

TYRIL™ 867 E SAN Resin

Overview

TYRIL* styrene-acrylonitrile (SAN) resins are designed by Styron 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 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)	10200 psi	70.0 MPa	ISO 527-2/5 ASTM D638 ¹
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	0.000028 in/in/°F	0.000050 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

Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Dissipation Factor (1 MHz)	0.00010	0.00010	IEC 60250
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating (0.0630 in (1.60 mm))	HB	HB	UL 94 ⁴

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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This document is intended for use within Europe

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