

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	164,754	188,350
Reel Stock/Sheet-NZ Sourced	1,227	1,295
Reel Stock/Sheet-Overseas Sourced	9,226	10,776
Regrind (Bought In)	5,155	6,162
Regrind (In-House Recycling)	8,672	9,758
TOTAL (excl In-House Recycling)	180,362	199,127

^Import Stats^

All Virgin Resins used in Production as a % of Total Imported Virgin Resins 87.37 %

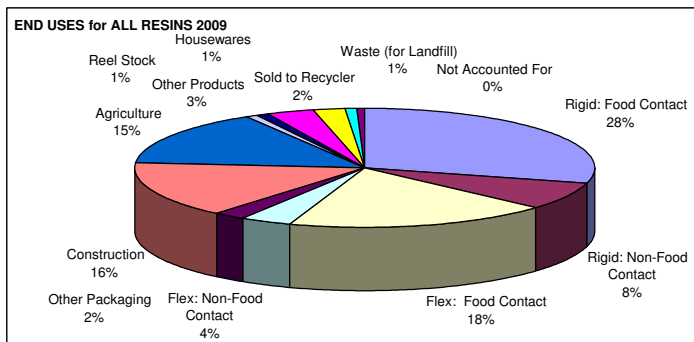
TWEAK RATIO = 1.00

OUTPUT TONNAGES

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
Packaging		
Rigid: Food Contact	47,360	59,339
Rigid: Non-Food Contact	12,802	15,497
Flex: Food Contact	37,759	37,875
Flex: Non-Food Contact	6,887	7,649
Other Packaging	4,255	4,179
Packaging (sub-total)	109,063	124,539
Construction	29,394	31,651
Agriculture	25,317	30,636
Reel Stock	1,298	1,371
Housewares	1,479	1,790
Other Products	4,815	6,631
Sold to Recycler	4,676	4,895
Sold as Recyclate	1,383	1,469
To Waste (Dumped)	1,076	1,220
TOTAL (Including Packaging)	178,502	204,202

In-house Recycling = 5.61 %

Recycling (Both from Bought In and In-house) = 9.15 %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
	39,938	2,419	2,808	5,003
	11,644	871	1,154	288
	10,764	18,633	17,337	8,362
	4,320	1,582	1,585	984
	3,990	239	252	25
	70,656	23,744	23,136	14,663
	26,741	283	378	2,370
	24,057	450	585	810
	166	1,132	1,097	0
	593	232	341	653
	1,871	632	707	2,312
	124,084	26,474	26,243	20,809
	145,282			25,093

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INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	15,002	13,895
Reel Stock/Sheet-NZ Sourced	562	521
Reel Stock/Sheet-Overseas Sourced	1,826	1,691
Regrind (Bought In)	209	194
Regrind (In-House Recycling)	1,066	987
TOTAL (excl In-House Recycling)	17,599	15,586

^Import Stats^

All PET Resins used in Production as a % of Total Imported PET Resins **107.97** %

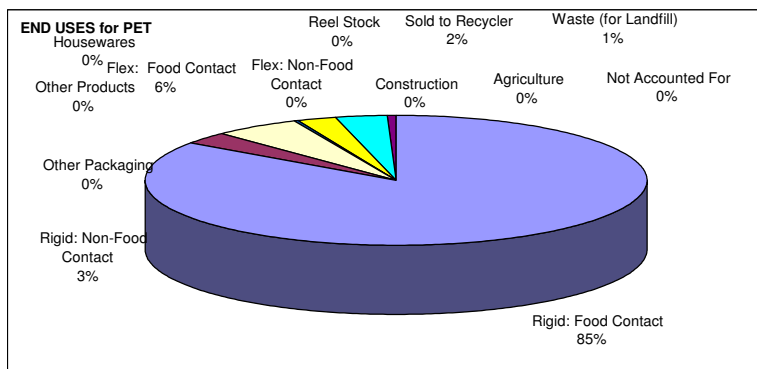
TWEAK RATIO = 0.93

OUTPUT TONNAGES

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
Packaging		
Rigid: Food Contact	14,919	13,818
Rigid: Non-Food Contact	508	470
Flex: Food Contact	1,016	941
Flex: Non-Food Contact	0	0
Other Packaging	0	0
Packaging (sub-total)	16,444	15,230
Construction	1	1
Agriculture	10	10
Reel Stock	0	0
Housewares	1	0
Other Products	21	19
Sold to Recycler	426	394
Sold as Recyclate	604	559
To Waste (Dumped)	93	86
TOTAL (Including Packaging)	17,599	16,300

