



**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	15,523	15,500
Reel Stock/Sheet-NZ Sourced	570	569
Reel Stock/Sheet-Overseas Sourced	2,047	2,044
Regrind (Bought In)	0	0
Regrind (In-House Recycling)	1,653	1,651
<b>TOTAL (excl In-House Recycling)</b>	<b>18,139</b>	<b>17,544</b>

^Import Stats^

All PET Resins used in Production as a % of Total Imported PET Resins **100.14** %

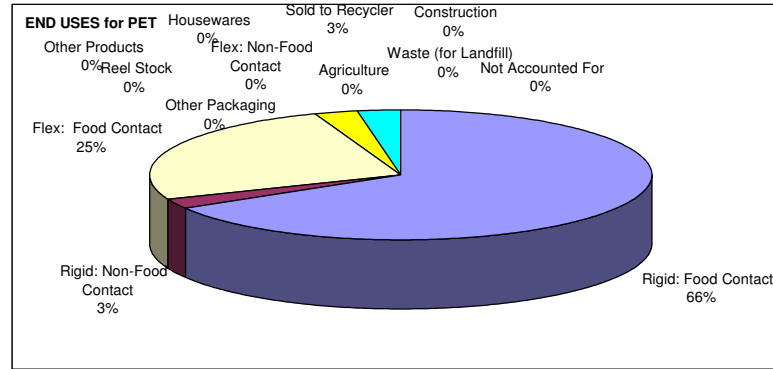
**TWEAK RATIO = 1.00**

**OUTPUT TONNAGES**

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
<b>Packaging</b>		
Rigid: Food Contact	12,018	12,000
Rigid: Non-Food Contact	502	501
Flex: Food Contact	4,593	4,586
Flex: Non-Food Contact	0	0
Other Packaging	0	0
<b>Packaging (sub-total)</b>	<b>17,112</b>	<b>17,088</b>
Construction	1	1
Agriculture	0	0
Reel Stock	0	0
Housewares	0	0
Other Products	33	33
Sold to Recycler	510	510
Sold as Recyclate	470	469
To Waste (Dumped)	13	13
<b>TOTAL (Including Packaging)</b>	<b>18,139</b>	<b>18,113</b>

In-house Recycling = **9.39** %

Recycling (Both from Bought In and In-house) = **9.39** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
9,882	9,868	1,090	1,089	1,045	1,044
278	277	200	200	24	24
4,230	4,224	110	110	253	253
0	0	0	0	0	0
0	0	0	0	0	0
14,390	14,369	1,400	1,398	1,322	1,320
1	1	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
22	22	6	6	5	5
14,413	14,392	1,406	1,404	1,327	1,325

**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	38,698	53,462
Reel Stock/Sheet-NZ Sourced	18	24
Reel Stock/Sheet-Overseas Sourced	0	0
Regrind (Bought In)	1,995	2,756
Regrind (In-House Recycling)	2,612	3,609
<b>TOTAL (excl In-House Recycling)</b>	<b>40,710</b>	<b>53,462</b>

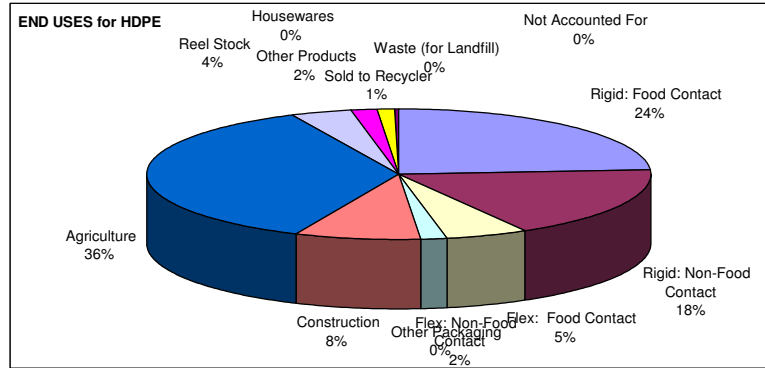
^Import Stats^

All HDPE Resins used in Production as a % of Total Imported HDPE Resins 72.38 %  
**TWEAK RATIO = 1.38**

