2	56 6
Bank	2	7	c	5	9	L	4	N/A
%	31%	%0	13%	5%	%0	41%	10%	100%
GWP(kg CO ₂)	41.76	0.41	18.03	6.14	0.43	54.40	12.80	133.96
Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
Se	jnorie Z	ت Gə1	В Э	ct o	ii. ed	ی سا	Ш	F
	Phase GWP(kg CO ₃) % Bank (mg CFC-11) % Bank MAC (m ³) %	Phase GWP(kg CO ₂) % Rank ODP Mark Material Production 41.76 31% 2 0.00 0% 6 57.354	Phase GWP(kg CO ₂) % Rank ODP % Rank MAC (m³) % Material Production 41.76 31% 2 0.00 0% 6 57.354 40% Distribution 1 0.41 0% 7 0.00 0% 5 0.653 0%	Phase GWP(kg CO ₂) % Rank MAC (m ³) % Material Production 41.76 31% 2 0.00 0% 6 57.354 40% Distribution 1 0.41 0% 7 0.00 0% 5 0.653 0% Manufacturing 18.03 13% 3 0.30 13% 3 15.896 11%	Phase GWP(kg CO ₂) % Rank MAC (m ³) % Material Production 41.76 31% 2 0.00 0% 6 57.354 40% Distribution 1 0.41 0% 7 0.00 0% 5 0.653 0% Manufacturing 18.03 13% 3 0.30 13% 3 15.896 11% Distribution 2 6.14 5% 5 0.34 15% 2 6.370 4%	Phase GWP(kg CO ₂) % Rank MAC (m ³) % Material Production 41.76 31% 2 0.00 0% 6 57.354 40% Material Production 41.76 31% 2 0.00 0% 6 57.354 40% Distribution 1 0.41 0% 7 0.00 0% 5 0.653 0% Manufacturing 18.03 13% 3 0.30 13% 3 15.896 11% Distribution 2 6.14 5% 5 0.34 15% 2 6.370 4% Distribution 2 0.43 0% 6 0.04 4% 0.085 0%	GWP(kg CO ₂) % Rank MAC (m ³) % al Production 41.76 31% 2 0.00 0% 6 57.354 40% ution 1 0.41 0% 7 0.00 0% 5 0.653 0% acturing 18.03 13% 3 0.30 13% 3 15.896 11% ution 2 6.14 5% 5 0.34 15% 2 6.370 4% ution 2 0.43 0% 5 0.34 15% 3 15.896 11% ution 2 6.14 5% 5 0.34 15% 2 6.370 4% ution 3 54.40 41% 1 1.88 82% 1 69.638 49%	Phase GWP(kg CO ₂) % Rank MAC (m ³) % Material Production GWP(kg CO ₂) % Rank (mg CFC-11) % Rank MAC (m ³) % Material Production 0.41.76 31% 2 0.00 0% 6 57.354 40% Distribution 1 0.41 0% 7 0.00 0% 5 0.653 0% Manufacturing 18.03 13% 3 0.30 13% 3 15.896 11% Manufacturing 0.43 0% 6 0.30 13% 3 15.896 11% Distribution 2 6.14 5% 5 0.34 15% 2 6.370 4% Filling 0.43 0.00 0% 4 0.085 0% 5 5 0.563 9% Filling 0.108 0 0% 1 60.633 1% 5 6 5 5 5 5 5

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Project - Results	13	6 oz. Dist. 3 Corrugated	1000 lb	6 oz.
Stonyfield Farm Master's Project - Results	E Data Set	Designation	E Functional Unit	Container Size

		ding	ding	sion	
	Process	Injection Molding	Injection Molding	Extrusior	
	Manufacturer	Polytainers	Polytainers	Clear-Lam	
	Name	Cup	Lid	Seal	
6 oz. Dist. 3 Cc 🛡	Designation	Component 1	Component 2	Component 3	