In-house Recycling = **5.87** %

Recycling (Both from Bought In and In-house) = **7.02** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
13,166	12,195	1,358	1,258	395
373	345	115	106	20
716	663	133	123	167
0	0	0	0	0
0	0	0	0	0
14,255	13,203	1,606	1,487	583
1	1	0	0	0
1	1	9	9	0
0	0	0	0	0
1	0	0	0	0
14	13	2	1	5
14,272	13,219	1,617	1,497	588

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	32,530	46,933
Reel Stock/Sheet-NZ Sourced	7	9
Reel Stock/Sheet-Overseas Sourced	0	0
Regrind (Bought In)	1,246	1,797
Regrind (In-House Recycling)	2,097	3,026
TOTAL (excl In-House Recycling)	33,782	46,933

^Import Stats^

All HDPE Resins used in Production as a % of Total Imported HDPE Resins **69.31** %

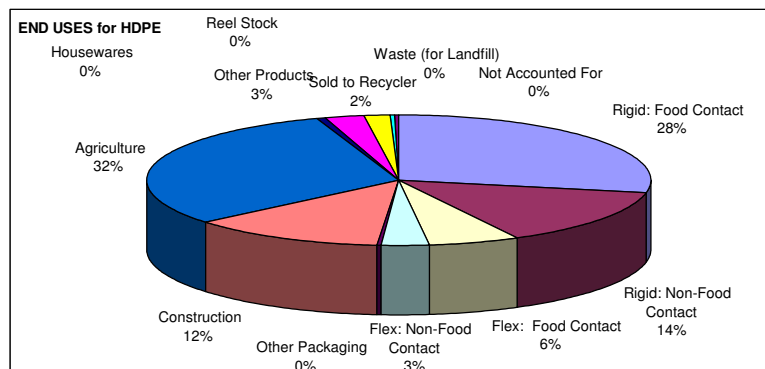
TWEAK RATIO = 1.44

OUTPUT TONNAGES

END MARKET	TOTAL (Domestic+Ind Exports+Dir Exp)	Extrapolation
Packaging		
Rigid: Food Contact	9,493	13,697
Rigid: Non-Food Contact	4,747	6,849
Flex: Food Contact	2,001	2,887
Flex: Non-Food Contact	1,021	1,473
Other Packaging	66	96
Packaging (sub-total)	17,329	25,002
Construction	4,217	6,084
Agriculture	10,435	15,055
Reel Stock	0	0
Housewares	163	235
Other Products	906	1,308
Sold to Recycler	562	811
Sold as Recyclate	40	58
To Waste (Dumped)	130	187
TOTAL (Including Packaging)	33,782	48,740

In-house Recycling = **9.30** %

Recycling (Both from Bought In and In-house) = **14.83** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
9,138	13,185	280	405	75	108
4,475	6,456	232	334	41	59
731	1,054	808	1,166	462	667
772	1,113	50	72	200	288
41	59	0	0	25	36
15,156	21,867	1,370	1,977	803	1,158
3,925	5,663	218	315	74	106
9,939	14,339	257	370	239	345
0	0	0	0	0	0
2	2	161	232	0	0
212	306	85	122	610	880
29,234	42,178	2,091	3,016	1,725	2,489

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	22,817	23,364
Reel Stock/Sheet-NZ Sourced	380	389
Reel Stock/Sheet-Overseas Sourced	1,104	1,130
Regrind (Bought In)	120	123
Regrind (In-House Recycling)	1,551	1,588
TOTAL (excl In-House Recycling)	24,420	24,494

