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## **PERFORMIX 1858**

For the production of PE-Xb pipes by Monosil or other single-step extrusion process

### **Introduction**

PERFORMIX 1858 is a multi-component formulation, containing suitable silane, peroxide and catalyst, for the manufacturing of PE-Xb pipes using the Monosil or other single-step extrusion process.

PERFORMIX 1858 should be used with a suitable base polyethylene (HDPE or MDPE). It may require a stabilizer masterbatch in conjunction with the chosen polyethylene. Pipes extruded may meet following specifications:

- DIN 16892 (Rohre aus vernetztem Polyethylen)
- EN (155 WI 023)

The extruded pipes may be used for under-floor heating, hot water pipes for radiators, Sanitary and drinking water distribution etc.

Key advantages of PERFORMIX 1858 are;

- Cost effective,
- Does not affect the odor and taste of water carried by the pipes
- Excellent processibility

### **Typical Properties and Recommended Dosage**

Form : Low viscosity liquid  
Color : Light yellow / straw  
Viscosity : < 10 cP  
S.G. : 0.965 -0.975  
Dosage : 1.8 – 2.2% by weight of base resin

### **Processing – Pipe extrusion**

PERFORMIX 1858 is suggested to be processed at the following temperature (in °C) ;

Feed : 170 – 180  
Compression : 185 – 195  
Metering : 210 – 220  
Die : 220 – 230  
Screw : 140

Base polyethylene should contain no more than 200 ppm of moisture. For optimal results, pre-drying of base polyethylene may be required at 70°C for 4 hours.

Various grades of HDPE or MDPE may be used. Polyethylene with melt index of 0.2 – 8.0 (g/10 mins at 190°C / 2.16kg) with density of 0.945-0.955 (g/cm<sup>3</sup>) are suitable. Best results may be achieved using polyethylene with melt index of 4 – 6 with density of 0.950.

It is recommended that any color masterbatches, especially carbon black masterbatches, be thoroughly dried at 60-70°C for 4 hours before use.

The extruded pipes need to undergo a post extrusion curing process to complete the crosslinking. Curing time depends on quantity of moisture, temperature and thickness of insulation. Suggested curing media & conditions are;

Hot water	: 80 - 90 °C
Steam	: 100 - 105 °C

### **European Food Contact Regulations**

The components used in PERFORMIX 1858 are listed / complies to ;

- Ref PM Nr 26328 in the EU Directive 90/128/EEC - plastics for use as food contact, with a max permitted quantity of 'residual' silane of 5 mg/kg,
- BgVV, Section XLVI - that allows specific ingredients for food-contact applications in crosslinked PE, with the restriction that the total amount of decomposition products in the final resin/product does not exceed 0.2%,
- KTW-recommendation 1.3.17 – the migration of Sn in drinking water is lower than 5 µg Sn/dm<sup>2</sup>. The max concentration of Sn in the PE should be <0.08 %.

All components of PERFORMIX 1858 are allowed as ingredients in plastics for drinking water use in Germany.

### **Packaging, Handling and Shelf Life**

The product is packed in 200L steel drum. Product should be stored in cool and dry conditions. Ensure that



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the content do not comes into contact with water or excessive moisture.

To ensure maximum storage period for opened drums, caps must be closed tightly after every time drums are opened. Prolonged storage above 65°C may cause deterioration of the product.

Under normal storage conditions, the shelf-life for unopened drum is 2 years.

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