	Material	Weight (kg)	%	Rank	Mat. Prod.	%	Rank
	Acrylic	0.000	%0.0	N/A	00.0	%0.0	N/A
	Aluminum	0.000	0.0%	N/A	00.0	%0.0	N/A
	Corrugated	3.407	8.6%	3	97.83	3.4%	4
Ş	Cotton Color	0.971	2.4%	5	45.34	1.6%	9
ណ	LLDPE Film	0.327	0.8%	8	29.41	1.0%	7
du	LDPE	0.305	0.8%	6	25.01	0.9%	6
8	LLDPE	10.467 26.3%	26.3%	2	868.58	30.6%	2
eria	Paper Board	0.217	0.5%	10	10.52	0.4%	10
tel	PE	1.467	3.7%	4	116.59	4.1%	3
N	PET	0.680	1.7%	2	49.31	1.7%	5
	ЬР	20.935	52.7%	1	1567.59	55.2%	1
	White Color	000.0	0.0%	N/A	00.0	0.0%	N/A
	Mood	0.969	2.4%	9	27.58	1.0%	8
	Total	39.75	100%	N/A	2837.76	100%	N/A

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	Phase	Energy (MJ)	%	Rank	Renewable %
	Material Production	2647.40	%69	1	0.73%
	Distribution 1	6.73	%0	5	%60.0
	Manufacturing	630.02	16%	2	28.00%
	Distribution 2	188.45	5%	4	38.73%
	Filling	0.16	%0	6	0.00%
λŧ	Distribution 3	. 601.15	16%	3	3.55%
erç	End of Life	-211.57	-5%	7	3.43%
uЭ	Total	3862.34	100%	N/A	N/A
	Component Allocation - Energy	n - Enerav			

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Component Allocation - Energy	n - Energy			
Component	Energy (MJ)	%	Rank	Renewable %
Cup	1939.48	62%	1	6.77%
Lid	1063.48	34%	2	5.54%
Seal	148.78	5%	3	6.80%
Total	3151.74	100%	N/A	N/A

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Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	1824.69	47%	1	N/A
Material Production	822.71	21%	2	N/A
D1 Transport	6.73	%0	11	%60.0
D1 Pkg. Transport	0.01	%0	13	%60.0
Manufacturing	630.02	16%	3	28.00%
D2 1Pkg. Transport	41.28	1%	2	%60.0
D2 2Pkg. Production	140.06	4%	5	52.08%
D2 2Pkg. Transport	7.10	%0	10	%60.0
Filling	0.16	%0	12	%00.0
D3 Product Transport	501.15	13%	4	%60.0
D3 1Pkg. Transport	35.44	1%	8	%60.0
D3 2Pkg. Production	48.36	1%	9	43.07%
D3 2Pkg. Transport	16.20	%0	6	%60.0
End of Life	-211.57	-5%	14	3.43%
Total	3862.34	100%	N/A	N/A

