

CEFLEX rPE Film Natural – Certificate of Analysis

rPE Film Natural is a high quality L(L)DPE-rich recyclate from household transparent post-consumer flexible packaging which has been processed in a Quality Recycling Process (QRP). QRP includes additional sorting, hot washing with detergents, extrusion with homogenization and degassing as well as double melt filtration and de-odourization.

Processing advice:

After prolonged storage or for the manufacture of sensitive products, drying of the material prior to processing and/or the use of moisture scavenger is recommended.

PROPERTY	UNIT	VALUE	COMMENTS	TEST METHOD
GENERAL				
Name	-	rPE Film Natural		
Composition	wt%	PE min 93, PP 3-4, other 1-3	Other=thermoplastics other than PE or PP	Internal
APPEARANCE				
Color	-	L* 90.53 a*-0.06 b* 4.08	Light grey Measured on 3mm disk	ASTM E1164
Shape	-	Granules		
PHYSICAL				
Melt Flow Index (MFI)	g/10 min	0.56 2.2	2.16 kg, 190 °C 5 kg, 190 °C	ISO 1133
Density	g/cm ³	0.939		ISO 1183
Ash content	wt%	< 1	after 1h - 900°C	ASTM D5630
Moisture saturation (23 °C)	wt%	0.08	after submersion (H ₂ O, 24h)	ASTM D570
MECHANICAL – blown film*, specimen type 5 (Thickness= 60-65 µm)				
Modulus	MD	MPa	115	1 mm/min ISO 527
	TD	MPa	95	
Tensile strength	MD	MPa	23	50 mm/min ISO 527
	TD	MPa	24	
Strain at break	MD	%	> 700	50 mm/min ISO 527
	TD	%	> 700	
Dart drop resistance		g/µm	1.5	ASTM D1709
Tear strength	MD	N	4	200 mm/min ISO 6383
Haze		%	49	TT C/2 ASTM D1003/8B
OTHER				
Bulk density	g/cm ³	0.56		EN 15344

* Film blowing with 20 mm single screw extruder, L/D = 25 and melt filtration. Film blowing die 40 mm diameter and 1 mm die gap, Process parameters: temperature profile 170-170-190-210-210-220 °C, screw speed of 30 rpm and BUR=3. Film thickness 60-65 µm, each sample measured for calculations.

CoA experimentally determined by UM on an industrially relevant batch.