## **TABOREX TA 1117 HD**

# High Density Polyethylene SILON s.ro

#### Message:

A chemically-crosslinkable HDPE compound for the production of multi-layer pipes for domestic hot and cold water, under floor heating and central heating application. It is designed to achieve best performance in single layer and co-extrusion products.

TABOREX TA 1117 HD is a crosslinkable compound made by Silane grafted ethylene polymer. This graft polymer constitutes together with a Masterbatch containing the crosslinking catalyst a "SIOPLAS-SYSTEM". Pipes which are produced with the SILON grade TABOREX TA 1117 HD fulfil the requirements of ASTM F876-04a, CSA 137.5-03, EN ISO 15875, BS 7291 and all related standards.

This system allows the compound to be extruded as a normal thermoplastic polymer, which will attain a high level of crosslinking in the processed form. The final product provides all the superior properties associated with crosslinked polyethylene.

Features         Crosslinkable           Uses         Piping system           Forms         Sphere           Processing Method         Extrusion           Physical         Nominal Value         Unit         Test Method           Density         0.54         g/cm³         DIN 53479, ASTM D1050           Apparent Density         0.54         g/cm³         DIN 53466           Melt Mass-Flow Rate (MFR) (190°C/216*         g/cm³         DIN 53466           kg)         1.0         g/l min         ASTM D1238, ISO 1138           Volatile Matter ¹         2.0         g/l min         ASTM D1238, ISO 1138           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Strain (Break)         450         MPa         ISO 527-2           Extrusion         Nominal Value         Unit         Scot 527-2           Drying Temperature         80.0-90.0         "C         C           Olyinger Zone 1 Temp.         160-170         "C         "C           Ujinder Zone 2 Temp.         170-180         "C         "C           Ujinder Zone 3 Temp.         170-190         "C         "C	General Information			
Forms         Sphere           Processing Method         Extrusion           Physical         Nominal Value         Unit         Test Method           Density         0.948         g/cm³         DIN 53479, ASTM D1505           Apparent Density         0.54         g/cm³         DIN 53479, ASTM D1505           Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         3         g/10 min         ASTM D1238, ISO 1133           Volatile Matter ¹         1.0         %         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Extrusion         Nominal Value         Unit         SO 527-2           Extrusion (Break)         80.0 - 90.0         °C           Drying Temperature         80.0 - 90.0         °C           Oylinder Zone 1 Temp.         160 - 170         °C           Cylinder Zone 2 Temp.         170 - 180         °C           Cylinder Zone 3 Temp.         170 - 190         °C           Oylinder Zone 4 Temp.         170 - 190         °C           Die Temperature         190 - 220         °C </td <td>Features</td> <td>Crosslinkable</td> <td></td> <td></td>	Features	Crosslinkable		
Processing Method         Extrusion           Physical         Nominal Value         Unit         Test Method           Density         0.948         g/cm³         DIN 53479, ASTM D1505           Apparent Density         0.54         g/cm³         DIN 53479, ASTM D1505           Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         g/10 min         ASTM D1238, ISO 1133           Volatile Matter ¹         %         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Extrusion         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         °C           Drying Temperature         80.0 - 90.0         °C           Cylinder Zone 1 Temp.         160 - 170         °C           Cylinder Zone 2 Temp.         170 - 180         °C           Cylinder Zone 3 Temp.         170 - 190         °C           Cylinder Zone 4 Temp.         170 - 190         °C           Cylinder Zone 4 Temp.         170 - 190         °C           Drie Temperature         190 - 220         °C	Uses	Piping system		
