TYRIL™ 905UV
SAN Resin

Overview

TYRIL* styrene-acrylonitrile (SAN) resins are designed to offer superior chemical resistance, strength, hardness and dimensional stability in a broad range of product applications. The key property of TYRIL 905 is its superior water-clear clarity compared to other SAN resins and a high thermal stability that results in consistent color (reduced yellowing). TYRIL 905 is designed for applications demanding chemical and heat resistance and offers good processability. TYRIL 905 represents a technology breakthrough in trace-color reduction. Its thermal stability and exceptionally low base color make it a product especially suited for self-coloring. The UV-stabilized version exhibits excellent weather ability, suitable in particular for lighting applications.

Applications:

- Large appliances: transparent refrigerator parts
- Lighting applications: louvers and covers
- Cosmetic packaging: water-clear, thick-wall applications

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.08	g/cm³	1.08	g/cm³	ASTM D792 ISO 1183/B
Apparent (Bulk) Density	0.69	g/cm³	0.69	g/cm³	ASTM D1895 ISO 60
Melt Mass-Flow Rate (MFR)					ASTM D1238 ISO 1133
220°C/10.0 kg	13	g/10 min	13	g/10 min	
230°C/3.8 kg	5.0	g/10 min	5.0	g/10 min	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus	522000	psi	3600	MPa	ASTM D638 ISO 527-2
Tensile Strength					
Break [1]	9860	psi	68.0	MPa	ASTM D638
Break	9860	psi	68.0	MPa	ISO 527-2/5
Flexural Strength	13800	psi	95.0	MPa	ASTM D790 ISO 178
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Charpy Unnotched Impact Strength					ISO 179
73°F (23°C)	7.1	ft·lb/in²	15	kJ/m²	
Unnotched Izod Impact Strength (73°F (23°C))	5.7	ft·lb/in²	12	kJ/m²	ISO 180
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Rockwell Hardness (M-Scale)	82		82		ASTM D785 ISO 2039-2
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648 ISO 75-2/A
264 psi (1.8 MPa), Annealed	212	°F	100	°C	
Vicat Softening Temperature					
--	214	°F	101	°C	ASTM D1525 [2] ISO 306/B50 [2]
--	230	°F	110	°C	ASTM D1525 [3] ISO 306/A120 [3]
CLTE - Flow	2.8E-5	in/in/°F	5.0E-5	cm/cm/°C	DIN 53752
Specific Heat	0.330	Btu/lb/°F	1380	J/kg/°C	ASTM D2766