

# TECHNICAL DATA SHEET

## TIPPLEN R 660

### Random copolymer for extrusion applications

TIPELIN / TIPOLEN / TIPPLEN / TATREN / BRALEN+

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

#### DESCRIPTION

**TIPPLEN R 660** is a random copolymer polypropylene for extrusion. This grade is formulated with a new generation clarifying agent, so the product shows excellent optical properties (transparency and gloss).

#### APPLICATIONS

**TIPPLEN R 660** is recommended for blow moulded bottles for detergents, toiletries and flat mineral water, where the higher gas-permeability than PVC and PET is no problem. This grade is well suited for extruded sheet for stationery folder and thermoforming articles.

**TIPPLEN R 660** is suitable for food contact. The product complies with Food Contact Regulations.

#### PROPERTIES

	Test method	Unit	Typical value
MFR (230 °C /2.16 kg)	ISO 1133-1	g/10 min	2.0
Flexural Modulus *	ISO 178	MPa	1000
Modulus of Elasticity in Tension *	ISO 527-1,2	MPa	950
Tensile Strength at Yield *	ISO 527-1,2	MPa	28
Tensile Strain at Yield *	ISO 527-1,2	%	12
Izod Impact Strength (notched, 23 °C) *	ISO 180/A	kJ/m <sup>2</sup>	25
HDT (0.45 MPa, flatwise) *	ISO 75-1,2	°C	86
Rockwell Hardness *	ISO 2039/2	R scale	75
Haze**	ISO 14782	%	13

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 294-1.

\*\* Measured on specimen with 1 mm wallthickness

#### PROCESSING

**TIPPLEN R 660** can be used in conventional extrusion machines.

Recommended processing temperatures are 185 – 230 °C.

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2

### 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 polypropylene 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 polypropylene 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 TIPPLEN does not contain any substances specifically identified as SVHC at levels greater than 0.1%.

### SAFETY

See MSDS.

### RECYCLING

POLYPROPYLENE 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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4

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