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PRODUCT SELECTION GUIDE

High-Performance Polyolefin Compounds for Extrusion and Thermoforming Applications

LyondellBasell is one of the world's largest producers of versatile plastic resins and is the largest global manufacturer of polypropylene compounds.* Our materials produce a variety of products that are used to advance solutions in nearly every sector of the economy, including automobile parts, renewable energy technologies, packaging, piping and textiles.

As a global leader in polyolefin compounds for the extrusion and thermoforming industry, we offer numerous benefits to our global customers.

A comprehensive portfolio of proven products

- TPO substrate products with high melt strength and a superior balance of stiffness, impact strength and dimensional stability
- High gloss, low gloss and soft touch cap layer products which enable customized aesthetics and haptics in molded parts

Industry-leading product development and commercialization support

- Best-in-class polyolefin compounds material development and testing expertise
- Expert field technical service for extrusion and thermoforming process optimization and troubleshooting

A reliable, global supply

- Vertically integrated into polypropylene resins and olefinic impact modifiers which facilitates unique product design and stability of supply
- Worldwide manufacturing sites to support our global customers

** 2017 data as of Dec. 31, 2017*

For more information, please visit lyondellbasell.com

Polyolefin Compounds for Extrusion and Thermoforming

Typical Properties

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Properties	Method	Units	Sheet Extrusion Grades		Cap layer Grades			Profile Extrusion Grades	
			Sequel E3400	*Sequel* E3400FR	*Indure* E1500 HG	*Dexflex* E900	*Dexflex* E701	*Sequel* E4000	*Sequel* E5000
GENERAL									
Melt Flow Rate (230°C, 2.16 kg)	ISO 1133	g/10 min	0.7	1.0	2.0	1.2	0.8	1.5	1.0
Specific Gravity	ISO 1183	--	1.12	1.26	0.90	0.92	0.98	1.11	1.16
Density	ISO 1183	lb/in^3	0.041	0.046	0.033	0.033	0.035	0.040	0.042
Mold Shrinkage	ISO 294	%	0.80	0.70		1.10		0.90	0.70
Hardness	ISO 868	Shore D	64	65	70	63	32	71	71
THERMAL									
Heat Deflection Temperature	ISO 75								
@ 0.45 MPa		°C	102	103				113	114
@ 1.80 MPa		°C	56	56				62	65
CLTE (-30°C to 80°C)	ASTM E228	10-5 /°C	5.4	5.3				5	4.5
MECHANICAL									
Flexural Modulus	ISO 178	MPa	2100	2200	1014	621	200	2600	3100
Tensile Yield Strength	ISO 527	MPa	21.0	20.0	30.0	18.0	15.0	28.0	25.5
Tensile Elogation at Yield	ISO 527	%	10.0	4.0	13.0	15.0		4	4
Tensile Elogation at Break	ISO 527	%	>200	>150		>400	>400	40	60
IMPACT									
Izod Impact Strength	ISO 180								
@ 23°C (73)		kJ/m^2	82	38				25	40
@ -30°C (-22)		kJ/m^2	7	4				5	5
Multi-Axial Impact (2.2 m/s) -15°C	ASTM D3763								
Total Energy		J	51	38					
Failure Mode (D-Ductile; B-Brittle)		D/B	100% D	100% D					
Multi-Axial Impact (2.2 m/s) -30°C	ASTM D3763								
Total Energy		J	57						
Failure Mode (D-Ductile; B-Brittle)		D/B	100% D						
	Attributes and Recommended Applications		Excellent balance of high stiffness and high impact; Improved melt strength for thermo-forming; UL 94 HB listed	For applications requiring UL 94 V-1 flame retardanancy. Improved melt strength for thermoforming	High gloss polyolefinic cap layer	Cap layer to pro-mote reduced stress whitening	Soft touch, low gloss cap layer	Medium M70:N70 grade	High stiffness grade for applications that require high dimensional and thermal stabilty

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