

Lustran® ABS 682

Acrylonitrile Butadiene Styrene

INEOS ABS (USA)

Message:

Lustran ABS 682 is a high performance, HCFC-141b resistant grade of ABS for injection molded refrigerator and freezer components. As with any product, use of Lustran ABS 682 resin in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.

General Information			
UL YellowCard	E44741-235649		
Uses	Appliance Components		
Agency Ratings	EC 1907/2006 (REACH)		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.05	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)			
220°C/10.0 kg	5.2	g/10 min	ASTM D1238, ISO 1133
230°C/10.0 kg	8.0	g/10 min	ASTM D1238, ISO 1133
230°C/3.8 kg	0.70	g/10 min	ASTM D1238
220°C/3.8 kg	0.70	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.40 to 0.60	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
--	2470	MPa	ASTM D638
-18°C	2810	MPa	ISO 527-2/1
23°C	2420	MPa	ISO 527-2/1
Tensile Strength			
Yield	43.0	MPa	ASTM D638
Yield, -18°C	64.0	MPa	ISO 527-2/50
Yield, 23°C	48.0	MPa	ISO 527-2/50
Break	32.0	MPa	ASTM D638
Break, -18°C	52.0	MPa	ISO 527-2/50
Break, 23°C	34.0	MPa	ISO 527-2/50
Tensile Elongation			
Break	34	%	ASTM D638
Break, -18°C	15	%	ISO 527-2/50
Break, 23°C	20	%	ISO 527-2/50
Flexural Modulus			
--	2530	MPa	ASTM D790
23°C ¹	2480	MPa	ISO 178

Flexural Stress			
23°C ²	72.0	MPa	ISO 178
Yield	72.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			
-18°C ³	14	kJ/m ²	ASTM D256
-18°C ⁴	12	kJ/m ²	ISO 180
23°C ⁵	29	kJ/m ²	ISO 180
23°C ⁶	48	kJ/m ²	ASTM D256
Multi-Axial Instrumented Impact Energy			ASTM D3763
-18°C, 40.0 mm, Energy to Peak Force	26.0	J	
-18°C, 40.0 mm, Total Penetration Energy	30.0	J	
23°C, 40.0 mm, Energy to Peak Force	20.0	J	
23°C, 40.0 mm, Total Penetration Energy	33.0	J	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, Annealed ⁷	95.1	°C	ASTM D648
1.8 MPa, Annealed	94.5	°C	ISO 75-2/A
Vicat Softening Temperature			
--	109	°C	ASTM D1525 ⁸
--	94.1	°C	ISO 306/B50
--	97.0	°C	ISO 306/B120
CLTE - Flow	1.0E-4	cm/cm/°C	ASTM D696
Flammability	Nominal Value		Test Method
Flame Rating			UL 94
1.10 mm, White	HB		
1.50 mm, All Colors	HB		
Optical	Nominal Value		Test Method
Gardner Gloss			ASTM D523
20°	87		
60°	96		
NOTE			
1.	2.0 mm/min		
2.	2.0 mm/min		
3.	12.7-mm x 3.2-mm, 0.25-mm notch		
4.	10.0-mm x 4.0-mm, 0.25-mm notch		
5.	10.0-mm x 4.0-mm, 0.25-mm notch		
6.	12.7-mm x 3.2-mm, 0.25-mm notch		
7.	Annealed 2 hours at 80°C		

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