

# TECHNICAL DATA SHEET

# POLYETHYLENE TIPELIN 2100J

## HDPE for injection moulding

Preliminary  
(Lot number: 530231)

TIPELIN / TIPOLEN / TIPPLEN / TATREN / BRALEN

The joint product portfolio of TVK and SLOVNAFT provides infinite opportunities

## DESCRIPTION

**TIPELIN 2100J** is a high density unimodal polyethylene copolymer (with propene-1 as comonomer) intended for injection moulding of general purpose products. It offers good balance of properties between stiffness and processability. The grade contains antioxidant and acid scavenger.

## APPLICATIONS

**TIPELIN 2100J** is recommended for making bottle closures (for not carbonated drinks), pails, crates, pallets, dust bins, large containers, lids (for pails, drums and containers).

**TIPELIN 2100J** is suitable for food contact, for manufacturing of pharmaceutical packing products and toys. Qualification for Food Contact, Pharmaceutical and Toy Safety Regulations is under process.

## PROPERTIES

|   | Test method   | Unit              | Typical value |
|---|---------------|-------------------|---------------|
| Melt Mass-Flow Rate (MFR) (190 °C /2.16 kg) | ISO 1133      | g/10 min          | 3,6           |
| Density (23 °C) *                           | ISO 1183-2    | kg/m <sup>3</sup> | 951           |
| Tensile Strength at Yield *                 | ISO 527-3     | MPa               | 10,1          |
| Tensile Strain at Yield *                   | ISO 527-3     | %                 | 22,9          |
| Tensile Strength at Break *                 | ISO 527-3     | MPa               | 11,8          |
| Tensile Strain at Break *                   | ISO 527-3     | %                 | 563           |
| Flexural Modulus *                          | ISO 178       | MPa               | 1033          |
| IZOD Impact Strength (notched, 23 °C) *     | ISO 180/ A    | kJ/m <sup>2</sup> | 6,6           |
| IZOD Impact Strength (notched, -20 °C) *    | ISO 180/ A    | kJ/m <sup>2</sup> | 4,6           |
| CHARPY Impact Strength (notched, 23 °C) *   | ISO 179/ A    | kJ/m <sup>2</sup> | 7,2           |
| CHARPY Impact Strength (notched, -20 °C) *  | ISO 179/ A    | kJ/m <sup>2</sup> | 4,3           |
| ESCR F50 B (100% Igepal CO-630) *           | ASTM D 1693   | h                 | 7             |
| OIT (200 °C) *                              | EN 728        | min               | 43            |
| Vicat Softening Temperature *               | ISO 306/A 120 | °C                | 124           |
| Shore D Hardness *                          | ISO 868       | -                 | 59            |

\* Typical properties, not to be used as specification. Average mechanical property values of several measurements carried out on standard injection-moulded test specimens prepared in accordance with ISO 1872-2.

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## **PROCESSING**

**TIPELIN 2100J** can be used in conventional injection machines.  
Recommended processing temperatures are 210-270 °C.

## **STORAGE AND HANDLING**

Pellets are packed in 25 kg PE-LD bags and transported on stretch or shrink-wrapped pallets at eligible load of polymer 1250 or 1375 kg. Heat treated pallets are available as well. We use adhesive between the bags in order to avoid their slipping. Pay attention to this fact during the removing of the bags from the palettes. The preferred method is to lift the bag at first without rotation. Transportation in a road silo or rail silo is also available. For more detailed information please contact Slovnaft and TVK sales representative.

Since polyethylene is a combustible substance, the fire safety rules applicable for combustible materials in warehouses and store rooms should be observed.

If polymer is stored in conditions of high humidity and fluctuating temperatures, then atmospheric moisture can condense inside the packing. If it happened, it is recommended the pellets to be dried before use. During the storage polyethylene should not be exposed to UV radiation and temperatures above 40°C. Producer does not take responsibility for any damages caused by adverse storage.

## **REACH STATEMENT**

Polymers are exempt of REACH registration. However, their raw materials which mean monomers and relevant additives have been registered. TVK Plc. is committed to fully respect legislation and will only use REACH compliant raw materials. At this point in time HDPE TIPELIN does not contain any substances specifically identified as SVHC at levels greater than 0.1%.

## **SAFETY**

See MSDS.

## **RECYCLING**

Polyethylene resins are suitable for recycling using modern recycling methods.  
In-house production waste should be kept clean to facilitate direct recycling.

## **DISCLAIMER**

The information provided in this publication has been compiled to the best of our present knowledge. However, in view of the various applications of polyethylene resins and the equipment used, the processing conditions may differ.

The recommendations and data herein are to be construed as informational only and do not relieve users from carrying out their own tests and experiments prior to processing in order to check suitability for a specific use. It is the responsibility of those to whom we supply our products to ensure that any proprietary rights and existing laws and legislation are observed. Our products are under continuous development, therefore we reserve the right to change the information presented in this brochure at our own discretion.

The REACH statement herein does not constitute legal advice. The REACH statement is provided for informational purpose only.

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