**OUTPUT TONNAGES**

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
<b>Packaging</b>		
Rigid: Food Contact	9,674	13,364
Rigid: Non-Food Contact	7,315	10,105
Flex: Food Contact	2,131	2,944
Flex: Non-Food Contact	616	851
Other Packaging	56	78
<b>Packaging (sub-total)</b>	<b>19,791</b>	<b>27,342</b>
Construction	3,302	4,562
Agriculture	14,779	20,417
Reel Stock	1,606	2,219
Housewares	2	2
Other Products	671	927
Sold to Recycler	415	573
Sold as Recyclate	56	77
To Waste (Dumped)	89	123
<b>TOTAL (Including Packaging)</b>	<b>40,710</b>	<b>56,242</b>

In-house Recycling = 9.32%  
 Recycling (Both from Bought In and In-house) = 16.45%



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
9,300	12,848	346	478	27	37
5,517	7,621	546	754	1,253	1,731
800	1,105	1,167	1,613	164	226
371	512	90	124	156	215
56	78	0	0	0	0
16,044	22,164	2,149	2,969	1,599	2,209
2,793	3,859	472	652	37	51
14,407	19,904	8	11	364	502
1,463	2,022	48	66	95	132
2	2	0	0	0	0
245	339	71	98	355	490
<b>34,954</b>	<b>48,290</b>	<b>2,747</b>	<b>3,795</b>	<b>2,450</b>	<b>3,384</b>



**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	58,365	63,130
Reel Stock/Sheet-NZ Sourced	110	119
Reel Stock/Sheet-Overseas Sourced	6,335	6,852
Regrind (Bought In)	2,668	2,885
Regrind (In-House Recycling)	6,175	6,679
<b>TOTAL (excl In-House Recycling)</b>	<b>67,478</b>	<b>69,982</b>

^Import Stats^

All LDPE Resins used in Production as a % of Total Imported LDPE Resins **102.73** %

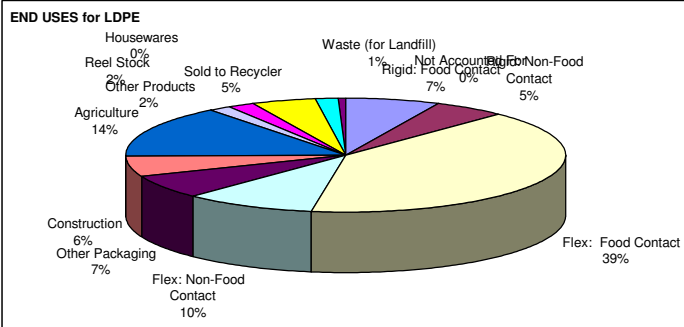
**TWEAK RATIO = 1.08**

**OUTPUT TONNAGES**

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
<b>Packaging</b>		
Rigid: Food Contact	4,666	5,046
Rigid: Non-Food Contact	3,548	3,838
Flex: Food Contact	27,137	29,353
Flex: Non-Food Contact	6,681	7,226
Other Packaging	4,526	4,896
<b>Packaging (sub-total)</b>	<b>46,558</b>	<b>50,359</b>
Construction	3,773	4,081
Agriculture	9,964	10,777
Reel Stock	1,111	1,202
Housewares	10	11
Other Products	1,449	1,567
Sold to Recycler	3,119	3,374
Sold as Recyclate	1,072	1,159
To Waste (Dumped)	422	456
<b>TOTAL (Including Packaging)</b>	<b>67,478</b>	<b>72,987</b>

In-house Recycling = **10.32** %

Recycling (Both from Bought In and In-house) = **14.78** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
3,196	3,456	823	890	647	700
2,553	2,762	262	283	733	793
11,949	12,925	10,807	11,690	4,381	4,738
5,298	5,731	896	970	486	526
4,499	4,866	28	30	0	0
27,494	29,739	12,817	13,863	6,247	6,757
2,753	2,978	11	11	1,010	1,092
9,860	10,664	2	2	102	111
0	0	1,111	1,202	0	0
7	8	3	4	0	0
860	930	84	91	505	546
<b>40,974</b>	<b>44,319</b>	<b>14,028</b>	<b>15,173</b>	<b>7,863</b>	<b>8,505</b>

