Polidan® PNT 0555/06

Crosslinked Polyethylene

Solvay Specialty Polymers

Message:

POLIDAN® PNT 0555/06 is a silane crosslinkable PE compound which is used together with a catalyst masterbatch to accelerate the crosslinking reaction. It is used for flexible crosslinkable pipes.
Applications
POLIDAN® PNT 0555/06 is used for the production of pipes for domestic hot and cold water supply as well as underfloor hating This compound is designed for both mono layer and composite pipe solutions.

General Information	
Features	Crosslinkable Good flexibility
Uses	Pipe components Piping system
Processing Method	Pipeline extrusion molding Extrusion

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.940	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.6	g/10 min	ISO 1133
Gel content-Crosslinking level	> 65	%	EN 579
Head Temperature	200	°C	
Extruder Screw L/D Ratio	25:1 ~ 30:1		
Extruder Screw Compression Ratio	>2.5:1		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	570	MPa	ISO 527-2
Tensile Strength	> 20.0	MPa	ASTM D638
Tensile Elongation (Break)	> 350	%	ASTM D638
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	126	°C	ASTM D1525
Specific Heat (23°C)	2030	J/kg/°C	ISO 11357
Thermal Conductivity [1] (23°C)	0.45 - 0.47	W/m/K	Internal method
Additional Information			

Above values are typical averages obtained from 18 x 2 mm mono layer pipe specimens which are extruded with 95 parts of POLIDAN® PNT 0555/06 and 5 parts of CATALYST PS/4. These pipe specimens are cured by immersion in hot water at 95°C for 6 hours time.Storage and Handling
In order to avoid pre-mature crosslinking, the silane crosslinkable compound and the catalyst masterbatch shall be stored separately and mixed only when used. The silane crosslinkable compound shall be used within 6 - 8 hours after bags are opened.
The product shall be stored under the following conditions:
Closed and unbroken bags
Ambient temperature not exceeding 40°C
Indoor in order to avoid direct exposure to sunlight
The product could undergo alterations due to extended period of storage. Solvay Specialty Polymers suggests the product use within six months from the production date printed on the packaging. Solvay Specialty Polymers accepts no liability of any kind in case the above mentioned conditions are not fulfilled.
Packaging
POLIDAN® PNT 0555/06 is supplied in 500 kg octabins which contain a single moisture resistant bag or in 25 kg moisture resistant bags placed on 1375 kg pallets.
Technical Service
POLIDAN® PNT 0555/06 is part of the Solvay Specialty Polymers POLIDAN® PEX System product range. Solvay Specialty Polymers Technical Service is available to assist customers with further information and advice including the start-up and also for any eventual necessity during the use of the product.

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	150 - 200	°C
Cylinder Zone 2 Temp.	150 - 200	°C
Cylinder Zone 3 Temp.	150 - 200	°C
Cylinder Zone 4 Temp.	150 - 200	°C
Cylinder Zone 5 Temp.	150 - 200	°C
Die Temperature	210	°C

Extrusion instructions

Processing Guidelines
The silane crosslinkable compound POLIDAN® PNT 0555/06 shall be used together with a Solvay Specialty Polymers catalyst masterbatch in the ratio of 95 to 5 parts respectively. Mixing shall be done just before extrusion or during the extrusion process with the use of automatic feeders. POLIDAN® PNT 0555/06 can be processed with modern PE single screw extruders.
Curing
The final pipe properties are curing dependent.
Curing can be done in the following ways:
by immersion in hot water at 90-95°C
by circulation of hot water inside the pipe at 90-95°C
by exposure to steam
In all cases curing time depends on the pipe wall thickness, pipe structure and applied curing temperature.
Colouring
POLIDAN® compounds and catalyst masterbatches can be used together with good quality PE based colour masterbatches. Solvay Specialty Polymers suggests pre-drying all colour masterbatches prior to use.

NOTE

1.	Hot Plate Method

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


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