

TWO COLOURS



ONE DIRECTION

TIPELIN 7100S

New bimodal high density polyethylene designed for sheet manufacturing

TVK has developed a new bimodal high density polyethylene, **TIPELIN 7100S** produced by CX Process under licence of Mitsui.

We developed the product on the basis of the requirements of and in close cooperation with German converters concerning sheet feedstock.

Basic requirements were unchanged (or higher) yield during extrusion, in addition to the expected rigidity excellent ESCR (Environmental Stress Cracking Resistance) and FNCT (Full Notched Creep Test) values, and outstanding color and surface quality of the finished products (sheets).

The technical parameters ensured by the base polymer and stabilizer package developed in case of the **TIPELIN 7100S** „match” the aforementioned customer requirements, companies buy and apply the product regularly.

Product News

	Test methods	Units	7700M	7300B	7100S
MFR (190 °C /5 kg)	ISO 1133	g/10 min	0.25	0.4	0.5
Density (23 °C)*	ISO 1183	kg/m ³	949	954	948
Tensile Strength at Yield*	ISO 527-1,2	MPa	25	29	25
Tensile Strain at Yield*	ISO 527-1,2	%	12	12	11
Tensile Strength at Break*	ISO 527-2	MPa	30	34	28
Tensile Strain at Break*	ISO 527-1,2	%	1100	1350	1100
Flexural Modulus*	ISO 178	MPa	1100	1300	1200
Notched Izod Impact (23 °C)*	ISO 180/1A	kJ/m ²	20	15	16
Shore D Hardness*	ISO 868	-	63	64	63
ESCR F50 B (10% Igepal CO-630)*	ASTM D 1693	h	> 1000	> 500	> 2000

These are 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).

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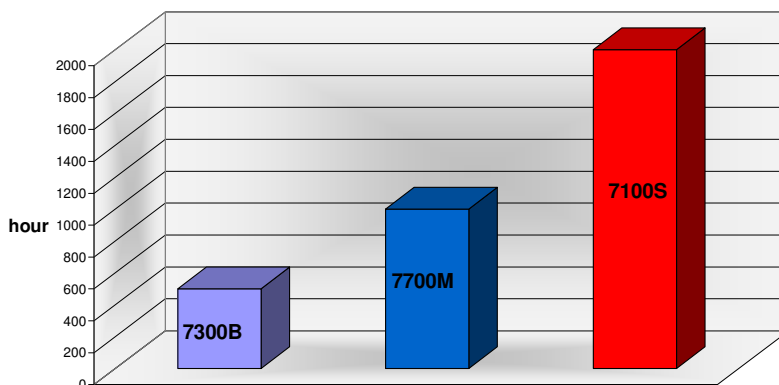
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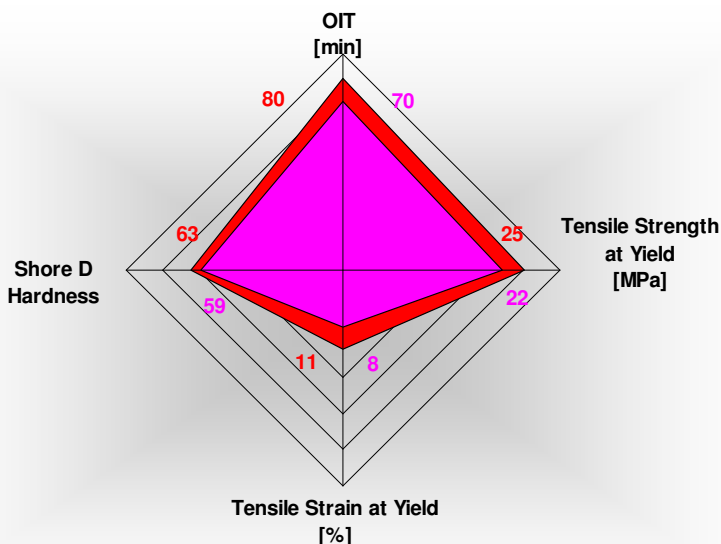


Compared to our **TIPELIN 7300B** and **7700M** grades, which are the closest to the new grade in its density and melt behaviour, **TIPELIN 7100S** has eminently good ESCR (see the table and the graph).

Minimum values of Environmental Stress Crack Resistance (ESCR)



It can be seen well from the following graph that the new **TIPELIN 7100S** surpasses the competitive German grade in mechanical properties and oxidation induction time (OIT) as well. It is apparent from the values that our grade has nearly 15 % better thermal stability in oxidative atmosphere than the competitive grade.



■ TIPELIN 7100S ■ Competitive grade (MFR=0.45 g/10 min, density 0.947 g/cm³)

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The finished products (sheets) are mainly used for the insulation of tunnels, reconstructed old buildings, for thermoforming (coating for power machines, metal processing equipment etc.).



In addition to all these features **TIPELIN 7100S** is also recommended for the manufacturing of blown, hollow bodies (bottles, cans, small volume containers) and of pipe that are not subject to qualification.

In addition to these our new grade complies with Commission Directive 2002/72/EC on plastic materials and articles intended for food contact.

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For further information and Technical data sheets please visit our websites:
www.slovnaft.sk, www.tvk.hu or contact customerservice@tvk.hu or your sales representative.

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 informative 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.

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