^Import Stats^

All PVC Resins used in Production as a % of Total Imported PVC Resins 97.66 %

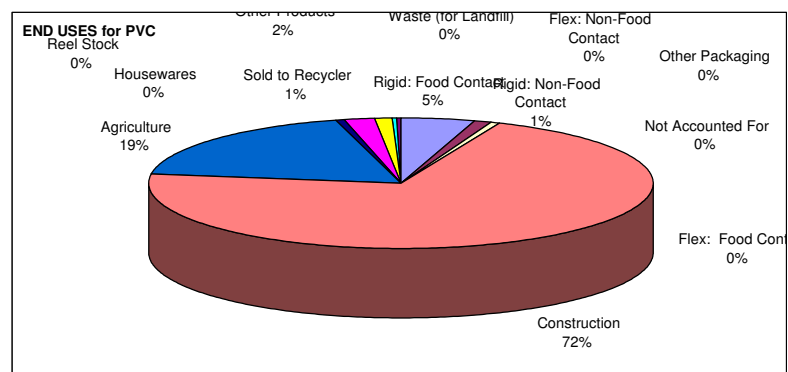
TWEAK RATIO = 1.02

OUTPUT TONNAGES

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
Packaging		
Rigid: Food Contact	1,159	1,187
Rigid: Non-Food Contact	263	269
Flex: Food Contact	109	111
Flex: Non-Food Contact	0	0
Other Packaging	5	5
Packaging (sub-total)	1,536	1,572
Construction	17,306	17,721
Agriculture	4,569	4,678
Reel Stock	25	26
Housewares	102	105
Other Products	505	517
Sold to Recycler	241	247
Sold as Recyclate	93	95
To Waste (Dumped)	45	46
TOTAL (Including Packaging)	24,420	25,006

In-house Recycling = 6.64%

Recycling (Both from Bought In and In-house) = 7.15%



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
1,109	1,136	7	7	44	45
189	193	65	67	9	9
109	111	0	0	0	0
0	0	0	0	0	0
4	4	1	1	0	0
1,411	1,444	72	74	52	54
16,366	16,759	43	44	897	919
4,491	4,599	10	10	68	69
8	8	17	17	0	0
65	67	11	11	26	27
403	413	41	42	61	62
22,744	23,289	194	199	1,104	1,131

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	56,948	55,153
Reel Stock/Sheet-NZ Sourced	12	12
Reel Stock/Sheet-Overseas Sourced	3,184	3,084
Regrind (Bought In)	2,899	2,808
Regrind (In-House Recycling)	2,226	2,156
TOTAL (excl In-House Recycling)	63,043	58,237

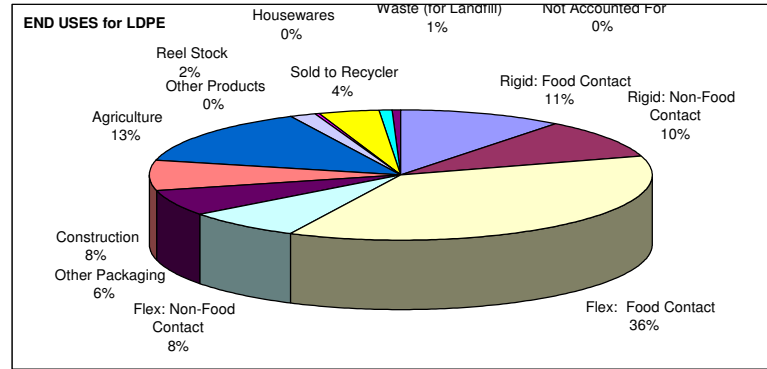
^Import Stats^

All LDPE Resins used in Production as a % of Total Imported LDPE Resins **103.26** %
TWEAK RATIO = 0.97

OUTPUT TONNAGES

END MARKET	TOTAL (Domestic+Ind Exports+Dir Exp)	Extrapolation
Packaging		
Rigid: Food Contact	6,705	6,493
Rigid: Non-Food Contact	6,034	5,844
Flex: Food Contact	23,411	22,673
Flex: Non-Food Contact	4,741	4,591
Other Packaging	3,871	3,749
Packaging (sub-total)	44,761	43,350
Construction	4,840	4,687
Agriculture	8,891	8,611
Reel Stock	1,111	1,076
Housewares	8	8
Other Products	103	100
Sold to Recycler	2,514	2,434
Sold as Recyclate	448	434
To Waste (Dumped)	368	356
TOTAL (Including Packaging)	63,043	61,056

