

Catalloy

Product Description

Adflex KS 021 P is a reactor TPO (thermoplastic polyolefin) manufactured using LyondellBasell's proprietary Catalloy process technology. It is suitable for the extrusion and calendaring of soft film and sheet, for the impact modification of polypropylene, as well as monolayer and multilayer air quenched blown films. It is also used by our customers as high cold impact resistance material for automotive color-matched interior trim applications. Key characteristics are flexibility and low temperature impact resistance. The grade is available in natural pellet form.

Regulatory Status

For regulatory compliance information, see Adflex KS 021 P [Product Stewardship Bulletin \(PSB\) and Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	Africa-Middle East; Asia-Pacific; Australia and New Zealand; North America; South & Central America
Application	Automotive Flooring; Interior Automotive Applications; Polymer Modifier; Soft Profile & Sheets; Soft Touch Applications; Sports, Leisure & Toys; TPO Foils and Skins
Market	Automotive; Compounding
Processing Method	Blown Film; Calendaring; Compounding; Extrusion Blow Molding; Extrusion Flat-die; Thermoforming
Attribute	Good Chemical Resistance; Good Flexibility; Good Shape Retention; High ESCR (Environmental Stress Cracking Resistance); Low Temperature Impact Resistance

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (230 °C/2.16 kg)	0.9	g/10 min	ISO 1133-1
Density, (23 °C, Method A)	0.88	g/cm ³	ISO 1183-1
Mechanical			
Flexural Modulus	350	MPa	ISO 178
Tensile Stress at Break	10	MPa	ISO 527-1, -2
Tensile Stress at Yield	8.5	MPa	ISO 527-1, -2
Tensile Strain at Break	500	%	ISO 527-1, -2
Tensile Strain at Yield	37	%	ISO 527-1, -2
Impact			
Charpy Impact Strength - Notched			
(23 °C)	70	kJ/m ²	ISO 179
Note: Failure Mode - Partial Break			
(-20 °C)	98	kJ/m ²	ISO 179
Note: Failure Mode - Partial Break			
(-40 °C)	3.2	kJ/m ²	ISO 179
Note: Failure Mode - Complete Break			

Multi-axial Impact Strength		
(23 °C, 6.6 m/s, 3.2 mm plaque)	17 J	ASTM D3763
Note: Failure Mode - Ductile		
(-40°C, 6.6 m/s, 3.2 mm plaque)	23 J	ASTM D3763
Note: Failure Mode - Ductile		
Hardness		
Shore Hardness, (Shore D, 15 sec)	38	ISO 868
Thermal		
Vicat Softening Temperature, (A50)	67 °C	ISO 306
Heat Deflection Temperature B, (0.45 MPa, Unannealed)	52 °C	ISO 75B-1, -2
DSC Melting Point	163 °C	ISO 11357-3
Optical		
Haze, (45 mil)	96 %	ASTM D1003
Gloss, (60°, 45 mil)	49	ASTM D2457
Additional Information		
Mold Shrinkage		ISO 294-4
Please contact LyondellBasell for shrinkage information.		

Notes

These are typical property values not to be construed as specification limits.

Automotive Specifications

- ▶ FCA MS-DB590 CPN 3900
- ▶ Ford WSS M4D777-A8
- ▶ GM GMW15702-170020

Processing Techniques

Specific recommendations for resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

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