



COGEGUM[®] AFR/960

Thermoplastic halogen-free fire retardant, oil, fuel and fluid resistant compound for sheathing and insulation of power, signal and control cables

description

Polyolefinic based thermoplastic compound containing a fire retardant system that contributes to give the cable self-extinguish properties without halogenidric acids evolution; furthermore, toxic and corrosive gases emission and smoke generation are particularly reduced. These characteristics make this compound suitable in all applications where the fire behaviour of cable materials is one of the main concerns to be considered in establishing a high safety level in public places. This material complies with RoHS requirements.

standard complying

Cenelec HD 624.7 S1; Cenelec HD 624.6 S1; EN 50363-8 TM7; EN 50363-7 TI6, TI7; EN 50636-0 M1, M9; UNE 21123-4; VDE 0207-24 HM2, HM4, HM5, HJ2; BS 6724; BS 7655 LTS1, LTS2, LTS3, LTS4; CEI 46.29; CEI 46.34; IEC 60092 SHF1; IEC 60502-1 ST8; NF C 32062-1; NF C 32062-2

physical properties

	typical value	test method
density @23°C (g/cm ³):	1.44	ASTM D 792
shore D hardness:	50	ISO R 868
M.F.I. @190°C/21.6 kg (g/10')	4.5	Padanaplast
unaged mechanical properties - tensile strength (N/mm ²): - elongation at break (%):	12.5 200	IEC 60811
mechanical properties after ageing in air oven, 168 hours @110°C - variation on tensile strength (%): - variation on elongation at break (%):	+ 4 - 13	
mechanical properties after ageing in air oven, 168 hours @121°C - variation on tensile strength (%): - variation on elongation at break (%):	+ 9 - 18	
IRM 902 oil immersion test, 168 hours @100°C - variation on tensile strength (%): - variation on elongation at break (%):	- 28 - 8	
IRM 903 fuel immersion test, 168 hours @70°C - variation on tensile strength (%): - variation on elongation at break (%):	- 6 - 6	
water immersion test, 168 hours @70°C - variation on tensile strength (%): - variation on elongation at break (%):	- 10 + 1	
1N HCl solution immersion test, 168 hours @23°C - variation on tensile strength (%): - variation on elongation at break (%):	- 17 - 20	
1N NaOH solution immersion test, 168 hours @23°C - variation on tensile strength (%): - variation on elongation at break (%):	- 13 - 24	
hydrocarbons immersion test, 4 hours @25°C - variation on tensile strength (%): - variation on elongation at break (%):	- 10 - 1	
hot pressure test at 100°C, max. penetration (%):	< 50	
heat shock test at 150°C:	pass	
cold bend at -25°C:	pass	
cold impact at -25°C:	pass	
water absorption, 24 hours @100°C (mg/cm ²):	1.2	

electrical properties

		typical value	test method
volume resistivity (Ω x cm):	@20°C:	1.0 x 10 ¹⁵	IEC 60502
	@90°C:	2.7 x 10 ¹⁴	
insulation constant (MΩ x km):	@20°C:	4000	
	@90°C:	1000	
tests made on pressed or extruded specimens			

burning properties

	typical value	test method
oxygen index (% O ₂):	30	ASTM D 2863
temperature index (°C):	280	NES 715
halogenidric acid emission (% HCl):	< 0.1	IEC 60754-1
corrosivity of gases evolved	pH:	> 4.3
	conductivity (µS/mm):	< 10

tests made on pressed or extruded specimens

extrusion equipment

Standard extruders for thermoplastics equipped with low compression screw (1:1.2-1.4 compression ratio and 20-25 L/D ratio are suggested), and an adequate barrel thermoregulation. Screw cooling is not required.

Filter net: not necessary; in case, use 40-80 mesh/cm² max. Anyway the use of the breaker plate is advisable, in particular using low compression screws.

temperature setting

	zone 1	zone 2	zone 3	zone 4	collar	head	die
max (°C)	160	170	180	180	180	190	200
min (°C)	140	150	160	170	170	180	180

colouring

EVA based masterbatches added at 1.2-1.5% (approx.) by weight; predrying of colour masterbatch is suggested if moisture absorption occurred during storage (4-6 hours at 60-70°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

25 kg moisture-resistant bags on 1250 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®