TYRIL™ 905UV

SAN Resin

Trinseo

Message:

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 represnts 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
Automotive: taillight lenses and reflectors
Cosmetic packaging: water-clear, thick-wall applications

General Information	
Additive	UV Stabilizer
Features	Good Chemical Resistance
	Good Dimensional Stability
	Good Processability
	Good Strength
	Good Thermal Stability
	Good Weather Resistance
	High Clarity
	High Heat Resistance
Uses	Appliances
	Automotive Applications
	Lighting Applications
	Packaging
Appearance	Clear/Transparent
Forms	Pellets
Processing Method	Blow Molding
	Extrusion
	Injection Molding
	Sheet Extrusion
	Thermoforming

Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.08	g/cm³	ASTM D792, ISO 1183/B
--	1080	kg/m³	ISO 1183 [1]

Apparent Density	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	
230°C/3.8 kg	5.0	g/10 min	
Melt volume-flow rate (220°C/10.0 kg)	16.0	cm³/10min	ISO 1133 [2]
Water Absorption			ISO 62 [3]
Saturation	0.20	%	
Equilibrium	0.50	%	
Viscosity number	117	cm³/g	ISO 307, 1157, 1628 [4]
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	82		ASTM D785, ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
--	3600	MPa	ASTM D638, ISO 527-2
--	3350	MPa	ISO 527-2 [5]
Tensile Stress			
Yield	65.0	MPa	ISO 527-2 [6]
Break [7]	68.0	MPa	ASTM D638
Break	68.0	MPa	ISO 527-2/5
Tensile Strain (Yield)	2.5	%	ISO 527-2 [8]
Nominal strain at break	2.5	%	ISO 527-2 [9]
Flexural Strength	95.0	MPa	ASTM D790, ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength			
23°C	15	kJ/m²	ISO 179
-30°C	17.0	kJ/m²	ISO 179/1eU [10]
23°C	16.0	kJ/m²	ISO 179/1eU [11]
Unnotched Izod Impact Strength (23°C)	12	kJ/m²	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Annealed)	100	°C	ASTM D648, ISO 75-2/A
Vicat Softening Temperature			
--	101	°C	ASTM D1525, ISO 306/B50 4 [12]
--	110	°C	ASTM D1525, ISO 306/A120 5 [13]
50°C/h, B (50N)	102	°C	ISO 306 [14]
CLTE			
Flow	5.0E-5	cm/cm/°C	DIN 53752
Flow	4.0E-5	cm/cm/°C	ISO 11359-2 [15]
Transverse	6.0E-5	cm/cm/°C	ISO 11359-2 [16]
Specific Heat	1380	J/kg/°C	ASTM D2766
Electrical	**Nominal Value**	**Unit**	**Test Method**

Surface resistivity	> 1.0E+15	ohms	IEC 60093 [17]
Volume resistivity	> 1.0E+13	ohms·m	IEC 60093 [18]
Electric Strength	9.1	kV/mm	IEC 60243-1
Relative Permittivity			
1 MHz	3.00		IEC 60250
100 Hz	3.00		IEC 60250 [19]
Dissipation Factor (1 MHz)	1.0E-4		IEC 60250

Flammability	Nominal Value	Unit	Test Method
Flame Rating [20] (1.60 mm)	HB		UL 94
Burning Behav. at 1.6mm nom. thickn. (1.50 mm, UL)	HB		ISO 1210 [21]

NOTE	
1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
7.	5.0 mm/min
8.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
9.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Rate A (50°C/h), Loading 2 (50 N)
13.	Rate B (120°C/h), Loading 1 (10 N)
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
20.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
21.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

WECHAT