



# POLIDIEMME<sup>®</sup> G/450

**Extra-flexible elastomer based compound, crosslinkable by exposure to moisture for power cable insulation and sheathing**

**description** elastomer based compound crosslinkable by moisture, consisting of a silane pregrafted base compound to be used with a catalyst masterbatch (Sioplas method)

**standard complying** Cenelec HD 22.1 EI4, EI6, EI7 and EM3; IEC 60502 EPR; IEC 60092/351 EPR; BS 7655 RS5 and GP7

**physical properties**

	typical value	test method
density @23°C (g/cm <sup>3</sup> ):	0.87	ASTM D 792
shore D hardness:	16	ISO R 868
M.F.I. @190°C/2.16 kg (g/10')	1.1	Padanaplast
unaged mechanical properties - tensile strength (N/mm <sup>2</sup> ): - elongation at break (%):	7.7 400	IEC 60811
mechanical properties after ageing in air oven, 168 hours @135°C - variation on tensile strength (%): - variation on elongation at break (%):	+20 +12	
mechanical properties after ageing in air oven, 336 hours @100°C - variation on tensile strength (%): - variation on elongation at break (%):	+10 -16	
mechanical properties after ageing in air bomb, 40 hours @127°C, 0.55 MPa - variation on tensile strength (%): - variation on elongation at break (%):	+12 -8	
hot set test @200°C, 20 N/cm <sup>2</sup> - elongation under load (%): - permanent elongation after cooling (%):	40 0	
hot set test @250°C, 20 N/cm <sup>2</sup> - elongation under load (%): - permanent elongation after cooling (%):	50 0	
water absorption, 336 hours @85°C (mg/cm <sup>2</sup> ):	0.66	
water absorption, 24 hours @100°C (mg/cm <sup>2</sup> ):	0.42	

**electrical properties**

		typical value	test method
volume resistivity (Ω x cm):	@20°C:	4.1 x 10 <sup>15</sup>	IEC 60502
	@90°C:	1.4 x 10 <sup>14</sup>	
insulation constant (MΩ x km):	@20°C:	15000	
	@90°C:	500	

tests made on pressed or extruded specimens, added with 3% of Catalyst CT/1 and crosslinked in hot water

**processing** POLIDIEMME® G/450 pregrafted base must be added with Catalyst CT/1 masterbatch to promote curing. Catalyst dosage is 3% by weight and blending must be done just before using (2-3 hours max.), preferably in the extruder hopper. Catalyst doesn't any predrying.

The pregrafted base compound is sensible to moisture; open bags must be used within few hours.

**extrusion equipment** Standard PVC extruders and single or double flight screw, having a L/D ratio of 20+30 and an adequate barrel thermoregulation; longer screws may require a reduced dosage of Catalyst. Screw cooling not required. Filter net: 80-160 mesh/cm<sup>2</sup>. Compression tools suggested.

**temperature setting**

	zone 1	zone 2	zone 3	zone 4	collar	head	die
max (°C)	140	150	160	170	170	170	170
min (°C)	120	120	130	140	140	140	140

**curing**

- by immersion in hot water at 60-70°C
- by exposure to low pressure steam (about 0.15 bar)
- by exposure in ambient at 10-30°C for some days

In all cases curing time depends on insulation thickness; for 0.7-1.2 mm wall thickness 2-4 hours are generally necessary in case of forced curing in hot water and 8-12 hours in case of curing in steam room; in case of self curing, time depends also on the specific ambient conditions.

**colouring** PE based masterbatches added at 0.6-1% (approx.) by weight; predrying of colour masterbatch is suggested if moisture absorption occurred during storage (4-6 hours at 70-80°C).

**storage** The product should be stored under the following conditions:

- closed and unbroken bags
- ambient temperature not exceeding 30°C
- avoid direct exposure to sunlight and weathering

Product alterations could occur due to extended period of storage. Its use within six months from the production date is suggested.

Solvay Padanaplast S.p.A. accepts no liability of any kind in case the above mentioned conditions are not fulfilled.

**packaging** 20 kg moisture-resistant bags on 1100 kg pallet.

**contact** Solvay Padanaplast S.p.A. - Via Paganina 3 - 43010 Roccabianca (Parma) - ITALY  
phone: +39-0521-5291  
fax: +39-0521-870427  
e-mail: info.padanaplast@solvay.com  
http: www.padanaplast.com

**disclaimer** The data and numerical results contained in this document are provided for the sake of general information and are given in good faith. They reflect the state of our knowledge at the time of publication. Because the possibilities and application conditions of our product are many and varied, and lie beyond our control, we can in no event be held responsible if all the necessary information on planned applications have not been formally brought to our attention. The information presented here cannot be considered as a suggestion to use our products without taking into account existing patents, or legal provisions or regulations, whether national or local. The purchaser is obliged to verify whether the possession, use or marketing of our products is subject within his territory to particular rules, especially with respect to public health, hygiene and worker and/or consumer safety. The purchaser alone assumes the duties of information and advice for the ultimate user. Specifications reported on this datasheet can not be used as reference values in a technical or sales contract. Padanaplast can in no event be held responsible for a possible failure on the part of the purchaser to respect these regulations, provisions and duties. This document replaces all previously published on this product.

Solvay  
Padanaplast



a Passion for Progress®