Adflex KS311P

LyondellBasell Industries - Polyolefin

Tuesday, November 5, 2019

General Information

Product Description

Adflex KS311P is a reactor TPO (thermoplastic polyolefin) manufactured using LyondellBasell's proprietary Catalloy process technology. It is suitable for extrusion as well as injection molding and blow molding applications, including mechanical and decorative automotive parts requiring elastomeric type properties, like molded-in color automotive exterior components. The product is in fact used by our customers for applications with paintable and weatherable requirements, such as injection molded fascias, claddings, bumper covers, body panels, step pads, and air deflectors. It is also used as a component in compounded materials for a wide range of industrial applications.

The grade is available in natural pellet form.

For regulatory compliance information see Adflex KS311P Product Stewardship Bulletin (PSB).

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability • Good Flexibility • Good Moldability	• Good Processability • Good Surface Finish • Low Temperature Impact Resistance	• Paintable
Uses	• Automotive Applications • Automotive Bumper • Automotive Exterior Parts • Blow Molding Applications	• Building Materials • Cast Film • Compounding • Construction Applications	• Fascias • Film • Industrial Applications
Automotive Specifications	• CHRYSLER MS-DC-243 Type B CPN3689	• GM GMP.E/P.023	• IMDS ID 27791295
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Blow Molding • Cast Film	• Compounding • Extrusion	• Extrusion Blow Molding • Injection Molding

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density (73°F)	0.890	g/cm³	ISO 1183/A
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	9.5	g/10 min	ISO 1133
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (Yield)	2030	psi	ISO 527-2
Tensile Stress (Break)	2180	psi	ISO 527-2
Tensile Strain (Yield)	14	%	ISO 527-2
Tensile Strain (Break)	800	%	ISO 527-2
Flexural Modulus	76900	psi	ISO 178
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength	588	lbf/in	ASTM D624
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179
-40°F, Complete Break	0.67	ft·lb/in²	
-4°F, Partial Break	2.0	ft·lb/in²	
73°F, Partial Break	28	ft·lb/in²	

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Impact	Nominal Value	Unit	Test Method
Instrumented Dart Impact			ASTM D3763
-40°F, 0.126 in, Ductile Failure [2]	230	in·lb	
73°F, 0.126 in, Ductile Failure [3]	124	in·lb	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 15 sec)	46		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	127	°F	ISO 75-2/B
Vicat Softening Temperature	234	°F	ISO 306/A50
Melting Temperature	288	°F	ISO 11357-3
Optical	**Nominal Value**	**Unit**	**Test Method**
Gloss (60°, 45.0 mil)	76		ASTM D2457
Haze (45.0 mil)	82.0	%	ASTM D1003

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 21.7 ft/sec

[3] 7.22 ft/sec