	Recvcled (ka)	0.0000	0.0000	0.0000	0.0000	1.1731	0.0000	0.0000	3.4930	0.0000	0.0000	0.0000	0.0000	0.6326	0.0000	5.2987		Critorio	1203.46	8.61	215.56	95.59	2.51	701.28	-67.30	2159 72		Criteria	944.05	369.33	101.71	1415.08
	%   Rank   B	9%	1% 8	0% 13	0% 14	6% 3			0% 12		6% 2	0% 10	2% 7	0% 11	74% 1	100% N/A			303.83	0.61	77.69	13.95	0.04	56.05	-47.75	404.43		sox	252.51	40.39	23.92	316.82
t Waste	ka)	8	0.2844	0.0252	0.0000	1.8318	0.1549	0.9745	0.0266	1.3284	1.8802	0.1330	0.5315	0.0608		30.2622 10		Particulated	63.32	0.31	46.87	4.48	0.07	28.26	-32.16	111.13		Particulates	53.71	17.78	7.30	78.79
Segment Allocation - Solid Waste	Segment		Material Production	port	Transport	turing	Transport	D2 2Pkg. Production	D2 2Pkg. Transport		D3 Product Transport	D3 1 Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	е				28.58	5.77	73.74	50.24	0.28	459.53	-21.39	896.76			294.05	126.29	28.40	448.73
Segment	Ň	Feedstock	Material I	D1 Transport	D1 Pkg.	Manufacturing	D2 1Pkg.	D2 2Pkg.	D2 2Pkg.	Filling	D3 Produ	D3 1Pkg.	D3 2Pkg.	D3 2Pkg.	End of Life	Total		Hvdrocarhons	468.33	0.59	5.46	14.50	0.02	55.46	-1.24	543.12		Hydrocarbons	288.22	156.80	34.24	479.26
	Recycled (kg)	0.0000	0.0000	1.1731	3.4930	0.0000	0.6326	0.0000	5.2987			Recycled (kg)	2.6966	1.9521	0.0174	4.6661		co	39.41	1.34	11.80	12.42	2.10	101.99	35.24	204.29		00	55.56	28.07	7.85	91.49
	Rank	9	7	Э	5	4	2		N/A		ł	Rank Rank	-	2		N/A		Bank	F	7	3	4	9	2	5	N/A		Rank	+	2	3	NA
	%	3%	0%	6%	4%	4%	%6					%	61%		%6			%	49%	%0	11%	4%	1%	30%	4%	100%		%	%99	27%	7%	100%
lid Waste	Waste (kg)	0.9153	0.0253	1.8318	1.1561	1.3284	2.6054	22.4000	30.2622		1 - Solid Waste	Waste (kg)	16.7241	8.2604	2.3951	27.3796	Emiseione	Emissions (g)	1219.19	8.99	284.07	109.14	13.76	738.55	108.14	2481.84	- Air Emissions	Emissions (g)	1108.93	452.49	121.00	1682.41
Phase Allocation - Solid Waste	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	lotal		Component Allocation - Solid Waste	Component	Cup	jd	Seal	Fotal	Phase Allocation - Air Emissions	Phase	Material Production	Distribution 1		Distribution 2		Distribution 3	End of Life	Total	Component Allocation - Air Emissions	Component	Cup	j	Seal	Total
					_		eVa:				~L			<u>1</u>	57		ľ	. <b>.</b>	<u>[~]</u>	<u>ا</u> ت	<u> </u>				imi		-	1		<u>(</u>	တ ျ	