In-house Recycling = **3.59** %
 Recycling (Both from Bought In and In-house) = **8.25** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
6,446	6,243	69	67	190	184
5,864	5,680	58	56	112	108
5,836	5,652	12,433	12,041	5,141	4,979
2,816	2,728	1,507	1,460	417	404
3,861	3,740	9	9	0	0
24,824	24,042	14,076	13,632	5,860	5,676
3,607	3,494	5	4	1,228	1,189
8,600	8,329	57	55	234	227
0	0	1,111	1,076	0	0
6	6	2	2	0	0
84	81	4	4	14	14
37,122	35,952	15,255	14,774	7,337	7,106

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INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	11,332	24,524
Reel Stock/Sheet-NZ Sourced	97	210
Reel Stock/Sheet-Overseas Sourced	1,829	3,958
Regrind (Bought In)	472	1,021
Regrind (In-House Recycling)	15	32
TOTAL (excl In-House Recycling)	13,730	28,483

^Import Stats^

All PP Resins used in Production as a % of Total Imported PP Resins **46.21** %

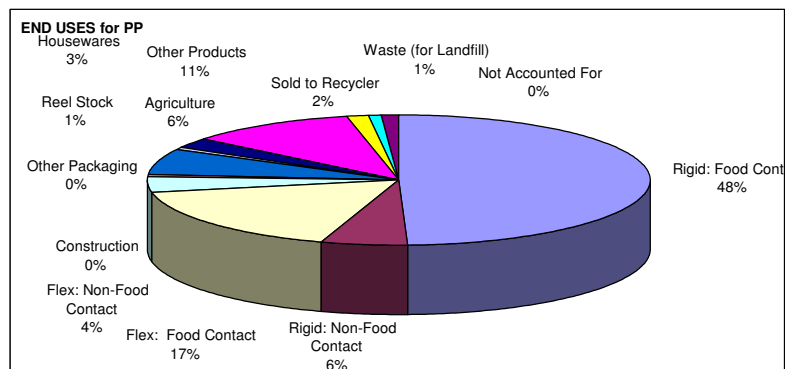
TWEAK RATIO = 2.16

OUTPUT TONNAGES

END MARKET	TOTAL (Domestic+Ind Exports+Dir Exp)	Extrapolation
Packaging		
Rigid: Food Contact	6,604	14,292
Rigid: Non-Food Contact	739	1,600
Flex: Food Contact	2,255	4,880
Flex: Non-Food Contact	540	1,168
Other Packaging	0	0
Packaging (sub-total)	10,138	21,940
Construction	58	127
Agriculture	842	1,822
Reel Stock	94	203
Housewares	336	728
Other Products	1,426	3,086
Sold to Recycler	209	453
Sold as Recyclate	106	230
To Waste (Dumped)	139	302
TOTAL (Including Packaging)	13,350	28,892

In-house Recycling = **0.24** %

Recycling (Both from Bought In and In-house) = **8.00** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
	3,979	283	2,343	5,070
	533	199	7	16
	1,785	181	392	625
	431	25	84	181
	0	0	0	0
	6,728	688	1,488	5,892
	53	2	3	9
	735	39	84	147
	94	0	0	0
	263	37	81	79
	355	121	263	2,055
	8,228	887	3,781	8,182

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	8,485	10,094
Reel Stock/Sheet-NZ Sourced	70	83
Reel Stock/Sheet-Overseas Sourced	0	0
Regrind (Bought In)	39	46
Regrind (In-House Recycling)	1,421	1,691
TOTAL (excl In-House Recycling)	8,594	10,094

