

Technical Data Sheet

Polypropylene

I. Product Description

The grade exhibits excellent clarity, gloss and rigidity.

The material is suitable for food contact.

The material is not intended for use in medical and pharmaceutical applications.

Product Characteristics

Test Method used Features

ISO ASTM
High Clarity, High Gloss, Nucleated, Medium Rigidity

Typical Properties

Method

Value

Unit

Physical

| | | | |
|---------------------------------------|----------|-------|------------------------|
| Density | ISO 1183 | 0.900 | g/cm ³ |
| Melt flow rate (MFR) (230 °C/2.16kg) | ISO 1133 | 1.8 | g/10min |
| Melt volume flow rate (230 °C/2.16kg) | ISO 1133 | 2.40 | cm ³ /10min |

Mechanical

| | | | |
|-------------------------|---------------|------|-----|
| Tensile Modulus | ISO 527-1, -2 | 1100 | MPa |
| Tensile Stress at Yield | ISO 527-1, -2 | 29.0 | MPa |
| Tensile Strain at Break | ISO 527-1, -2 | >50 | % |
| Tensile Strain at Yield | ISO 527-1, -2 | 11 | % |

Impact

| | | | |
|------------------------------------|---------|-----|-------------------|
| Charpy notched impact strength | ISO 179 | | |
| (23 °C, Type 1, Edgewise, Notch A) | | 26 | kJ/m ² |
| (0 °C, Type 1, Edgewise, Notch A) | | 2.5 | kJ/m ² |

Hardness

| | | | |
|--------------------------------------|------------|------|-----|
| Ball indentation hardness (H 358/30) | ISO 2039-1 | 56.0 | MPa |
|--------------------------------------|------------|------|-----|

Thermal

| | | | |
|-----------------------------|---------------|------|----|
| Heat deflection temperature | ISO 75B-1, -2 | 80.0 | °C |
| B (0.45 MPa) Unannealed | | | |
| Vicat softening temperature | ISO 306 | | |
| (B50 (50 °C/h 50N)) | | 72.0 | °C |
| (A50 (50 °C/h 10N)) | | 130 | °C |
| Processing temperature | | 210 | °C |

Additional Properties

Haza (injection moulded 1mm disk, without tool coating), ASTM D1003: 11%

II. Further Information

Health and Safety:

The material is manufactured to the highest standards but, special requirements apply to certain applications such as food end-use contact and direct medical use.

Workers should be protected from the possibility of skin or eye contact with molten polymer. Safety glasses are suggested as a minimal precaution to prevent mechanical or thermal injury to the eyes.

Molten polymer may be degraded if it is exposed to air during any of the processing and off-line operations. The products of degradation have an unpleasant odour. In higher concentrations they may cause irritation of the mucus membranes. Fabrication areas should be ventilated to carry away fumes or vapours. Legislation on the control of emissions and pollution prevention must be observed. If the principles of sound manufacturing practice are adhered to and the place of work is well ventilated, no health hazards are involved in processing the material.

The material will burn when supplied with excess heat and oxygen. It should be handled and stored away from contact with direct flames and/or ignition sources. In burning the resin contributes high heat and may generate a dense black smoke. Starting fires can be extinguished by water, developed fires should be extinguished by heavy foams forming an aqueous or polymeric film.

Storage:

The spool s is packed in a bag protecting it from contamination. If it is stored under adverse conditions, i. e. if there are large fluctuations in ambient temperature and the atmospheric humidity is high, moisture may condense inside the packaging. Under these circumstances, it is recommended to dry the material before use. Unfavourable storage conditions may also intensify the materials slight characteristic odour.

The material is subjected to degradation by ultra-violet radiations or by high storage temperatures. Therefore the spool must be protected from direct sunlight, temperatures above 40 °C and high atmospheric humidity during storage. The spool can be stored over a period of more than 6 month without significant changes in the specified properties, appropriate storage conditions provided. Higher storage temperatures reduce the storage time.

The information submitted is based on our current knowledge and experience. In view of the many factors that may affect processing and application, these data not relieve processors of the responsibility of carrying out their own tests and experiments; neither do they imply any legally binding assurance of certain properties or of suitability for a specific purpose. The data do not relieve the customer from his obligation to control the resin upon arrival and to complain about faults. It is the responsibility of those to whom we supply or products to ensure that any rights and existing laws and legislation are observed.