**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	14,754	25,977
Reel Stock/Sheet-NZ Sourced	313	551
Reel Stock/Sheet-Overseas Sourced	3,097	5,452
Regrind (Bought In)	1,053	1,854
Regrind (In-House Recycling)	384	677
<b>TOTAL (excl In-House Recycling)</b>	<b>19,217</b>	<b>31,428</b>

^Import Stats^

All PP Resins used in Production as a % of Total Imported PP Resins = 56.80 %

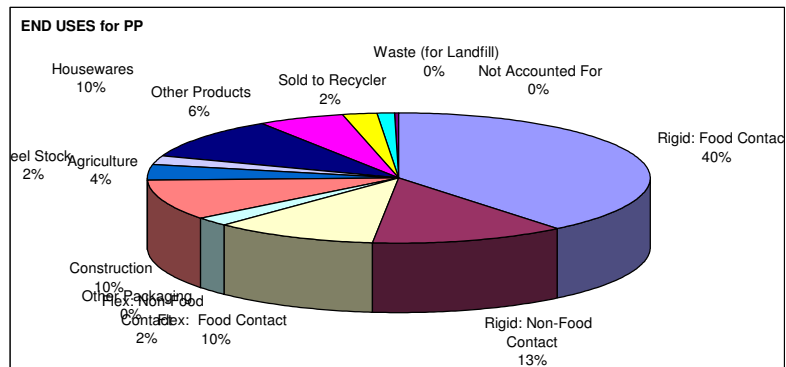
**TWEAK RATIO = 1.76**

**OUTPUT TONNAGES**

END MARKET	TOTAL (Domestic+Ind Exports+Dir Exp)	Extrapolation
<b>Packaging</b>		
Rigid: Food Contact	7,514	13,229
Rigid: Non-Food Contact	2,428	4,274
Flex: Food Contact	1,991	3,505
Flex: Non-Food Contact	432	761
Other Packaging	5	9
<b>Packaging (sub-total)</b>	<b>12,369</b>	<b>21,777</b>
Construction	1,939	3,413
Agriculture	766	1,349
Reel Stock	392	690
Housewares	1,964	3,458
Other Products	1,077	1,896
Sold to Recycler	430	757
Sold as Recyclate	240	422
To Waste (Dumped)	40	71
<b>TOTAL (Including Packaging)</b>	<b>19,217</b>	<b>33,833</b>

In-house Recycling = 3.79 %

Recycling (Both from Bought In and In-house) = 14.18 %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
3,921	6,903	708	1,247	2,885
1,725	3,037	525	924	178
1,592	2,802	198	348	201
379	667	18	31	35
5	9	0	0	0
7,621	13,418	1,449	2,551	3,300
1,832	3,225	3	5	104
687	1,209	12	21	68
172	302	18	31	202
1,207	2,124	757	1,333	0
515	906	304	536	258
<b>12,032</b>	<b>21,184</b>	<b>2,543</b>	<b>4,477</b>	<b>3,932</b>
				<b>6,922</b>

**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	9,172	7,349
Reel Stock/Sheet-NZ Sourced	65	52
Reel Stock/Sheet-Overseas Sourced	1,264	1,013
Regrind (Bought In)	0	0
Regrind (In-House Recycling)	1,418	1,136
<b>TOTAL (excl In-House Recycling)</b>	<b>10,501</b>	<b>8,362</b>