Segment Allocation - Air Emissions           Segment         Emissions (g)         %         Rank         CO         Hydrocarbons         NOX           Feedstock         840.32         34%         1         27.16         322.79         226.47           Material Production         378.88         15%         3         12.25         145.54         102.11           D1 Transport         840.32         34%         13         1.2.25         145.54         102.11           D1 Production         378.88         15%         3         1.33         0.00         0.00         0.01           D1 Prog. Transport         840.37         11%         4         11.80         5.46         73.74           Manufacturing         284.07         11%         4         11.80         5.46         73.74           D2 1Pkg. Transport         52.79         2%         6         7.16         3.60         33.89           D2 2Pkg. Production         47.26         2%         7         4.02         10.28         10.52           D2 2Pkg. Transport         52.2kg. Transport         56.2%         7         4.02         10.28         5.83           D2 2Pkg. Transport         640.84		Particulates SOX Criteria	43.64 209.41 829.47	19.68 94.42 373.99	0.31 0.61 8.60	0.00 0.00 0.01	46.87 77.69 215.56	1.95 3.74 50.34	2.20 9.57 36.60	0.33 0.64 8.66	0.07 0.04 2.51	23.62 45.41 610.91	1.67 3.21 43.20	2.21 5.95 27.42	0.76 1.47 19.74	-32.16 -47.75 -67.30	111.13 404.43 2159.72
Segment Allocation - Air Emissions           Segment         Emissions         (g)         %         Rank         CO         Hydrocart           Feedstock         840.32         34%         1         27.16         32           Material Production         378.88         15%         3         12.25         14           D1 Transport         8.98         0%         13         1.33         1.33           D1 Pkg. Transport         8.98         0%         14         0.00         13           D1 Pkg. Transport         8.98         0%         13         1.33         1.33           D2 IPkg. Transport         0.01         0%         14         0.00         1.33           D2 IPkg. Transport         52.79         2%         6         7.16         1           D2 2Pkg. Transport         52.79         2%         6         7.16         1           D2 2Pkg. Transport         13.76         1%         11.23         1.23         1           D2 2Pkg. Transport         52.79         2%         8         6.15         4           D3 Production         31.69         1%         1         2.10         2           D3 2Pkg. Transport <td></td> <td>XON</td> <td>226.47</td> <td>102.11</td> <td>5.76</td> <td>0.01</td> <td>73.74</td> <td>33.85</td> <td>10.52</td> <td>5.8</td> <td>0.2{</td> <td>411.2%</td> <td>29.05</td> <td>5.90</td> <td>13.29</td> <td>-21.39</td> <td>896.76</td>		XON	226.47	102.11	5.76	0.01	73.74	33.85	10.52	5.8	0.2{	411.2%	29.05	5.90	13.29	-21.39	896.76
Segment Allocation - Air Emissions         Air Emissions         Air Emissions         Air Emissions         CO         Segment         Emissions         (g)         %         Rank         CO         CO         Segment         Emissions         (g)         %         Rank         CO         Segment         Emissions         (g)         %         Rank         CO         Segment         Emissions         (g)         %         Rank         CO         378.88         15%         3         1         2         2         Material Production         378.88         15%         3         1         2         2         3         1         2         2         3         1         2         2         3         1         2         2         3         1         2         2         3         1         2         2         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         1         3         3         <		Hydrocarbons		145.54											1.41		543.12
Segment Allocation - Air Emissions         Segment Allocation - Air Emissions           Segment         Emissions (g)         %         Ran           Feedstock         840.32         34%         840.32         34%           Material Production         378.88         15%         898         0%           D1 Transport         8.98         0%         898         0%           D1 Pkg. Transport         0.01         0%         71%           D2 IPkg. Transport         284.07         11%         76           D2 IPkg. Transport         0.01         0%         71%           D2 IPkg. Transport         52.79         2%         2%           D2 IPkg. Transport         47.26         2%         76           D2 2Pkg. Transport         13.76         1%         76           D2 2Pkg. Transport         45.32         2%         76           D3 Product Transport         13.76         1%         76           D3 2Pkg. Transport         31.69         1%         76           D3 2Pkg. Transport         20.71         1%         76           D3 2Pkg. Transport         20.71         1%         76           D3 2Pkg. Transport         20.71         1%		СО	27.16	12.25	1.33	00.0	11.80	7.16	4.02	1.23	2.10	86.96	6.15	6.06	2.81	35.24	204.29
Segment Allocation - Air EmissionsSegmentEmissions (g)SegmentEmissions (g)SegmentEmissions (g)Feedstock840.32Material Production378.88D1 Transport378.88D1 Pkg. Transport8.98D1 Pkg. Transport0.01D2 1Pkg. Transport284.07D2 1Pkg. Transport284.07D2 1Pkg. Transport284.07D2 2Pkg. Production47.26D2 2Pkg. Transport640.84D2 2Pkg. Transport13.76D2 2Pkg. Transport640.84D3 2Pkg. Transport20.71D3 2Pkg. Transport20.71		Rank	-	3	13	14	4	9	7	12	11	2	8			5	NA
Segment Allocation - Air Emissi Segment Allocation - Air Emissi Feedstock Material Production D1 Transport D1 Pkg. Transport D1 Pkg. Transport D2 1Pkg. Transport D2 2Pkg. Transport D2 2Pkg. Transport D2 2Pkg. Transport D3 1Pkg. Transport D3 2Pkg. Transport		%	34%	15%		%0	11%	2%	2%		1%	26%	2%	1%	1%	4%	100%
	Air Emissions	Emissions (g)	840.32	378.88	8.98	0.01	284.07	52.79	47.26	9.08	13.76	640.84	45.32	31.69	20.71	108.14	2481.84
Air Emissions (Cont'd)	Segment Allocation - /	Segment	Feedstock	Material Production										D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total

