



Product description

Medium density polyethylene base 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⁽¹⁾

Cenelec EN 50363-1 EI4; DVGW (W270, KTW-A).

⁽¹⁾ refer to the current standard version, valid on the date of this document release

Availability

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	0.90	g/cm ³	ASTM D792
Melt Flow Index, 190°C/2.16 kg ⁽²⁾	0.40	g/10'	internal method
Hardness, Shore A	95	-	ISO 868
Hardness, Shore D	40	-	
Mechanical			
Tensile Strength at break	24	MPa	EN 60811
Tensile Elongation at break	480	%	
Thermal			
Hot Set Test at 200°C, 20 N/cm ²			
elongation under load	70	%	EN 60811
permanent elongation	0	%	
Ageing			
Bending test in Air Oven 100°C 240h on untinned copper	no cracks		EN 60811
Mechanical properties after ageing in Air Oven, 135°C/168 hours			
change in Tensile Strength	-10	%	EN 60811
change in Tensile Elongation	-15	%	
Mechanical properties after ageing in Air Oven, 100°C/336 hours			
change in Tensile Strength	-17	%	EN 60811
change in Tensile Elongation	-5	%	
Mechanical properties after ageing in Air Bomb, 127°C/40 hs, 0.55 MPa			
change in Tensile Strength	+6	%	EN 60811
change in Tensile Elongation	+10	%	

	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	6.0 E+13	Ω x cm	
Insulation Resistance Constant at 20°C	15000	MΩ x km	IEC 60502
Insulation Resistance Constant at 90°C	200	MΩ x km	

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/0552-09 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 octabin box

Processing information

Extruder temperature setting:

barrel zone 1	140 to 150 °C
barrel zone 2	150 to 170 °C
barrel zone 3	160 to 190 °C
barrel zone 4	170 to 190 °C
collar	170 to 200 °C
crosshead	170 to 200 °C
die	170 to 220 °C

Extrusion notes:

Processing

Polidan® PNT 0553/23 pregrafted base must be added with Catalyst Masterbatch CT/0552-09 at 5% by weight to promote curing. 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

Polidan® PNT grades are sensitive to moisture; open bags must be used within 4 hours. Polidan® PNT 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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