^Import Stats^

All PS Resins used in Production as a % of Total Imported PS Resins 124.80 %

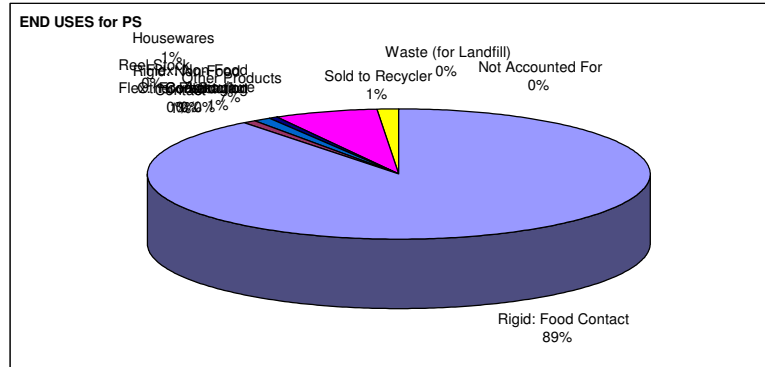
**TWEAK RATIO = 0.80**

**OUTPUT TONNAGES**

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
<b>Packaging</b>		
Rigid: Food Contact	9,378	7,515
Rigid: Non-Food Contact	100	80
Flex: Food Contact	0	0
Flex: Non-Food Contact	0	0
Other Packaging	0	0
<b>Packaging (sub-total)</b>	<b>9,478</b>	<b>7,595</b>
Construction	0	0
Agriculture	108	87
Reel Stock	0	0
Housewares	69	56
Other Products	704	564
Sold to Recycler	132	106
Sold as Recyclate	0	0
To Waste (Dumped)	9	7
<b>TOTAL (Including Packaging)</b>	<b>10,501</b>	<b>8,414</b>

In-house Recycling = 10.89%

Recycling (Both from Bought In and In-house) = 10.89%



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
6,156	4,933	130	104	3,092	2,478
69	55	6	4	26	21
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
6,225	4,988	135	108	3,118	2,498
0	0	0	0	0	0
105	84	2	2	1	1
0	0	0	0	0	0
31	25	39	31	0	0
310	248	10	8	384	307
6,671	5,346	186	149	3,502	2,807

**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	5,384	8,361
Reel Stock/Sheet-NZ Sourced	0	0
Reel Stock/Sheet-Overseas Sourced	0	0
Regrind (Bought In)	14	22
Regrind (In-House Recycling)	249	387
<b>TOTAL (excl In-House Recycling)</b>	<b>5,398</b>	<b>8,361</b>

^Import Stats^

All EPS Resins used in Production as a % of Total Imported EPS Resins **64.40** %

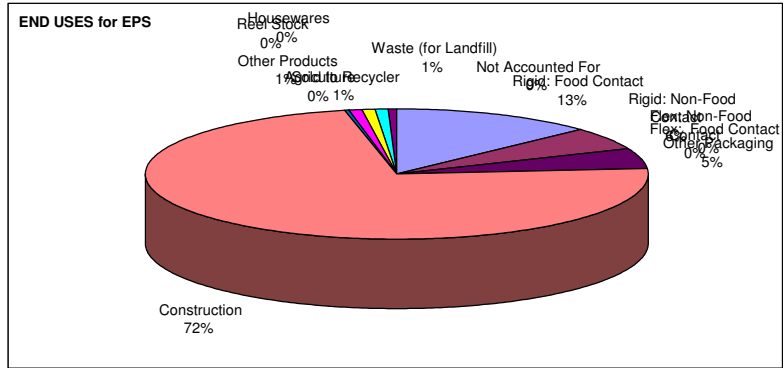
**TWEAK RATIO = 1.55**

**OUTPUT TONNAGES**

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
<b>Packaging</b>		
Rigid: Food Contact	699	1,085
Rigid: Non-Food Contact	308	478
Flex: Food Contact	0	0
Flex: Non-Food Contact	0	0
Other Packaging	262	407
<b>Packaging (sub-total)</b>	<b>1,269</b>	<b>1,970</b>
Construction	3,951	6,135
Agriculture	7	12
Reel Stock	0	0
Housewares	0	0
Other Products	52	81
Sold to Recycler	37	58
Sold as Recyclate	51	80
To Waste (Dumped)	31	48
<b>TOTAL (Including Packaging)</b>	<b>5,398</b>	<b>8,383</b>

In-house Recycling = **7.18** %

Recycling (Both from Bought In and In-house) = **7.59** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
	277	416	6	9
	105	203	0	0
	0	0	0	0
	0	0	0	0
	134	128	0	0
	515	747	6	9
	3,917	0	34	53
	7	0	0	0
	0	0	0	0
	0	0	0	0
	52	0	0	0
	4,492	747	40	62

**PLASTICS MASS BALANCE SURVEY (2008 PRODUCTION) - SUMMARY FOR ALL RESINS**

**INPUT TONNAGES**

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	14,302	12,349
Reel Stock/Sheet-NZ Sourced	72	62
Reel Stock/Sheet-Overseas Sourced	837	722
Regrind (Bought In)	89	77
Regrind (In-House Recycling)	175	151
<b>TOTAL (excl In-House Recycling)</b>	<b>15,300</b>	<b>13,072</b>

