AEI SX744:CM488

Medium Density Polyethylene

AEI Compounds Limited

Message:

Silane crosslinkable medium density polyethylene for high temperature pressure pipes
Material SX744 is a silane grafted MDPE compound, curable by exposure to moist conditions, and possessing good extrusion properties at high output rates. The graft component SX744 is mixed with a crosslinking catalyst masterbatch CM488 generally in the ratio 95:5.
The highly crosslinked materials produced by the two-component system possess excellent impact strength, ESCR, creep and internal pressure resistance under ambient and elevated temperature conditions.
These materials have been formulated for hot and cold water pressure pipes and are easily extrudable on conventional polyethylene extrusion lines.

General Information	
Features	High ESCR (Stress Cracking Resistance) Impact resistance, high Crosslinkable Good creep resistance
Uses	Piping system
Agency Ratings	DIN 16892 EC 1907/2006 (REACH)
RoHS Compliance	RoHS compliance
Forms	Particle
Processing Method	Pipeline extrusion molding Extrusion

Physical	Nominal Value	Unit	Test Method
Density	0.941	g/cm³	BS 2782 620A
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.3	g/10 min	Internal method
Gel Content	72	%	ASTM D2765
Thermoset [1]			IEC 60811-2-1
Elongation under load, 20N/cm² : 200°C	55	%	IEC 60811-2-1
Permanent elongation after cooling	0.0	%	IEC 60811-2-1
Head Temperature	200	°C	
Extruder Screw L/D Ratio	20.0:1 to 25.0:1		
Extruder Screw Compression Ratio	2.5:1 to 3.0:1		

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus - 1% Secant	650	MPa	BS 2782 320A
Tensile Stress	24.0	MPa	IEC 60811-1-1
Tensile Strain (Break)	550	%	IEC 60811-1-1

Additional Information

Crosslinking or cure: If properly processed the material has the capacity of crosslinking under ambient conditions.Should accelerated cure times be required, then any of the following methods may be employed.
Immersion in water at 80°C
Flushing with water at 80°C
Exposure to steam at 90°C (as in a sauna)

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	140	°C
Cylinder Zone 2 Temp.	160	°C
Cylinder Zone 3 Temp.	175	°C
Cylinder Zone 4 Temp.	190	°C
Die Temperature	200	°C

NOTE	
1.	Cure assessment by hot set test (forced cured at 80°C in water)

Recommended distributors for this material

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