Cogegum® AFR/765-UV

Polyolefin

Solvay Specialty Polymers

Message:

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; EN 50363-7 TI6, TI7; 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

General Information	
Features	Low smoke Low toxicity Good UV resistance Halogen-free Self-extinguishing Flame retardancy
Uses	Low voltage insulation Cable sheath Wire and cable applications
RoHS Compliance	RoHS compliance

Physical	Nominal Value	Unit	Test Method
Specific Gravity [1]	1.52	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)	5.1	g/10 min	Internal method
Water absorption rate-24 hours(100°C)	2.20	mg/cm²	IEC 60811
Cold shock (-25°C)	Pass		IEC 60811
Thermal shock (150°C)	Pass		IEC 60811
Hot pressing test-Maximum permeability, K = 0.6(90°C)		%	IEC 60811
Bending test (-25°C)	Pass		IEC 60811
Insulation resistance constant			IEC 60502
20°C	800	Mohms·km	IEC 60502
70°C	10	Mohms·km	IEC 60502
Halogen-containing acid emission		%	IEC 60754-1
Latent heat energy-High (Total)	15.7	MJ/kg	ISO 1716
Temperature Index (Combustion)	300	°C	NES 715
Corrosive gases in flue gas			IEC 60754-2

pH	> 4.30		IEC 60754-2
Conductivity		µS/mm	IEC 60754-2
Ring temperature	150 - 170	°C	
Head Temperature	150 - 170	°C	
Environmental Stress-Cracking Resistance (condition a, 50°C, 3.00mm, 10% Igepal, molding)	> 1000	hr	ASTM D1693
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	53		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (Break)	12.3	MPa	IEC 60811
Tensile Elongation (Break)	190	%	IEC 60811
Aging	**Nominal Value**	**Unit**	**Test Method**
Changes in mechanical properties after hot air aging test, 110°C, 168 hr			IEC 60811
Tensile strength change	5	%	IEC 60811
Change in tensile elongation	-12	%	IEC 60811
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity			IEC 60502
20°C	2.2E+14	ohms·cm	IEC 60502
70°C	2.6E+12	ohms·cm	IEC 60502
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	39	%	ASTM D2863
Chemical Resistance	**Nominal Value**	**Unit**	**Test Method**
SAE 20 Oil Impregnation Test, 70°C, 4 hr			IEC 60811
Tensile strength change	-10	%	IEC 60811
Change in tensile elongation	5	%	IEC 60811
UV/VIS radiation exposure test, 65°C, 750 hr [2]			ISO 4892-2/A
Tensile strength change	5	%	ISO 4892-2/A
Change in tensile elongation	6	%	ISO 4892-2/A
Hydrocarbon impregnation test, 25°C, 4 hr			CEI 20-34/0-1
Tensile strength change	-13	%	CEI 20-34/0-1
Change in tensile elongation	16	%	CEI 20-34/0-1
Additional Information			

Tests reported are performed on pressed or extruded specimensColoring
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	Nominal Value	Unit
Cylinder Zone 1 Temp.	130 - 150	°C
Cylinder Zone 2 Temp.	130 - 160	°C
Cylinder Zone 3 Temp.	140 - 160	°C
Cylinder Zone 4 Temp.	140 - 160	°C
Die Temperature	150 - 180	°C

Extrusion instructions

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^2 max. Anyway the use of the breaker plate is advisable, in particular using low compression screws

NOTE	
1.	23°C
2.	R. h. 50%, at 340 nm, radiation 0.51W/(mnm)

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China