^Import Stats^

All OTHER Resins used in Production as a % of Total Imported OTHER Resins =  $\frac{115.80}{135.16} = 0.86\%$

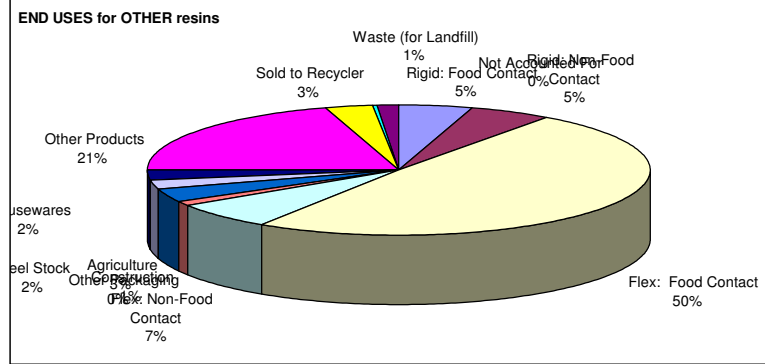
**TWEAK RATIO = 0.86**

**OUTPUT TONNAGES**

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
<b>Packaging</b>		
Rigid: Food Contact	708	611
Rigid: Non-Food Contact	822	710
Flex: Food Contact	7,501	6,477
Flex: Non-Food Contact	1,006	869
Other Packaging	0	0
<b>Packaging (sub-total)</b>	<b>10,037</b>	<b>8,667</b>
Construction	178	153
Agriculture	527	455
Reel Stock	339	293
Housewares	359	310
Other Products	3,130	2,703
Sold to Recycler	468	404
Sold as Recyclate	26	22
To Waste (Dumped)	210	181
<b>TOTAL (Including Packaging)</b>	<b>15,274</b>	<b>13,189</b>

In-house Recycling =  $\frac{151}{15,300} = 1.00\%$

Recycling (Both from Bought In and In-house) =  $\frac{226}{15,300} = 1.51\%$



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
	622	58	27	24
	402	321	99	85
	2,144	3,668	1,689	1,459
	596	8	401	347
	0	0	0	0
	3,765	4,055	2,217	1,914
	103	9	66	57
	293	113	121	105
	241	38	60	52
	119	150	91	79
	1,342	556	1,232	1,064
	5,862	4,921	3,787	3,270

Statistics NZ Code		KGM	
*3901.10.00.05	34,943,602	LLDPE	<b>TOTAL</b> 229,142,252
3901.10.00.01	837,200	LD/LLDPE	
3901.10.00.10	27,201,193	LDPE	
3901.20.00.01	1,428,270	HDPE Pwd	
3901.20.00.09	52,033,663	HDPE	
3901.30.09.00	1,753,421	EVA	
3902.10.00.00	20,339,222	PP	
3902.20.00.00	251,028	POLYISOBUTYLENE	
3902.30.00.00	10,837,517	PP Copolymer	
3903.11.00.00	8,360,623	EPS	
3903.19.00.00	8,362,043	Other PS	
3903.20.00.00	25,500	SAN	
3903.30.00.01	1,626,546	ABS	
3903.30.00.09	2,466,260	ABS COMPONENTS	
3904.10.00.00	33,931,315	PVC	
3906.90.09.01	1,347,919	PMMA	
3907.10.01.00	813,038	POM	
3907.60.01.00	2,330,546	PC	
3908.10.01.00	2,708,993	NYLON	
3907.60.01.00	17,544,353	PET	
3908.10.01.00	0		

2008 Import Figures

	Kilograms	Tonnes
PET	17,544,353	17,544
HDPE	53,461,933	53,462
PVC	33,931,315	33,931
L/LLDPE	62,981,995	62,982
PP	31,427,767	31,428
PS	8,362,043	8,362
EPS	8,360,623	8,361
OTHER	13,072,223	13,072
<b>TOTAL</b>	<b>229,142,252</b>	<b>229,142</b>