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	Metals	14.42	0.00	-0.54	0.17	0.00	0.28	0.00	14.33		Metals	6.56	7.49	-0.09	13.96
	TDS	7.93	0.00	00.00	0.04	0.00	0.06	0:00	8.03		TDS	6.34	1.40	0.15	7.89
	COD	14.63	0.50	1.48	15.53	0.12	41.46	1.68	75.40		COD	14.44	6.34	9.20	29.98
	BOD	2.20	0.06	0.19	2.00	0.03	4.92	0.50	9.89		BOD	2.17	0.58	1.03	3.78
	Acid	2.44	0.00	00.00	0.02	0.00	0.02	00.00	2.49		Acid	1.91	0.44	0.10	2.45
	Rank	2	5	4	3	9	ł	7	N/A		Rank	1	2	3	N/A
	%	15%	1%	3%	13%	%0	20%	-1%	100%	SU	%	58%	29%	12%	100%
ater Emissions	Emissions (g)	93.51	5.42	17.30	83.19	0.16	446.80	-4.18	642.21	I - Water Emisssions	Emissions (g)	104.79	52.83	21.91	179.53
Phase Allocation - Water Emis	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	-illing	Distribution 3	End of Life	Total	Component Allocation - Water	Component	Sup	į	Seal	Total
<u>u</u>	L				su	oia	sju			BV 0	<u>الــــــــــــــــــــــــــــــــــــ</u>	<u>10</u>			

	Metals	9.936	4.480	0.003	0.000	-0.537	0.021	0.143	0.004	0.000	0.255	0.018	0.003	0.008	-0.001	14.333
	TDS	5.465	2.464	0.000	0.000	0.000	0.001	0.040	0.000	0.000	0.010	0.001	0:050	0.000	0.001	8.031
	COD	10.086	4.547	0.498	0.001	1.481	3.056	11.943	0.526	0.115	37.087	2.623	0.555	1.199	1.679	75.395
	BOD	1.514	0.683	0.059	0.000	0.186	0.361	1.572	0.062	0:030	4.383	0.310	0.085	0.142	0.503	9.891
	Acid	1.683	0.759	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.023	0.000	0.000	2.487
	Rank	2	5	10	13	7	4	3	6	12	1	9	11	8	14	N/A
	%	10%	2%	1%	%0	3%	5%	%2	1%	%0	63%	4%	%0	2%	-1%	100%
Vater Emissions	Emissions (g)	64.45	29.06	5.42	0.01	17.30	33.26	44.21	5.72	0.16	403.74	28.55	1.46	13.05	-4.18	642.21
Segment Allocation - Water	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1 Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transpor	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total
			(	b'tı	uo;	<b>)</b>	sue	oia	sin	uЭ	<b>19</b>	isV	٨			

1				<b>~</b>	**				
	Rank				7	9			N/A
	%	28%	1%	14%	13%	%0	46%	-1%	100%
alei 036	Use (liter)	167.14	3.28	83.87	76.50	0.00	276.50	-3.11	604.17
I HASE MINCALION - MALEI USE	Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
			əs	r U	əte	3W			

		ľ	ľ						
	-			ODP					
Phase	GWP(kg CO ₂ )	%	Rank	(mg CFC-11)	%	Rank	MAC (m³)	%	Rank
Material Production	49.20	36%	1	00.0	%0	9	68.508	46%	-
Distribution 1	0.48	%0	7	00.0	%0	5	0.766	1%	S
Manufacturing	21.68	16%	3	0.36	73%	2	19.275	13%	Э
Distribution 2	7.23	5%	5	0.38	78%	1	7.561	5%	4
Filling	0.58	%0	9	00.0	%0	4	0.114	%0	9
Distribution 3	41.43	30%	2	0.02	5%	3	61.823	41%	2
End of Life	15.40	11%	4	-0.28	-56%	7	-8.053	-5%	7
Total	136.00	100%	N/A	0.49	100%	N/A	149.993	100%	N/A

Results	
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Project	
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er's Project - Results	14	8 oz. Dist. 3 Corruga	1000 lb	8 oz.	
Stonyfield Farm Master's Project - Results	E Data Set	Designation	E Functional Unit	Container Size	

 Designation	Component 1	Component 2	Component 3
	ugated	q	oz.

