TECHNICAL INFORMATION

Polidiemme® G/420

XL Elastomer

padanaplast®
EXCELLENCE IN COMPOUNDING

Product description

Elastomer based compound, moisture curable by addition of a catalyst masterbatch (Sioplas® method). This material complies with RoHS requirements.
Application: W&C insulation and sheathing

Standard complying

EN 50363-0 G7; EN 50363-1 EI7 and EI8; EN 50363-2 EM6; BS 7655 GP4, GP5, GP6 and GP7; EN 60092/360 EPR and HEPR Cenelec HD 603 DIH1, DIH2 and DIH3; IEC 60502 EPR and HEPR; VDE 0207/20 3GI3.

Availability

Africa & Middle East, Asia Pacific, Europe, Latin America, North America

Verify commercial availability and registration status in each country with local sales representative

Typical properties(1)	nominal value	unit	test method
Physical			
Density at 23°C	0.910	g/cm^3	ASTM D792
Melt Flow Index, 190°C/2.16 kg(2)	1.3	g/10'	internal method
Water absorption 24h at 100°C	1.00	mg/cm^2	EN 60811
IRHD Hardness	91	-	ISO 48
Hardness, Shore A	90	-	ISO 868
Hardness, Shore D	32	-	
Mechanical			
Tensile Modulus at 150% of elongation	7.0	MPa	
Tensile Strength at break	20.5	MPa	EN 60811
Tensile Elongation at break	470	%	
Thermal			
Hot Set Test at 250°C, 20 N/cm^2			
elongation under load	50	%	EN 60811
permanent elongation	0	%	
Ageing			
Bending test in Air Oven 150°C 240h on untinned copper	no cracks	-	EN 60811
Mechanical properties after ageing in Air Oven, 150°C/168 hours			
change in Tensile Strength	+10	%	EN 60811
change in Tensile Elongation	+5	%	
Mechanical properties after ageing in Air Bomb, 0.55 MPa, 127°C/40 hours			
change in Tensile Strength	+16	%	EN 60811
change in Tensile Elongation	+7	%	

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	nominal value	unit	test method
Electrical			
Volume Resistivity at 20°C	4.1 E+15	Ω x cm	IEC 60502
Volume Resistivity at 90°C	1.3 E+15	Ω x cm	
Insulation Resistance Constant at 20°C	15000	MΩ x km	IEC 60502
Insulation Resistance Constant at 90°C	5000	MΩ x km	
Dielectric Strength	39	kV/mm	ASTM D149
Dielectric constant (1kHz)	2.3	-	ASTM D150
Dissipation Factor (1kHz)	8.0 E-4	-	ASTM D150

Notes:

(1) Typical properties are not to be construed as specification. Tests reported are performed on pressed or extruded specimens, added with 5% of Catalyst Masterbatch CT/1 and crosslinked in hot water at 95°C for 2 hours

(2) Test performed without Catalyst Masterbatch addition

Additional information

The product must be stored under the following conditions:
- closed and undamaged bags
- ambient temperature not exceeding 30°C
- avoid direct exposure to sunlight and weathering

Product alterations could occur due to extended period of storage; shelf life: 9 months

Padanaplast S.r.l accepts no liability of any kind in case the above mentioned conditions are not fulfilled

Packaging
- 25 kg moisture-resistant bags on 1375 kg pallet
- 500 kg carton box

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Processing information

Extruder temperature setting:	
barrel zone 1	140 to 160 °C
barrel zone 2	150 to 170 °C
barrel zone 3	160 to 180 °C
barrel zone 4	170 to 190 °C
collar	170 to 190 °C
crosshead	170 to 190 °C
die	180 to 220 °C

Extrusion notes:

Processing
Polidiemme® G/420 pregrafted base must be added with Catalyst Masterbatch CT/1 at 5% by weight to promote curing. Other Catalyst Masterbatch grades can be used accordingly to information given in the specific technical literature. Blending must be done just before using (2-3 hours max.). Catalyst Masterbatch doesn't need any predrying if stored in dry conditions in the original closed bags; in case, predrying can be made at 50-60°C for 4-8 hours
Polidiemme® G grades are sensitive to moisture; open bags must be used within 4 hours. Polidiemme® G grades must be not predried in any case.

Extrusion equipment
- standard PVC extruders with single or double flight screw (20 to 30 L/D ratio) are suggested.
- don't use screw thermoregulation
- filter net: normally not necessary
- compression or semi-compression tools are suggested

Coloring
- EVA or PE based color masterbatches added at 0.6-1.0% by weight are suggested; in order to prevent precrosslinking during processing, colour masterbatch should be predried (4-6 hours at 50-60°C)

Curing
- by immersion in hot water at 60-70°C
- by exposure in ambient, crosslinking time depends on ambient temperature and relative humidity
- in all cases curing time depends on insulation thickness; for 0.7-1.2 mm wall thickness 3-6 hours are generally necessary in case of force curing in hot water

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

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