Adflex KS021P

Advanced Polyolefin

Product Description

Adflex KS021P is a reactor TPO (thermoplastic polyolefin) manufactured using LyondellBasell' s proprietary *Catalloy* process technology. It is suitable for the extrusion and calendering 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.
For regulatory compliance information see *Adflex* KS021P Product Stewardship Bulletin (PSB).

Product Characteristics

Status	Commercial: Active
Test Method used	ISO
Availability	North America, Asia-Pacific, Australia/NZ, Africa-Middle East, Latin America
Processing Methods	Extrusion Flat-die, Blown Film, Calandering, Extrusion Thermoforming
Features	Good Chemical Resistance, High ESCR (Environmental Stress Cracking Resistance), Good Flexibility, Low Temperature Impact Resistance, Good shape retention
Typical Customer Applications	Film, Interior Applications, Sports, Leisure and Toys

Typical Properties	Method	Value	Unit
Physical			
Density (Method A %)	ISO 1183	0.88	g/cm³
Melt flow rate (MFR) (230 °C/ 2.16 kg)	ISO 1133	0.9	g/10 min
Mechanical			
Tear Strength	ASTM D 624	85 N/mm	
Note: (Graves, Die C, 50mm/min) - Load/Width @ Max Load			
Tensile Stress at Break (23 °C, 50 mm/min)	ISO 527-1, -2	13	MPa
Tensile Stress at Yield (23 °C, 50 mm/min)	ISO 527-1, -2	8	MPa
Tensile Strain at Break (23 °C, 50 mm/min)	ISO 527-1, -2	>800	%
Tensile Strain at Yield (23 °C, 50 mm/min)	ISO 527-1, -2	38	%
Flexural modulus (23 °C, 2 mm/min, Chord)	ISO 178	300	MPa
Impact			
Notched izod impact strength	ISO 180		
(23 °C, Type 1, Notch A)		52	kJ/m²
Note: Failure Mode: Partial			
(-40 °C, Type 1, Notch A)		86	kJ/m²
Note: Failure Mode: Partial			
Multiaxial Impact Strength	ASTM D3763		
(Energy@ Max Load +23°C, 6.6m/s, 3.2mm plq; Failure Mode: Ductile)		17	J
(Energy@ Max Load -40°C, 6.6m/s, 3.2mm plq; Failure Mode: Ductile)		23	J

Hardness			
Shore hardness (Shore D)	ISO 868	38	
Note: 15 seconds			
Thermal			
Melting temperature		161	°C
Note: (ISO 11357-3)			
Heat deflection temperature B (0.45 MPa) Unannealed	ISO 75B-1, -2	48	°C
Heat deflection temperature A (1.80 MPa) Unannealed	ISO 75A-1, -2	38	°C
Vicat softening temperature (A50 (50°C/h 10N))	ISO 306	67	°C
Additional Information			
Mold shrinkage	ISO 294-4		
Note: Please contact Equistar for shrinkage recommendations			

Additional Properties

AUTOMOTIVE SPECIFICATIONS:
Chrysler MS-DB590 CPN 3900
Ford WSS M4D777-A8
GM GMW15072-170020

Notes

Typical properties; not to be construed as specifications.

LyondellBasell markets this product through the following entities:

- Equistar Chemicals, LP
- Basell Sales & Marketing Company B.V.
- Basell Asia Pacific Limited
- Basell International Trading FZE
- LyondellBasell Australia Pty Ltd

For the contact details of the LyondellBasell company selling this product in your country, please visit http://www.lyb.com/.

Before using a product sold by a company of the LyondellBasell family of companies, users should make their own independent determination that the product is suitable for the intended use and can be used safely and legally. SELLER MAKES NO WARRANTY; EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY WARRANTY) OTHER THAN AS SEPARATELY AGREED TO BY THE PARTIES IN A CONTRACT.

This product(s) may not be used in:

(i) any U.S. FDA Class I, Health Canada Class I, and/or European Union Class I Medical Devices, without prior notification to Seller for each specific product and application; or

(ii) the manufacture of any of the following, without prior written approval by Seller for each specific product and application: (1) U.S. FDA Class II, Health Canada Class II or Class III, and/or European Union Class II Medical Devices; (2) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned Medical Devices; (3) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; (4) tobacco related products and applications; (5) electronic cigarettes and similar devices; and (6) pressure pipe or fittings that are considered a part or component of a nuclear reactor.

(iii) Additionally, the product(s) may not be used in: (1) U.S. FDA Class III, Health Canada Class IV, and/or European Class III Medical Devices; (2) applications involving permanent implantation into the body; (3) life-sustaining medical applications; and (4) lead, asbestos or MTBE related applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

Users should review the applicable Safety Data Sheet before handling the product.

Adflex, Adstif, Adsyl, Akoafloor, Akoalit, Alastian, Alathon, Alkylate, Amazing Chemistry, Aquamarine, Aquathene, Arctic Plus, Arctic Shield, Avant, Catalloy, Clyrell, CRP, Crystex, Dexflex, Duopac, Duoprime, Explore & Experiment, Filmex, Flexathene, Fueling the power to win, Glacido, Hifax, Hiflex, Histif, Hostacom, Hostalen PP, Hostalen ACP, Ideal, Indure, Integrate, Koattro, LIPP, Lucalen, Luflexen,

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