	Process	Injection Molding	Injection Molding	Extrusion	
	Manufacturer	Polytainers	Polytainers	Clear-Lam	
	Name	Cup	Lid	Seal	
8 oz. Dist. 3 Cd 🕈	Designation	Component 1	Component 2	Component 3	

0.000 3.084
0.000
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Allocation	
<b>Phase</b>	

%	%	%	%	%	%	%	%	<b>AN</b>	
Rank   Renewable %	0.76%	%60.0	28.08%	39.24%	0.00%	4.34%	3.43%	z	
Rank	1	5	3	4	9	2	7	N/A	
%	66%	%0	16%	5%	%0	18%	-5%	100%	
Energy (MJ)	2190.85	5.74	523.54	164.08	0.12	611.30	-175.82	3319.81	
Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total	
						λđ	ieli	μЭ	

Energy	L
Component Allocation -	

I IONNOOIN / VIOLINALINO				
Component	Energy (MJ)	%	Rank	Renewable %
Cup	1702.89	65%	1	6.75%
Lid	799.97	31%	2	5.53%
Seal	111.59	4%	3	6.80%
Total	2614.45	100%	N/A	N/A

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Segment Allocation - Energy	nergy			
Segment	Energy (MJ)	%	Rank	Renewable %
Feedstock	1491.11	45%	1	N/A
Material Production	699.74	21%	2	N/A
D1 Transport	5.74	%0	Ŧ	0.09%
D1 Pkg. Transport	00.0	%0	A/A	0.09%
Manufacturing	523.54	16%	e	28.08%
D2 1Pkg. Transport	34.01	1%	2	0.09%
D2 2Pkg. Production	123.94	4%	5	51.92%
D2 2Pkg. Transport	6.13	%0	9	0.09%
Filling	0.12	%0	12	0.00%
D3 Product Transport	501.15	15%	4	0.09%
D3 1Pkg. Transport	29.45	1%	8	0.09%
D3 2Pkg. Production	60.46	2%	9	43.07%
D3 2Pkg. Transport	20.24	1%	6	%60.0
End of Life	-175.82	-5%	14	3.43%
Total	3319.81	100%	N/A	N/A

Phase Allocation - Solid Waste	olid Waste				Segmen	Segment Allocation - Solid Waste	olid Waste			
Phase	Waste (kg)	%	Rank	Recycled (kg)		Segment	Waste (kg)	%	Rank	Recycled (kg)
Material Production	0.7685	3%	9	0.0000	Feedstock	ck	0.5230	2%	7	0.0000
Distribution 1	0.0215	%0	7	0.0000	Materia	Material Production	0.2455	1%	8	0.0000
Manufacturing	1.5153	6%	3	0.9776	D1 Trar	Transport	0.0215	%0	13	0.0000
Distribution 2	0.9841	4%	5	3.1529	D1 Pkg	D1 Pkg. Transport	0.0000	%0	N/A	0.0000
Filling	0.9963	4%	4	0.0000	Manufacturing	cturing	1.5153	%9	3	0.9776
Distribution 3	2.7310	11%	2	0.7908	D2 1PK	D2 1Pkg. Transport	0.1276	%0	6	0.0000
End of Life	18.6151	73%	1	0.0000	D2 2Pk	D2 2Pkg. Production	0.8335	3%	5	0.0000
lotal	25.6319	100%	N/A	4.9212	D2 2PK	D2 2Pkg. Transport	0.0230	%0	12	3.1529
					Filling		0.9963	4%	4	0.0000
Component Allocation - Solid Waste	n - Solid Waste				D3 Proc	D3 Product Transport	1.8802	%2	2	0.0000
Component	Waste (kg)	%	Rank	Recycled (kg)	D3 1PK	D3 1Pkg. Transport	0.1105	%0	10	0.0000
	14.6611	65%	1	2.6533	D3 2PK	D3 2Pkg. Production	0.6644	3%	9	0.0000
Lid	6.1945	27%	2	1.4641	D3 2PK	D3 2Pkg. Transport	0.0760	%0	1	0.7908
	1.7963	8%	3	0.0130	End of Life	ife	18.6151	73%	F	0.0000
l otal	22.6520	100%	N/A	4.1305	Total		25.6319	100%	N/A	4.9212
Phase Allocation - Air Emissions	. Emissions									
Phase	Emissions (g)	%	Rank	co	Hydrocarbons	XON	Particulates	SOX		Criteria
Material Production	1014.04	46%	1	31.43	386.59	273.42	52.81	2	257.87	1002.12
Distribution 1	7.67	%0	7	1.14	0.50	4.92	0.26		0.52	7.34
Manufacturing	234.57	11%	3	9.76	4.36	61.08	38.69		63.63	177.53
Distribution 2	92.46	4%	4	10.34	12.52	42.16	3.78	-	12.03	80.83
Filling	10.32	%0	9	1.57	0.02	0.21	0.05		0.03	1.89
Distribution 3	743.99	34%	2	103.17	57.11	459.42	28.72		57.36	705.77
End of Life	89.87	4%	5	29.29	-1.03	-17.77	-26.73	Ĩ	-39.68	-55.93
Total	2192.91	100%	N/A	186.70	460.07	823.44	97.58	ю	351.77	1919.55
Component Allocation - Air Emissions	1 - Air Emissions									
Component	Emissions (g)	%	Rank	co	Hydrocarbons	XON	Particulates	SOX		Criteria
	973.78	69%	1	48.73	253.08	258.14	47.09	8	222.22	829.27
	339.51	24%	2	21.09	117.84	94.84	13.28		30.08	277.13
	90.75	6%	3	5.89	25.68	21.30	5.48		17.94	76.28
Total	1404.04	100%	N/A	75.71	396.60	374.28	65.85	Ñ	270.24	1182.69

