TYRIL™ 905

SAN Resin

Trinseo

PROSPECTOR®
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Technical Data

Product Description

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 properties of TYRIL 905 are its superior water-clear clarity and a high thermal stability resulting in excellent optical qualities in combination with good chemical and heat resistance and good processability. It is specially suited for self-coloring.

Applications:

- Cosmetic packaging: water-clear, thick-wall applications
- Kitchenware: airline service ware, mixer bowls, water cans and water reservoirs.
- Home appliances: transparent refrigerator parts, micro-wave windows and drying machine windows
- Personal care: cosmetic containers, tooth brushes, combs and other bathroom items.

Complies with:

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

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet		
UL Yellow Card [2]	• E162447-238300		
Search for UL Yellow Card	• Trinseo • TYRIL™		
Availability	• Europe		
Features	• Chemical Resistant • Good Dimensional Stability • Good Processability	• Good Strength • Good Thermal Stability • High Clarity	• High Heat Resistance
Uses	• Appliances • Automotive Applications	• Lighting Applications • Packaging	
Agency Ratings	• EU Food Contact [3]	• FDA 21 CFR 181.32	
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	• Sheet Extrusion

Physical	Nominal Value	Unit	Test Method
Density	1.08	g/cm³	ISO 1183
Apparent (Bulk) Density	0.69	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR)			ISO 1133
220°C/10.0 kg	13	g/10 min	
230°C/3.8 kg	5.0	g/10 min	
Molding Shrinkage	0.30 to 0.70	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3600	MPa	ISO 527-1/1
Tensile Stress (Break)	68.0	MPa	ISO 527-2/5
Flexural Stress	95.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength (23°C)	15	kJ/m²	ISO 179/1eU
Unnotched Izod Impact Strength (23°C)	12	kJ/m²	ISO 180
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	82		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Annealed	100	°C	
Vicat Softening Temperature			
--	101	°C	ISO 306/B50
--	110	°C	ISO 306/A120
CLTE - Flow	4.5E-5	cm/cm/°C	ISO 11359-2

Electrical	Nominal Value	Unit	Test Method
Electric Strength	9.1	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.00		IEC 60250
Dissipation Factor (1 MHz)	1.0E-4		IEC 60250

Flammability	Nominal Value	Unit	Test Method
Flame Rating [5] (1.5 mm)	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

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Conditional, contact Trinseo for more information.

[4] Typical properties: these are not to be construed as specifications.

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

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Where to Buy

Supplier

Trinseo
, USA
Telephone: 888-789-7661
Web: http://www.trinseo.com/

Distributor

Nexeo Plastics - Europe
Nexeo Plastics is a Pan European distribution company. Contact Nexeo for availability of individual products by country.
Telephone: +34-93-480-9125
Web: https://www.nexeoplastics.com/
Availability: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, United Kingdom

RESINEX Group
RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.
Telephone: +32-14-672511
Web: http://www.resinex.com/
Availability: Europe

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