^Import Stats^

All PS Resins used in Production as a % of Total Imported PS Resins **84.06** %

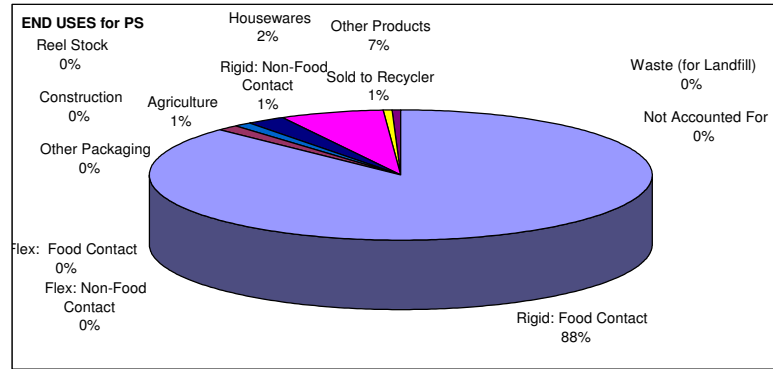
TWEAK RATIO = 1.19

OUTPUT TONNAGES

END MARKET	TOTAL (Domestic+Ind Exports+Dir Exp)	Extrapolation
Packaging		
Rigid: Food Contact	7,502	8,924
Rigid: Non-Food Contact	106	126
Flex: Food Contact	0	0
Flex: Non-Food Contact	0	0
Other Packaging	0	0
Packaging (sub-total)	7,608	9,050
Construction	0	1
Agriculture	107	127
Reel Stock	3	4
Housewares	201	239
Other Products	575	684
Sold to Recycler	63	75
Sold as Recyclate	0	0
To Waste (Dumped)	36	43
TOTAL (Including Packaging)	8,594	10,223

In-house Recycling = **19.93** %

Recycling (Both from Bought In and In-house) = **20.47** %



DOMESTIC USE	Extrapolation	INDIRECT EXPORTS	Extrapolation	DIRECT EXPORTS	Extrapolation
	5,431	115	137	1,956	2,326
	80	4	4	23	27
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0
	5,511	119	141	1,978	2,353
	0	1	0	0	0
	105	2	3	0	0
	2	3	1	0	0
	29	35	0	172	205
	304	7	9	264	314
	5,951	129	153	2,415	2,873

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	5,353	5,641
Reel Stock/Sheet-NZ Sourced	0	0
Reel Stock/Sheet-Overseas Sourced	0	0
Regrind (Bought In)	151	159
Regrind (In-House Recycling)	199	210
TOTAL (excl In-House Recycling)	5,504	5,641

^Import Stats^

All EPS Resins used in Production as a % of Total Imported EPS Resins **94.89** %

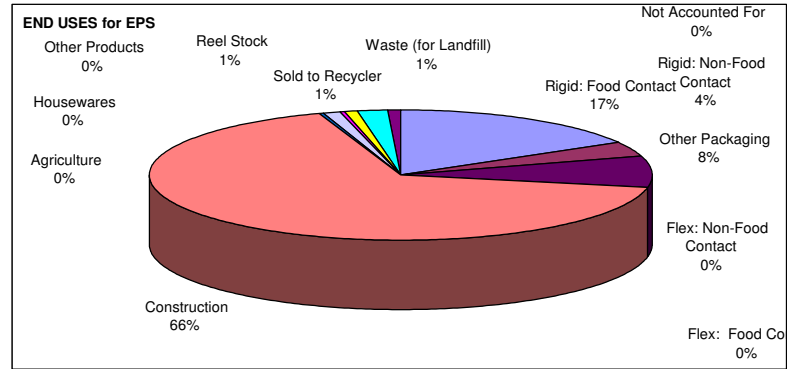
TWEAK RATIO = 1.05

OUTPUT TONNAGES

END MARKET	TOTAL	Extrapolation
	(Domestic+Ind Exports+Dir Exp)	
Packaging		
Rigid: Food Contact	675	711
Rigid: Non-Food Contact	145	152
Flex: Food Contact	0	0
Flex: Non-Food Contact	0	0
Other Packaging	313	330
Packaging (sub-total)	1,132	1,193
Construction	2,678	2,822
Agriculture	9	9
Reel Stock	47	49
Housewares	0	0
Other Products	17	18
Sold to Recycler	30	32
Sold as Recyclate	79	83
To Waste (Dumped)	33	34
TOTAL (Including Packaging)	4,024	4,240

In-house Recycling = **3.92** %

Recycling (Both from Bought In and In-house) = **6.89** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS	
	Extrapolation	Extrapolation	Extrapolation	Extrapolation
	368	307	0	0
	102	43	0	0
	0	0	0	0
	0	0	0	0
	83	230	0	0
	553	579	0	0
	2,615	0	62	66
	9	0	0	0
	47	0	0	0
	0	0	0	0
	15	2	0	0
	3,239	581	62	66