Physical         Nominal Value         Unit         Test Method           Density         0.948         g/cm³         DIN 53479, ASTM D1505           Apparent Density         0.54         g/cm³         DIN 53466           Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         g/10 min         ASTM D1238, ISO 1133           Volatile Matter ¹         %         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Tensile Strain (Break)         450         %         ISO 527-2           Extrusion         Nominal Value         Unit         Unit           Drying Temperature         80.0 - 90.0         *C         *C           Drying Time         2.0         hr         *C           Cylinder Zone 1 Temp.         160 - 170         *C         *C           Cylinder Zone 2 Temp.         170 - 180         *C         *C           Cylinder Zone 3 Temp.         170 - 190         *C         *C           Cylinder Zone 4 Temp.         170 - 190         *C         *C           Die Temperature         190 - 220 <td>Forms</td> <td>Sphere</td> <td></td> <td></td>	Forms	Sphere		
Density         0.948         g/cm³         DIN 53479, ASTM D1508           Apparent Density         0.54         g/cm³         DIN 53466           Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         "g/10 min         ASTM D1238, ISO 1133           Volatile Matter 1         1.0         %         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Extrusion         Nominal Value         Unit         SO 527-2           Extrusion (Break)         80.0 - 90.0         "C         "C           Drying Temperature         80.0 - 90.0         "C         "C           Cylinder Zone 1 Temp.         160 - 170         "C         "C           Cylinder Zone 2 Temp.         170 - 180         "C         "C           Cylinder Zone 3 Temp.         170 - 190         "C         "C           Cylinder Zone 4 Temp.         190 - 220         "C         "C           Extrusion instructions         190 - 220         "C         "C	Processing Method	Extrusion		
Apparent Density         0.54         g/cm³         DIN 53466           Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         1.0         g/10 min         ASTM D1238, ISO 1133           Volatile Matter ¹         %         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Tensile Strain (Break)         450         %         ISO 527-2           Extrusion         Nominal Value         Unit         Unit           Drying Temperature         80.0 - 90.0         °C         C           Olyinder Zone 1 Temp.         160 - 170         °C         Unit           Cylinder Zone 2 Temp.         170 - 180         °C         Unit           Cylinder Zone 3 Temp.         170 - 190         °C         Unit         Unit           Cylinder Zone 4 Temp.         170 - 190         °C         Unit         Unit<	Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)         1.0         g/10 min         ASTM D1238, ISO 1133           Volatile Matter <sup>1</sup> %         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         450         MPa         ISO 527-2           Extrusion         Nominal Value         Unit         Volument           Drying Temperature         80.0 - 90.0         °C         Volument           Cylinder Zone 1 Temp.         160 - 170         °C         Volument           Cylinder Zone 2 Temp.         170 - 180         °C         Volument           Cylinder Zone 4 Temp.         170 - 190         °C         Volument           Cylinder Zone 4 Temp.         170 - 190         °C         Volument           Extrusion instructions         190 - 220         °C         Volument	Density	0.948	g/cm³	DIN 53479, ASTM D1505
kg)         1.0         g/10 min         ASTM D1238, ISO 1133           Volatile Matter <sup>1</sup> "Refunded of the method         Internal method           Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Extrusion         Nominal Value         Unit         ***           Drying Temperature         80.0 - 90.0         "C         ***           Olyinder Zone 1 Temp.         160 - 170         "C         ***           Cylinder Zone 2 Temp.         170 - 180         "C         ***           Cylinder Zone 4 Temp.         170 - 190         "C         ***           Die Temperature         190 - 220         "C         ***	Apparent Density	0.54	g/cm³	DIN 53466