Air Emissions

Solid Waste

	Criteria	682.05	320.07	7.34	0.00	177.53	41.47	31.89	7.47	1.89	610.9	35.90	34.28	24.68	-55.93	1919.55
	SOX	175.51	82.36	0.52	0.00	63.63	3.08	8.39	0.56	0.03	45.41	2.67	7.44	1.83	-39.68	351.77
	Particulates	35.94	16.87	0.26	00.00	38.69	1.60	1.89	0.29	0.05	23.62	1.39	2.76	0.95	-26.73	97.58
	XON	186.09	87.33	4.92	0.00	61.08	27.92	9.21	5.03	0.21	411.23	24.17	7.41	16.61	-17.77	823.44
	Hydrocarbons	263.12	123.47	0.50	00.00	4.36	2.97	9.02	0.53	0.02	43.69	2.57	9.08	1.76	-1.03	460.07
	CO F	21.39	10.04	1.14	0.00	9.76	5.90	3.38	1.06	1.57	86.96	5.11	7.58	3.51	29.29	186.70
	Rank	1	3	13	N/A	4	6	7	12	11	2	6	8	10	5	N/A
	%	31%	15%	%0	%0	11%	2%	2%	%0	%0	29%	2%	2%	1%	4%	100%
Air Emissions	Emissions (g)	690.16	323.88	7.67	00.0	234.57	43.48	41.14	7.83	10.32	640.84	37.66	39.61	25.89	89.87	2192.91
Segment Allocation - Air Emissions	Segment	Feedstock	Material Production	D1 Transport	D1 Pkg. Transport	Manufacturing	D2 1Pkg. Transport	D2 2Pkg. Production	D2 2Pkg. Transport	Filling	D3 Product Transpor	D3 1Pkg. Transport	D3 2Pkg. Production	D3 2Pkg. Transport	End of Life	Total

Emissions	
- Water	
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Phase	Emissions (g)	%	Bank	Acid	BOD	COD	TDS	Metals
Material Production	76.89	13%	2	2.08	1.82	12.08	6.78	11.63
Distribution 1	4.62	1%	5	00.0	0.05	0.42	0.00	00.0
Manufacturing	14.26	2%	4	0.00	0.15	1.18	0.00	-0.40
Distribution 2	70.89	12%	3	0.02	1.68	12.79	0.04	0.15
Filling	0.12	%0	9	0.00	0.02	0.09	0.00	00.0
Distribution 3	445.61	73%	1	0.03	4.92	41.46	0.07	0.28
End of Life	-3.47	-1%	7	0.00	0.42	1.40	0.00	0.00
l otal	608.92	100%	N/A	2.13	90.6	69.42	6.89	11.66
Component Allocation - Wate	on - Water Emisssions	SL						
Component	Emissions (g)	%	Rank	Acid	BOD	COD	TDS	Metals
Sup	92.19	62%	1	1.68	1.92	12.74	5.59	5.73
Lid	39.87	27%	2	0.33	0.44	4.78	1.06	5.64
Seal	16.44	11%	3	0.08	0.77	6.90	0.11	-0.07
Total	148.49	100%	N/A	2.09	3.13	24.42	6.76	11.30

