

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 867 is excellent balance of physical properties. TYRIL 867 E is specifically designed to provide good processability, good chemical and heat resistance and very good strength. The UV-stabilized version exhibits excellent weather ability, suitable in particular for extruded sheet and thermoforming applications.

Applications:

- Small appliances: transparent kitchen-robot parts
- Extruded sheet for shower cabinets, light-diffusers
- Housewares: food storage 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	ASTM D792 ISO 1183/B
Apparent (Bulk) Density	0.69 g/cm ³	0.69 g/cm ³	ASTM D1895 ISO 60
Melt Mass-Flow Rate (MFR)			ASTM D1238 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	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	537000 psi	3700 MPa	ASTM D638 ISO 527-2
Tensile Strength			
Break ¹	10200 psi	70.0 MPa	ASTM D638
Break	10200 psi	70.0 MPa	ISO 527-2/5
Flexural Strength	14100 psi	97.0 MPa	ASTM D790 ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Unnotched Impact Strength			ISO 179
73°F (23°C)	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	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	214 °F	101 °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

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 ⁴ (0.06 in (1.6 mm))	HB	HB	UL 94

Notes

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

¹ 0.20 in/min (5.0 mm/min)

² Rate A (50°C/h), Loading 2 (50 N)

³ Rate B (120°C/h), Loading 1 (10 N)

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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