Technical Data Sheet

Adflex X 101 H

Catalloy

Product Description

Adflex X 101 H is a reactor TPO (thermoplastic polyolefin) manufactured using LyondellBasell' s proprietary *Catalloy* process technology. It exhibits a high softness and a low modulus, with a relatively high melt flow index. *Adflex* X 101 H is tailored to replace atactic polypropylene copolymers (APP) used for the modification of bitumen in roofing membranes. The percentage to be added can vary according to the quantity of the atactic polypropylene used in combination with *Adflex* X 101 H and the requested cold bending temperature of the end product. Due to the high molecular weight of *Adflex* X 101 H, high blend viscosity and good penetration values are obtained. Its structure is tailored to obtain easy dispersion and phase inversion in the bitumen blend. *Adflex* X101H is also used in other industrial applications where high flexibility and the capability of accepting high filler loading levels are required. The grade is available in natural pellet form.

Regulatory Status

For regulatory compliance information, see *Adflex* X 101 H Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	Africa-Middle East; Asia-Pacific; Australia and New Zealand; Europe; North America; South & Central America
Application	Bitumen Modification; Cured in Place Pipe; Industrial; Specialty Film
Market	Flexible Packaging; Industrial, Building & Construction
Processing Method	Cast Film; Compounding; Injection Molding
Attribute	Good Chemical Resistance; Good Flexibility; High ESCR (Environmental Stress Cracking Resistance); High Flow; Low Temperature Impact Resistance; Soft

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate, (230 °C/2.16 kg)	8	g/10 min	ISO 1133-1
Density, (23 °C, Method A)	0.88	g/cm³	ISO 1183-1
Mechanical			
Flexural Modulus	80	MPa	ISO 178
Tensile Stress at Break	10	MPa	ISO 527-1, -2
Tensile Stress at Yield	6	MPa	ISO 527-1, -2
Tensile Strain at Break	>600	%	ISO 527-1, -2
Tensile Strain at Yield	>40	%	ISO 527-1, -2
Impact			
Charpy Impact Strength - Notched			
(23 °C)	40	kJ/m²	ISO 179
Note: Failure Mode - Partial Break			
(-20 °C)	105	kJ/m²	ISO 179
Note: Failure Mode - Partial Break			
(-40 °C)	3.6	kJ/m²	ISO 179
Note: Failure Mode - Complete Break			

Hardness			
Shore Hardness, (Shore D, 15 sec)	30		ISO 868
Thermal			
Vicat Softening Temperature, (A50)	54	°C	ISO 306
Heat Deflection Temperature B, (0.45 MPa, Unannealed)	39	°C	ISO 75B-1, -2
DSC Melting Point	142	°C	ISO 11357-3
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.

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

For further information regarding the LyondellBasell company, please visit http://www.lyb.com/.

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