Segment	Emissions (g)	%	Bank	Acid	BOD	COD	TDS	Metals
Feedstock	52.33	9%	~	1.417	1.236	8.222	4.617	7.912
Material Production	24.56	4%	5	0.665	0.580	3.859	2.166	3.713
01 Transport	4.62	1%	9	0.000	0.050	0.425	000.0	0.003
D1 Pkg. Transport	0.00	%0	N/A	0.000	0.000	000.0	0.000	0.000
Manufacturing	14.26	2%	8	0.000	0.147	1.178	0.000	-0.402
D2 1Pkg. Transport	27.40	4%	4	0.000	0.298	2.518	0.001	0.017
02 2Pkg. Production	38.56	%9	3	0.020	1.328	9.822	0.035	0.127
02 2Pkg. Transport	4.94	1%	6	0.000	0.054	0.454	0.000	0.003
illing	0.12	%0	12	0.000	0.023	0.086	0.000	00000
<b>D3 Product Transport</b>	403.74	66%	1	0.000	4.383	37.087	0.010	0.255
D3 1Pkg. Transport	23.73	4%	9	0.000	0.258	2.180	0.001	0.015
D3 2Pkg. Production	1.83	%0	11	0.028	0.107	0.694	0.062	0.003
D3 2Pkg. Transport	16.31	3%	7	0.000	0.177	1.498	0.000	0.010
End of Life	-3.47	-1%	14	0.000	0.418	1.395	0.001	-0.001
	608.92	100%		0 120		001100		

Material Production         Use (liter)         %         Rank           Material Production         129.04         24%         2           Distribution 1         2.79         1%         5           Manufacturing         69.39         13%         3           Distribution 2         63.65         12%         4           Filling         0.00         0%         6           Distribution 3         277.39         51%         1           End of Life         -2.59         0%         7           Total         539.68         100%         N/A				_						
Phase         Use (liter)         9           Material Production         129.04         2           Distribution 1         2.79         2           Manufacturing         69.39         1           Distribution 2         63.65         1           Distribution 3         2.773         5           Distribution 2         0.00         0           Distribution 3         2.77.39         5           End of Life         -2.59         1           Total         539.68         10		Rank	2	S	e	4	9	+	7	N/A
Phase     Use (lither       Material Production     1       Distribution 1     1       Manufacturing     1       Distribution 2     1       Distribution 3     2       End of Life     5       Total     5		%	24%	1%	13%	12%	%0	51%	%0	100%
Phase Material Production Distribution 1 Manufacturing Distribution 2 Distribution 3 End of Life Total	aici 030	Use (liter)	129.04	2.79	66.99	63.65	00.0	277.39	-2.59	539.68
Water Use		Phase	Material Production	Distribution 1	Manufacturing	Distribution 2	Filling	Distribution 3	End of Life	Total
			1	əsi	י ט	əte	\$W			

					dQO .					
səi	Phase	GWP(kg CO ₂ )	%	Rank	(mg CFC-11)	%	Rank	MAC (m ³ )	%	Bank
JOE	Material Production	41.76	34%	1	0.00	%0	9	57.354	42%	2
) 91	Distribution 1	0.41	%0	7	00.0	%0	5	0.653	%0	5
e)	Manufacturing	18.03	15%	3	0:30	%69	2	15.896	12%	က
10	Distribution 2	6.14	5%	5	0.34	%62		6.370	5%	4
edu	Filling	0.43	%0	9	0.00	%0	4	0.085	%0	ø
ul	Distribution 3	41.68	34%	2	0.02	2%	e	62.002	46%	F
	End of Life	12.80	11%	4	-0.23	-53%	7	-6.692	-5%	
	Total	121.24	100%	N/A	0.43	100%	N/A	135.668	100%	N/A