Gel Content         70         %         EN 579           Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Tensile Strain (Break)         450         %         ISO 527-2           Extrusion         Nominal Value         Unit			g/10 min	ASTM D1238, ISO 1133
Mechanical         Nominal Value         Unit         Test Method           Tensile Stress (Break)         24.0         MPa         ISO 527-2           Tensile Strain (Break)         450         %         ISO 527-2           Extrusion         Nominal Value         Unit	Volatile Matter <sup>1</sup>		%	Internal method
Tensile Stress (Break)       24.0       MPa       ISO 527-2         Tensile Strain (Break)       450       %       ISO 527-2         Extrusion       Nominal Value       Unit         Drying Temperature       80.0 - 90.0       °C         Drying Time       2.0       hr         Cylinder Zone 1 Temp.       160 - 170       °C         Cylinder Zone 2 Temp.       170 - 180       °C         Cylinder Zone 3 Temp.       170 - 190       °C         Cylinder Zone 4 Temp.       170 - 190       °C         Die Temperature       190 - 220       °C         Extrusion instructions       Extrusion instructions	Gel Content	70	%	EN 579
Tensile Strain (Break)         450         %         ISO 527-2           Extrusion         Nominal Value         Unit           Drying Temperature         80.0 - 90.0         °C           Drying Time         2.0         hr           Cylinder Zone 1 Temp.         160 - 170         °C           Cylinder Zone 2 Temp.         170 - 180         °C           Cylinder Zone 3 Temp.         170 - 190         °C           Cylinder Zone 4 Temp.         170 - 190         °C           Die Temperature         190 - 220         °C   Extrusion instructions	Mechanical	Nominal Value	Unit	Test Method
Extrusion Nominal Value Unit  Drying Temperature 80.0 - 90.0 °C  Drying Time 2.0 hr  Cylinder Zone 1 Temp. 160 - 170 °C  Cylinder Zone 2 Temp. 170 - 180 °C  Cylinder Zone 3 Temp. 170 - 190 °C  Cylinder Zone 4 Temp. 170 - 190 °C  Extrusion instructions	Tensile Stress (Break)	24.0	МРа	ISO 527-2
Drying Temperature 80.0 - 90.0 °C  Drying Time 2.0 hr  Cylinder Zone 1 Temp. 160 - 170 °C  Cylinder Zone 2 Temp. 170 - 180 °C  Cylinder Zone 3 Temp. 170 - 190 °C  Cylinder Zone 4 Temp. 170 - 190 °C  Die Temperature 190 - 220 °C  Extrusion instructions	Tensile Strain (Break)	450	%	ISO 527-2
Drying Time       2.0       hr         Cylinder Zone 1 Temp.       160 - 170       °C         Cylinder Zone 2 Temp.       170 - 180       °C         Cylinder Zone 3 Temp.       170 - 190       °C         Cylinder Zone 4 Temp.       170 - 190       °C         Die Temperature       190 - 220       °C         Extrusion instructions	Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.       160 - 170       °C         Cylinder Zone 2 Temp.       170 - 180       °C         Cylinder Zone 3 Temp.       170 - 190       °C         Cylinder Zone 4 Temp.       170 - 190       °C         Die Temperature       190 - 220       °C         Extrusion instructions	Drying Temperature	80.0 - 90.0	°C	
Cylinder Zone 2 Temp. 170 - 180 °C Cylinder Zone 3 Temp. 170 - 190 °C Cylinder Zone 4 Temp. 170 - 190 °C Die Temperature 190 - 220 °C Extrusion instructions	Drying Time	2.0	hr	
Cylinder Zone 3 Temp. 170 - 190 °C  Cylinder Zone 4 Temp. 170 - 190 °C  Die Temperature 190 - 220 °C  Extrusion instructions	Cylinder Zone 1 Temp.	160 - 170	°C	
Cylinder Zone 4 Temp. 170 - 190 °C  Die Temperature 190 - 220 °C  Extrusion instructions	Cylinder Zone 2 Temp.	170 - 180	°C	
Die Temperature 190 - 220 °C  Extrusion instructions	Cylinder Zone 3 Temp.	170 - 190	°C	
Extrusion instructions	Cylinder Zone 4 Temp.	170 - 190	°C	
	Die Temperature	190 - 220	°C	
L/D: >25Compression ratio: 3:1 to 2.5 : 1Head: 200 to 210°CScrew: 70°C to 90 °C	Extrusion instructions			
	L/D: >25Compression ratio: 3:1 to 2.5	5 : 1Head: 200 to 210°CScrew: 70°C t	o 90 °C	

1. ITN-ZP 300CH 3-5-5/d

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