

## TABOREX TA 1108 HD NSF

**A chemically-crosslinkable HDPE compound for the production of flexible pipes with an improved surface quality for domestic hot and cold water, under floor heating and central heating application.**

### Product Description:

TABOREX TA 1108 HD NSF is a crosslinkable compound made by Silane grafted ethylene polymer. This graft polymer constitutes together with a TABOREX Masterbatch containing the crosslinking catalyst a "SIOPLAS-SYSTEM". Pipes which are produced with the SILON grade TABOREX TA 1108 HD NSF fulfil the requirements of ASTM F876, CSA 137.5, EN ISO 15875, BS 7291, NSF/ANSI 14, NSF/ANSI 61 and all related standards.

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

### Physical Properties:

Properties	Test method	Typical Value	Units
Density	ISO 1183-1	0.943	g/cm <sup>3</sup>
Bulk density	ISO 60	0.52	g/cm <sup>3</sup>
Melt Flow index (190°C/5 kg)	ISO 1133 / ASTM D 1238	2.7	g/10 min
Volatile level	ITN-ZP 300CH 3-5-5 / ČSN 640311	<0.25	%
Moisture (water)	ISO 15512	<0.02	%
Tensile strength at break	ISO 527	21	MPa
Elongation at break	ISO 527	550	%
Gel content	ISO 10147	75	%

The above details are given to the best of our knowledge and experience but are only meant as suggestions without obligation. Existing third party patent rights must be observed.



## Processing of TABOREX TA 1108 HD NSF

**Extruder:** TABOREX TA 1108 HD NSF can be processed on standard thermoplastic extruders without problems. Particularly if the available screw is designed for Polyethylene excellent products can be expected.

**Screw Parameters:** L/D: >25  
Compression ratio: 2.5 - 3 : 1

**Temperature Profile:** Zone 1: 160 °C – 170 °C  
Zone 2: 170 °C – 180 °C  
Zone 3: 170 °C – 190 °C  
Zone 4: 170 °C – 190 °C  
Head 200 °C – 210 °C  
Die 190 °C – 220 °C  
Screw\* 70 °C – 90 °C

\*The thermostatic control of the screw improves processing results.

### Recommendation for optimal extrusion conditions:

- Pre-drying of foreign masterbatches e.g. colour, PPA and others. Drying has to be done preferably with dried air. Residual moisture of the added masterbatches must not exceed 0.02%.
- Material preconditioning to ambient temperature before the package opening is necessary, to avoid moisture condensation on the pellet surface.
- Use screw suitable for PE-HD (3-zone or barrier screw).
- Head and tools should be designed allowing streamlined flow avoiding stagnation of the material.
- In case of line stop longer than 10 - 15 minutes: Before restarting purge with standard HDPE (MFI: 0.3 g/10 min.)

### Crosslinking Cure:

The following methods are recommended:

- Autoclave using saturated steam at 100-115°C (optimal method)
- By immersion in hot water at 80°C - 95°C
- Exposure to low pressure steam

The period required to obtain the final gel content depends on the wall thickness and the temperature. The exposure times are in the range of 4 - 8 hours.

### Storage:

TABOREX TA 1108 HD NSF has a shelf life of nine months from the production date printed on the packaging. The packages should be opened only before processing; exposure to direct sun radiation must be avoided. After opening the bags of the product must be used within 3 - 4 hours.

### Packaging:

Boxes of 600 kg containing a moisture resistant multilayer lining

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