

# ValueFlex

## Basic Engineering I

---

Input scenarios and mass flows



# 1. Input scenarios

Material composition of input material to sorting line*			
Input sorting line	Base case	+ 50% PP film**	+ 100% PP film**
Fresh fruit and veg and salads NAT	1,5%	1,3%	1,2%
Chilled, raw meat, fish, dairy, eggs, dips NAT	0,3%	0,3%	0,2%
Bakery NAT	1,0%	1,0%	0,9%
Ambient COL	3,3%	3,0%	2,7%
Confectionary COL	0,0%	0,0%	0,0%
Frozen food COL	1,2%	1,1%	1,0%
Non-food - Toiletries, personal care and medical NAT	1,2%	1,1%	1,0%
Non-food - Toiletries, personal care and medical COL	1,8%	1,6%	1,5%
Other Non food packaging, Household cleaning, garden, automotive NAT	8,3%	7,6%	7,0%
Other Non food packaging, Household cleaning, garden, automotive COL	12,5%	11,5%	10,4%
Unknown product group COL	1,3%	1,2%	1,1%
Bin Bags/Liners NAT	5,1%	4,7%	4,3%
Bin Bags/Liners COL	3,4%	3,1%	2,8%
Recycling Sacks NAT	5,9%	5,4%	4,9%
Recycling Sacks COL	5,9%	5,4%	4,9%
Carrier Bags NAT	1,5%	1,4%	1,3%
Carrier Bags COL	6,1%	5,6%	5,1%
Mono PP	9,9%	14,8%	19,7%
Mono PET	0,0%	0,0%	0,0%
PET/PE & PET/PP	2,4%	2,4%	2,4%
PA/PE	2,7%	2,7%	2,7%
PE/PP	7,7%	7,7%	7,7%
Other Complex multi materials	0,2%	0,2%	0,2%
Metallised Films PP, PE or PET	4,1%	4,1%	4,1%
Paper based with plastic	0,1%	0,1%	0,1%
Aluminium and Plastic layer pouch	0,0%	0,0%	0,0%
Aluminium and Plastic layer laminates	0,0%	0,0%	0,0%
Cellulose PLA and Starch Based	0,0%	0,0%	0,0%
PP thermoforms & rigid	6,0%	6,0%	6,0%
PE thermoforms & rigid	1,5%	1,5%	1,5%
Mono Paper	0,0%	0,0%	0,0%
Paper based with Aluminium	0,0%	0,0%	0,0%
Other, residue	5,0%	5,0%	5,0%

\* Composition based on CEFLEX waste analysis data

\*\* Scenarios show assumptions for increasing PP film content within the flexible material. Extended case considers an increase of 50 % PP film. Max case + 100% PP film.

Colour code:

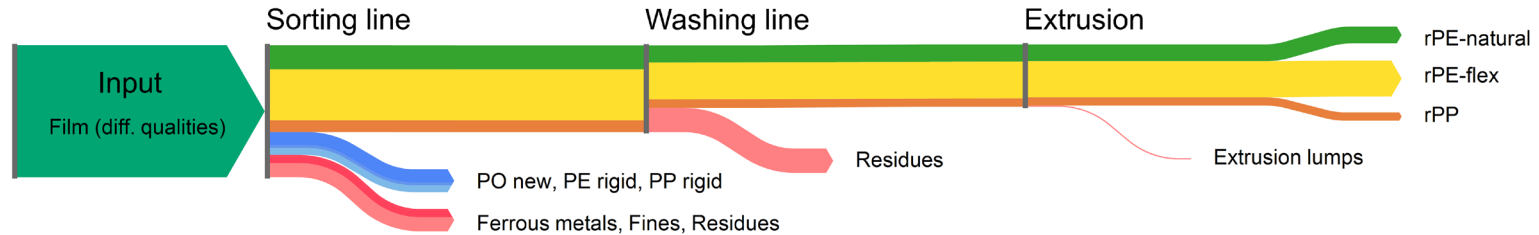
**Green**

→ (L)LD-PE natural film

**Blue**

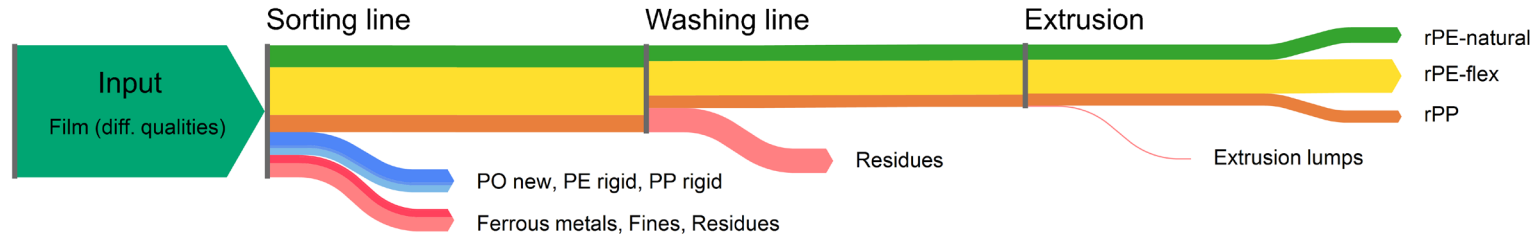
→ (L)LD-PE coloured film

## 2. Mass flow



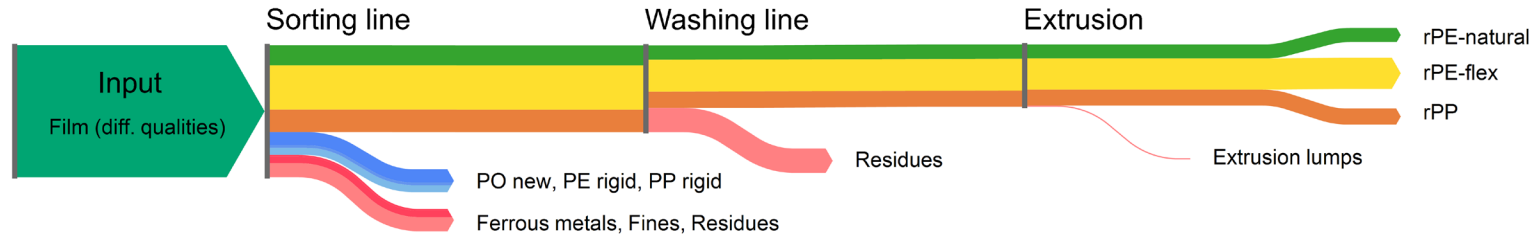
Input	Fraction	Output Sorting line		Output Washing line		Output Extrusion	
50000 t/a	PE-natural	18,1%	9057 t/a	13,0%	6521 t/a	12,8%	6391 t/a
	PE -flex	38,7%	19367 t/a	27,9%	13945 t/a	27,3%	13666 t/a
	PP-film	8,9%	4429 t/a	6,4%	3189 t/a	6,3%	3125 t/a
	PO new	10,0%	5003 t/a				
	PE rigid	2,1%	1074 t/a				
	PP rigid	5,2%	2608 t/a				
	Ferrous metals	1,3%	644 t/a				
	Fines	4,9%	2474 t/a				
	Residues	10,7%	5344 t/a	18,4%	9199 t/a	0,9%	473 t/a

## 2. Mass flow



Input	Fraction	Output Sorting line		Output Washing line		Output Extrusion	
50000 t/a	PE-natural	16,6%	8317 t/a	12,0%	5989 t/a	11,7%	5869 t/a
	PE -flex	36,1%	18046 t/a	26,0%	12993 t/a	25,5%	12733 t/a
	PP-film	13,0%	6495 t/a	9,4%	4676 t/a	9,2%	4583 t/a
	PO new	10,0%	4984 t/a				
	PE rigid	2,0%	1007 t/a				
	PP rigid	5,3%	2674 t/a				
	Ferrous metals	1,3%	644 t/a				
	Fines	4,9%	2474 t/a				
	Residues	10,7%	5355 t/a	18,4%	9202 t/a	0,9%	473 t/a

## 2. Mass flow



Input	Fraction	Output Sorting line		Output Washing line		Output Extrusion	
50000 t/a	PE-natural	15,2%	7578 t/a	10,9%	5456 t/a	10,7%	5347 t/a
	PE -flex	33,4%	16724 t/a	24,1%	12041 t/a	23,6%	11801 t/a
	PP-film	17,1%	8561 t/a	12,3%	6164 t/a	12,1%	6041 t/a
	PO new	10,0%	4984 t/a				
	PE rigid	2,0%	1007 t/a				
	PP rigid	5,3%	2674 t/a				
	Ferrous metals	1,3%	644 t/a				
	Fines	4,9%	2474 t/a				
	Residues	10,7%	5355 t/a	18,4%	9202 t/a	0,9%	473 t/a