

## Solvay Specialty Polymers Cogegum® AFR/960 Polyolefin, Unspecified (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Polyolefin

### Material Notes:

Cogegum® HFFR -Halogen Free Fire Retardant compound Polyolefin 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 behavior 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 - EN 50363-0 M1, M9; EN 50363-7 T16, T17; IEC 60502-1 ST8; Cenelec HD 624.7 S1; Cenelec HD 624.6 S1; VDE 0207 HM2, HM4, HM5, HJ2; BS 7655 LTS2; IEC 60092 SHF1; UNE 21123-4

Additional Information: Tests reported are performed on pressed or extruded specimens Coloring - EVA or PE based masterbatches added at 1.2-1.5% by weight; in order to avoid scotching problems during processing, predrying of colour masterbatch is suggested if moisture absorption occurred during storage (4-6 hours at 50-60°C). Storage - The product must be stored under the following conditions: -- closed and undamaged bags -- ambient temperature not exceeding 35°C -- avoid direct exposure to sunlight and weathering - Product alterations could occur due to extended period of storage - Shelf life: 12 months - Solvay Specialty Polymers 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 - 1000 kg carton box

Extrusion Notes: 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 - don't use screw thermoregulation - filter net: not necessary; in case, use 40-80 mesh/cm<sup>2</sup> max. Anyway the use of the breaker plate is advisable, in particular using low compression screws

Information provided by Solvay Specialty Polymers.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Cogegum-AFR960-Polyolefin-Unspecified-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Cogegum-AFR960-Polyolefin-Unspecified-nbspUnverified-Data.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.44 g/cc	1.44 g/cc	ASTM D792
ESCR 10% Igepal®	>= 1000 hour @Thickness 3.00 mm, Temperature 50.0 °C	>= 1000 hour @Thickness 0.118 in, Temperature 122 °F	Condition A, Compression Molded; ASTM D1693
Melt Flow	4.5 g/10 min @Load 21.6 kg, Temperature 190 °C	4.5 g/10 min @Load 47.6 lb, Temperature 374 °F	Internal Method

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50	50	ISO 868
Tensile Strength at Break	12.5 MPa	1810 psi	IEC 60811
Elongation at Break	200 %	200 %	IEC 60811

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	280 °C	536 °F	Temperature Index (Burning); NES 715
Oxygen Index	30 %	30 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.70e+14 ohm-cm	2.70e+14 ohm-cm	IEC 60502
	@Temperature 90.0 °C	@Temperature 194 °F	
	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60502
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Insulation Resistivity	1000 Megaohm/1000 m	3280 Megaohm/1000 ft	IEC 60502
	@Temperature 90.0 °C	@Temperature 194 °F	
	4000 Megaohm/1000 m	13100 Megaohm/1000 ft	IEC 60502
	@Temperature 20.0 °C	@Temperature 68.0 °F	

Processing Properties	Metric	English	Comments
Processing Temperature	170 - 180 °C	338 - 356 °F	Collar Temperature
Zone 1	140 - 160 °C	284 - 320 °F	
Zone 2	150 - 170 °C	302 - 338 °F	
Zone 3	160 - 180 °C	320 - 356 °F	
Zone 4	170 - 180 °C	338 - 356 °F	
Die Temperature	180 - 200 °C	356 - 392 °F	
Head Temperature	180 - 190 °C	356 - 374 °F	

Descriptive Properties	Value	Comments
1N HCl Solution Immersion Test, 23°C, 168 hr	-17% Change in Tensile Strength	IEC 60811
	-20% Change in Tensile Elongation	IEC 60811
1N NaOH Solution Immersion Test, 23°C, 168 hr	-13% Change in Tensile Strength	IEC 60811
	-24% Change in Tensile Elongation	IEC 60811

Descriptive Properties	Value	Comments
	Europe	
	North America	
Bending Test	Pass	-25°C; IEC 60811
Calorific Potential	17.5 MJ/kg	ISO 1716; Upper (gross)
Cold Impact	Pass	IEC 60811; -25°C
Corrosive Gas in Smoke	< 10.0 µS/mm	Conductivity IEC 60754-2
	pH > 4.30	
Features	Flame Retardant	
	Halogen Free	
	Low Smoke Emission	
	Low Toxicity	
	Self Extinguishing	
Generic	Polyolefin, Unspecified	
Halogenidric Acid Emissions	< 0.10%	
Heat Shock	Pass	IEC 60811; 150°C
Hot Pressure Test	< 50%	90°C; max penetration, K=0.6; IEC 60811
Hydrocarbons Immersion Test, 25°C, 4 hr	-1	CEI 20-34/0-1; % Change in Tensile Elongation
	-10	CEI 20-34/0-1; % Change in Tensile Strength
IRM 902 Oil Immersion Test, 100°C, 168 hr	-28	IEC 60811, %Change in Tensile Strength
	-8	IEC 60811, %Change in Tensile Elongation
IRM 903 Oil Immersion Test, 70°C, 168 hr	-6	IEC 60811, %Change in Tensile Elongation
	-6	IEC 60811, %Change in Tensile Strength
Mechanical Properties After Aging in Air Oven, 110°C, 168 hr	-13	IEC 60811, %Change in Tensile Elongation
	4	IEC 60811, %Change in Tensile Strength
Mechanical Properties After Aging in Air Oven, 121°C, 168 hr	-18	IEC 60811, %Change in Tensile Elongation

Descriptive Properties	Value	IEC 60811 %Change in Tensile Strength Comments
RoHS Compliance	RoHS Compliant	
Uses	Cable Jacketing	
	Low Voltage Insulation	
	Wire & Cable Applications	
Water Absorption (mg/cm <sup>2</sup> )	1.2	100°C; 24 hr; IEC 60811

## Contact Songhan Plastic Technology Co.,Ltd.

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