

TYRIL™ 867 E

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 867E is an excellent balance of physical properties. TYRIL 867 E is specifically designed to provide good processability, good chemical resistance, heat resistance, very good strength and optimal aesthetics (gloss and clarity).

Applications:

- Small appliances: transparent kitchen-robot parts
- Extruded sheet for shower cabinets, light-diffusers
- Housewares: food storage and water containers
- Sanitary accessories: soap dishes, toilet seats

Complies with:

- U.S. FDA 21 CFR 181.32
- European Food-Contact Compliance

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.08 g/cm ³	1.08 g/cm ³	ISO 1183
Apparent (Bulk) Density	0.69 g/cm ³	0.69 g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR)			ISO 1133
220°C/10.0 kg	12 g/10 min	12 g/10 min	
230°C/3.8 kg	4.0 g/10 min	4.0 g/10 min	
Molding Shrinkage	3.0E-3 to 7.0E-3 in/in	0.30 to 0.70 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	537000 psi	3700 MPa	ISO 527-1/1
Tensile Stress (Break)	10200 psi	70.0 MPa	ISO 527-2/5
Flexural Stress	14100 psi	97.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
73°F (23°C)	8.1 ft-lb/in ²	17 kJ/m ²	
Unnotched Izod Impact Strength (73°F (23°C))	6.7 ft-lb/in ²	14 kJ/m ²	ISO 180
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness (M-Scale)	83	83	ISO 2039-2
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ISO 75-2/A
264 psi (1.8 MPa), Annealed	214 °F	101 °C	
Vicat Softening Temperature			
--	214 °F	101 °C	ISO 306/B50
--	230 °F	110 °C	ISO 306/A120
CLTE - Flow	2.8E-5 in/in/°F	5.0E-5 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Electric Strength	230 V/mil	9.1 kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.00	3.00	IEC 60250
Dissipation Factor (1 MHz)	1.0E-4	1.0E-4	IEC 60250
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ¹ (0.06 in (1.5 mm))	HB	HB	UL 94

Additional Information

Mass balance versions (bio-based (BIO) or chemically recycled (CR)) of this product are chemically and physically indistinguishable to the standard fossil grade. This technical data sheet applies to all versions. Letters of sameness are available upon request.

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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