PLASTICS MASS BALANCE SURVEY (2009 PRODUCTION) - SUMMARY FOR ALL RESINS

INPUT TONNAGES

Input	Survey Totals (tonnes)	Extrapolation (tonnes)
Virgin resin	12,287	8,746
Reel Stock/Sheet-NZ Sourced	100	71
Reel Stock/Sheet-Overseas Sourced	1,283	913
Regrind (Bought In)	19	14
Regrind (In-House Recycling)	97	69
TOTAL (excl In-House Recycling)	13,689	9,659

^Import Stats^

All OTHER Resins used in Production as a % of Total Imported OTHER Resins **140.49** %

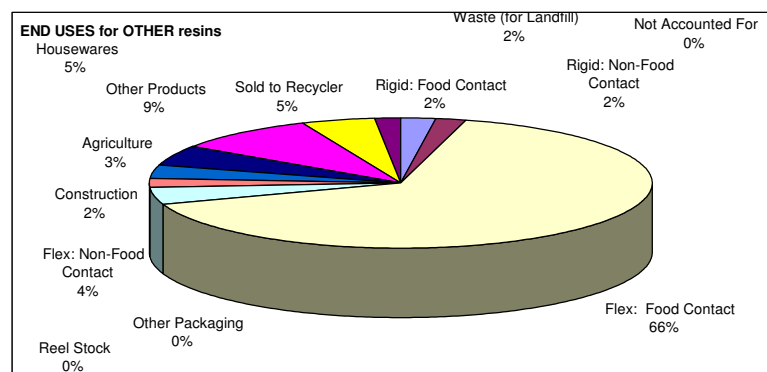
TWEAK RATIO = 0.71

OUTPUT TONNAGES

END MARKET	TOTAL (Domestic+Ind Exports+Dir Exp)	Extrapolation
Packaging		
Rigid: Food Contact	302	215
Rigid: Non-Food Contact	260	185
Flex: Food Contact	8,968	6,383
Flex: Non-Food Contact	585	416
Other Packaging	0	0
Packaging (sub-total)	10,115	7,200
Construction	294	209
Agriculture	455	324
Reel Stock	18	13
Housewares	667	475
Other Products	1,262	898
Sold to Recycler	631	449
Sold as Recyclate	13	9
To Waste (Dumped)	233	166
TOTAL (Including Packaging)	13,689	9,744

In-house Recycling = **0.51** %

Recycling (Both from Bought In and In-house) = **0.61** %



DOMESTIC USE	INDIRECT EXPORTS		DIRECT EXPORTS		
	Extrapolation	Extrapolation	Extrapolation	Extrapolation	
300	214	0	0	2	1
29	20	156	111	75	54
1,587	1,129	5,078	3,615	2,303	1,639
301	214	0	0	284	202
0	0	0	0	0	0
2,217	1,578	5,234	3,726	2,664	1,896
173	123	16	11	105	75
178	127	76	54	201	143
15	11	3	2	0	0
228	162	21	15	419	298
484	344	370	263	408	291
3,294	2,345	5,720	4,072	3,797	2,703

Statistics NZ Code	KGM
3901.10.00.01	281,023
3901.10.00.05	36,667,840
3901.10.00.10	21,287,702
3901.20.00.01	1,356,603
3901.20.00.09	45,576,702
3901.30.09.00	1,554,996
3902.10.00.00	23,531,343
3902.20.00.00	334,237
3902.30.00.00	4,618,669
3903.11.00.00	5,641,258
3903.19.00.00	10,094,172
3903.20.00.00	80,150
3903.30.00.01	1,325,317
3903.30.00.09	1,667,174
3904.10.00.00	24,493,968
3906.90.09.01	1,076,116
3907.10.01.00	461,590
3907.40.01.00	1,516,814
3907.60.01.00	15,586,387
3908.10.01.00	1,976,605
3908.10.01.00	0

TOTAL	199,128,666
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2009 Import Figures

	Kilograms	Tonnes
PET	15,586,387	15,586
HDPE	46,933,305	46,933
PVC	24,493,968	24,494
L/LLDPE	58,236,565	58,237
PP	28,484,249	28,484
PS	10,094,172	10,094
EPS	5,641,258	5,641
OTHER	9,658,762	9,659
TOTAL	199,128,666	199,129