TECHNICAL DATA SHEET

POLYETHYLENE TIPELIN 5700S

HDPE Fiber grade

TIPELIN / TIPOLEN / TIPPLEN / TATREN / BRALEN+

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

DESCRIPTION

TIPELIN 5700S is a high density unimodal polyethylene copolymer (with buthene-1 as comonomer) intended for fiber extrusion. It has medium molecular weight and a narrow molecular weight distribution. It offers high tensile strength, high elongation at break and low tendency to fibrillation. The grade contains antioxidant and acid scavenger.

APPLICATIONS

TIPELIN 5700S is recommended for making split film and tapes, round bale nets and protective netting in agriculture and building industry. Recommended film thickness (Primer film) is 0.06 - 0.12 mm. Recommended film thickness (Fibre) is 0.018 - 0.025 mm.

PRODUCT COMPLIANCE

See DDS.

PROPERTIES

Parameter	Note	Test method	Unit	Typical value
Melt Mass-Flow Rate (MFR) (190 °C /2.16 kg)	-	ISO 1133-1	g/10 min	0.5
Melt Mass-Flow Rate (MFR) (190 °C /5 kg)	-	ISO 1133-1	g/10 min	1.7
Melt Mass-Flow Rate (MFR) (190 °C /21.6 kg)	-	ISO 1133-1	g/10 min	25
Density (23 °C)	(1)	ISO 1183-2	kg/m³	947
Tensile Stress at Yield (MD/TD)	(2)	ISO 527-3	MPa	23/20
Tensile Strength at Break (MD/TD)	(2)	ISO 527-3	MPa	46/49
Tensile Strain at Break (MD/TD)	(2)	ISO 527-3	%	750/900
Tensile Strain at Yield	(2)	ISO 527-3	%	15
Flexural Modulus	(1)	ISO 178	MPa	1200
Izod Impact Strength (notched, 23 °C)	(1)	ISO 180/A	kJ/m²	10
Elmendorf Tear Resistance (MD/TD)	(2)	ISO 6383-2	cN	17/150
Dart Drop (F50)	(2)	ISO 7765-1 method A	g	47
Spencer Impact Strength	(2)	ASTM D 3420	MPa	34
Vicat Softening Temperature	(1)	ISO 306/A 120	°C	126
Hardness Shore D	(1)	ISO 868	-	62
OIT (Oxidation induction time) at 200 °C	(1)	EN 728	min	100

Typical properties, not to be used as specification.
(1) Average mechanical property values of several measurements carried out on standard pressed specimens (ISO 293) conditioned at room temperature (ISO 291).
(2) Average mechanical property values of several measurements on film (MD = machine direction, TD = trans direction) thickness of 0.015 mm, blow up ratio 4:1.

PROCESSING

TIPELIN 5700S can be used in conventional extrusion machines. Recommended processing temperatures are 180-220 °C.

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STORAGE AND HANDLING

Pellets are packed in 25 kg polyethylene bags and transported on shrink-wrapped or stretch-wrapped pallets at eligible load of polymer 1375 kg. 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. Heat treated pallets are provided by PRS, a member of the Faber Halbertma Group, operating a pooling system which collects the pallets after use, and organizes reuse as part of a sustainable, circular system. PRS pallets remain property of PRS at all times. For more detailed information please contact a sales representative at SLOVNAFT or at MOL Petrochemicals.
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 HDPE TIPELIN does not contain any substances specifically identified as SVHC at levels greater than 0.1%.

RECYCLING

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

SAFETY

See MSDS.

DISCLAIMER

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