

# TECHNICAL DATA SHEET

## TIPELIN 3110J

### HDPE for injection moulding and compression moulding

TIPELIN / TIPOLEN / TIPPLEN / TATREN / BRALEN+

The joint product portfolio of MOL Petrochemicals and Slovnaft provides infinite opportunities

#### DESCRIPTION

**TIPELIN 3110J** is a copolymer polyethylene (butene-1 comonomer), intended for injection moulding and compression moulding of general purpose products. It offers good organoleptic, environmental stress crack resistance and improved long-term color stability. The grade contains antioxidant, acid scavenger and slip agent which ensures easy application and opening.

#### APPLICATIONS

**TIPELIN 3110J** is recommended for caps and closures for carbonated soft drinks, engineering and technical parts. Highly recommended in cases when better colour stability and lower yellowness value of the product is needed. The product is also suitable for blow moulding of small size bottles. Furthermore, it is suitable for corrugated pipes too.

**TIPELIN 3110J** is suitable for food packaging and toys. The product complies with Food Contact and Toy Safety Regulations.

#### PROPERTIES

	Test method	Unit	Typical value
Melt Mass-Flow Rate (MFR) (190 °C /2.16 kg)	ISO 1133-1	g/10 min	2.0
Density (23 °C) *	ISO 1183-2	kg/m <sup>3</sup>	952
Tensile Strength at Yield **	ISO 527-3	MPa	23
Tensile Strain at Yield **	ISO 527-3	%	12
Tensile Strength at Break	ISO 527-3	MPa	25
Tensile Strain at Break	ISO 527-3	%	880
Flexural modulus**	ISO 178	MPa	1000
Izod Impact Strength**	ISO 180/A	kJ/m <sup>2</sup>	10
Shore D Hardness **	ISO 868	-	62
ESCR (100 % Igepal, F 50)*	ASTM D 1693	h	20
Shrinkage (TD/MD)**	ISO 294-4	%	1.8/3.0
OIT (200 °C)	EN 728	min	65
Vicat Softening Temperature	ISO 306/A 120	°C	127

Typical properties, not to be used as specification.

\* Average mechanical property values of several measurements carried out on standard pressed specimens (ISO 293) conditioned at room temperature (ISO 291).

\*\* Average mechanical property values of several measurements carried out on standard injection-moulded test specimens prepared in accordance with ISO 294-1.

#### PROCESSING

**TIPELIN 3110J** can be used in conventional injection moulding and compression moulding machines.

Recommended processing temperatures for injection moulding is 210-250 °C, and for compression moulding is 170-200 °C.

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### 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 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 pallets. 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 MOL Petrochemicals 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. MOL Petrochemicals is committed to fully respect legislation and will only use REACH compliant raw materials. At this point in time 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

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