



Performance Product Range

# TOUGHENED POLYSTYRENE

## SP253

### Characteristics:

- High Stiffness
- Moderate Toughness
- Good Clarity

### Processing:

- Molding

### Applications:

- Ball pens
- Small appliances housings
- Small impellers
- Blended with HIPS for improved gloss

Material Status : Commercially Active

Agency Ratings : FDA 21 CFR 177.1640

PROPERTY	ASTM TEST METHOD	TEST CONDITION	VALUE	UNIT
<b>Rheological</b>				
Melt Flow Index	D1238	200 °C / 5kgs	6	gm / 10 min
<b>Thermal</b>				
Vicat Softening Point	D1525	120 °C/hr, 1kg	103	°C
HDT (Unannealed)	D648	1.86 MPa	81	°C
<b>Mechanical</b>				
Tensile Strength	D638	50 mm/min	43	MPa
Elongation	D638	50 mm/min	5	%
Flexural Strength	D790	3.2 mm	60	MPa
Flexural Modulus	D790	3.2 mm	2200	MPa
Izod Impact (Notched)	D256	3.2 mm	15	J/m
Izod Impact (Notched)	D256	3.2 mm	200	J/m
<b>Optical</b>				
Haze	SPL	1mm	2.5	%
Light Transmission	SPL	1mm	88	%
<b>Flammability</b>				
Flammability*	UL 94	@ 1.6 mm	HB	-
<b>General</b>				
Specific Gravity	D792	-	1.02	-
<b>Processing Conditions</b>				
Maximum Melt Temperature	-	-	220	°C
Pre-drying Temperature	-	-	NA	°C
Mold Temperature	-	-	40 - 50	°C

NOTE: Use of lesser processing temperature recommended for improved clarity. High heat history in process equipment needs to be avoided for best results.

\*Tested at SPL laboratory.

Data presented in this catalogue are typical values of properties and are intended to serve as guide only. SPL reserves the right to review the content of this catalogue and revise.



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### Test Method & Standard Properties

Data presented in this catalogue are typical values of properties for natural materials and intended to serve as a guide only. All tests are carried out at 23°C unless otherwise stated. Testing of all mechanical properties is done with an injection molded specimen of 3.2 mm. In actual applications, properties can be affected to a considerable extent by the mold / die design, the processing conditions and the colour.

### Environmental

Supreme polystyrene resins can be recycled, incinerated or disposed off in landfill without detriment to the environment. Adequate ventilation should be used during processing. Where recycling of Supreme Polystyrene is not possible, disposal to landfill or incineration in accordance with all applicable government laws and regulations is recommended. Material Safety Data Sheets (MSDS) for Supreme Polystyrene resins are available from Supreme Petrochem Ltd MSD sheets are provided to help customers in handling their own safety and disposal needs and those that may be required for applicable health and safety regulations e.g. OHSAS ISO14000.

Supreme flame retardant polystyrene grades contains additives which may release hazardous or toxic vapors through lengthy or excessive exposure to high heat. Kindly, refer to recommended processing temperatures and use suitable personal protective equipments.

### Handling Precautions

While the handling of Supreme polystyrene pellets generally does not present unusual problems, a dust can be formed under some circumstances. If workers are exposed to this dust, they should be protected from dust inhalation by use of approved dust respirators. Contact with the skin and eyes should be prevented by use of protective equipment and/or clothing.

SPL recommends storing of polystyrene in cool & dry place in a shade away from sunlight and heat. The packing used is not UV stabilised and hence should not be exposed to sunlight.

### Exclusion of Liability

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## SUPREME PETROCHEM LTD

### Corporate Office, Exports & Zonal Office (West)

17/18, Shah Industrial Estate, Veera Desai Road, Andheri (West), Mumbai-400 053, India.

Ph. : (91-22) 2673 6196 to 99, Fax: (91-22) 2673 4783/ 2673 6203 / 5693 5930, Website : [www.supremepetrochem.com](http://www.supremepetrochem.com)

E-mail: | Exports: [export@spl.co.in](mailto:export@spl.co.in) | West Zone: [marketing@spl.co.in](mailto:marketing@spl.co.in) | Business Development: [appl\\_dev@spl.co.in](mailto:appl_dev@spl.co.in)

#### Zonal Office (North)

FGL, 9th Floor, Gopala Towers,  
25, Rajindra Place,  
New Delhi - 110 008  
Ph.: (91-11) 2573 0405-06  
Fax: (91-11) 2573 0405-06  
E-mail: [spl\\_delhi@spl.co.in](mailto:spl_delhi@spl.co.in)

#### Zonal Office (South)

144/4, Baab Enclave, Little Mount,  
Saidapet, Chennai-600 015  
Ph.: (91-44) 2235 5065 / 2235 4074  
Fax: (91-44) 2235 5065 / 2235 4074  
E-mail: [spl\\_chennai@spl.co.in](mailto:spl_chennai@spl.co.in)

#### Sales Offices

Vadodara : Telefax : (91-265) 2284521  
Kolkata : Telefax : (91-33) 24160278  
Bangalore : Telefax : (91-80) 23565110

#### Works

Village Amdoshi / Wangani,  
Wakan - Roha Road,  
Taluka Roha, Dist. : Raigad.  
Maharashtra - 402 106.  
Ph.: (91-2194) 222540 to 222548  
Fax: (91-2194) 222617 & 222537

