

## Supreme Petrochem SP EXP 31 Toughened Polystyrene

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Impact Modified

### Material Notes:

Characteristics Very high clarity & gloss High dart impact strength & good stiffness Good crease retention Good heat resistance High yield compared to PVC, APET Processing Extrusion Vacuum forming Applications Blister packing Collar packs Folded clear boxes Lids Egg cartons & other rigid packaging Material Status: Commercial : Active Agency Ratings: FDA 21 CFR 177.1640 Information provided by Supreme Petrochem LTD

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Supreme-Petrochem-SP-EXP-31-Toughened-Polystyrene.php](http://www.lookpolymers.com/polymer_Supreme-Petrochem-SP-EXP-31-Toughened-Polystyrene.php)

| Physical Properties | Metric                                               | English                                              | Comments   |
|---------------------|------------------------------------------------------|------------------------------------------------------|------------|
| Specific Gravity    | 1.02 g/cc                                            | 1.02 g/cc                                            | ASTM D792  |
| Melt Flow           | 6.0 g/10 min<br>@Load 5.00 kg,<br>Temperature 200 °C | 6.0 g/10 min<br>@Load 11.0 lb,<br>Temperature 392 °F | ASTM D1238 |

| Mechanical Properties     | Metric                           | English                               | Comments             |
|---------------------------|----------------------------------|---------------------------------------|----------------------|
| Tensile Strength at Break | 36.8 MPa                         | 5340 psi                              | 50 mm/min; ASTM D638 |
| Elongation at Break       | 10 %                             | 10 %                                  | 50 mm/min; ASTM D638 |
| Flexural Strength         | 51.5 MPa<br>@Thickness 3.20 mm   | 7470 psi<br>@Thickness 0.126 in       | ASTM D790            |
| Flexural Modulus          | 1.77 GPa<br>@Thickness 3.20 mm   | 256 ksi<br>@Thickness 0.126 in        | ASTM D790            |
| Izod Impact, Notched      | 0.150 J/cm<br>@Thickness 3.20 mm | 0.281 ft-lb/in<br>@Thickness 0.126 in | ASTM D256            |
| Izod Impact, Unnotched    | 2.75 J/cm<br>@Thickness 3.20 mm  | 5.15 ft-lb/in<br>@Thickness 0.126 in  | ASTM D256            |

| Thermal Properties                          | Metric                   | English                    | Comments                |
|---------------------------------------------|--------------------------|----------------------------|-------------------------|
| Deflection Temperature at 1.8 MPa (264 psi) | 74.0 °C                  | 165 °F                     | ASTM D648               |
| Vicat Softening Point                       | 101 °C                   | 214 °F                     | 1kg / 120°C; ASTM D1525 |
| Flammability, UL94                          | HB<br>@Thickness 1.60 mm | HB<br>@Thickness 0.0630 in |                         |

| Optical Properties    | Metric             | English              | Comments        |
|-----------------------|--------------------|----------------------|-----------------|
| Haze                  | 1.5 %              | 1.5 %                | SPL test method |
|                       | @Thickness 1.00 mm | @Thickness 0.0394 in |                 |
| Transmission, Visible | 88 %               | 88 %                 | SPL test method |
|                       | @Thickness 1.00 mm | @Thickness 0.0394 in |                 |

| Processing Properties | Metric         | English      | Comments |
|-----------------------|----------------|--------------|----------|
| Melt Temperature      | <= 220 °C      | <= 428 °F    |          |
| Mold Temperature      | 40.0 - 50.0 °C | 104 - 122 °F |          |

## Contact Songhan Plastic Technology Co.,Ltd.

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