Lucofin® 7410 HFFR

Polyolefin

Lucobit AG

Message:

Product description

Lucofin[®] 7410 HFFR is a thermoplastic, halogen free flame retardant and low smoke compound for the insulation and/or sheating of cables. Lucofin[®] 7410 HFFR combines good extrusion properties with flame retardancy.

The properties of Lucofin® 7410 HFFR are in compliance with VDE 0207 part 24(HM 2/4), VDE 0207 part 23 (HJ2), BS 6724 as well as other power and telecom standards.

Applications and markets

Target markets include -among others- power and telecom cables as well as construction and optical fiber cables. Lucofin® 7410 HFFR is designed in order to avoid both smoke and corrosive gases in case of a fire. Cables in trains, ships, tunnels, office buildings, public houses and off-shore installations are only some examples.

Due to its low water absorption, excellent low temperature properties and good ageing resistance Lucofin® 7410 HFFR is specifically suited for the following applications:

Cables in wet areas Ships and marine Outdoor Channels Off-shore Cables in cold areas Regions with harsh winters Refrigerated rooms Outdoor Snowy/icy conditions Cables in hot areas Regions with long summers Outdoor Areas at elevated temperatures Long life time required Packaging Granules in 25 kg bags

General Information	
Additive	Flame Retardant
Features	Flame Retardant
	Halogen Free
	Low Smoke Emission
Uses	Cable Jacketing
	Fiber Optic Cable
	Insulation Shield
	Telecommunications
Agency Ratings	BS 6724
	VDE 0207 part 23 (HJ2)
	VDE 0207 part 24(HM 2/4)
Processing Method	Extrusion

Physical	Nominal Value	Unit	Test Method
Density	1.48	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)	6.0	g/10 min	ISO 1133
Water Absorption ¹ (70°C)	0.500	mg/cm ²	IEC 60811-1-3
рН	5.9		
Elongation at Break - variation from original ² (70°C)	-6.0	%	
Tensile Strength - variation from original 3 (70°C)	-17	%	
Retention of Tensile Elongation - at break	97	%	BS 6724
Retention of Tensile Strength	94	%	BS 6724
Cold Elongation	140	%	IEC 60811-1-4
Hot Pressure Test ⁴ (90°C)	5.0	%	IEC 60811-3-1
Conductivity	2.80	μS/cm	
Halogen Content	< 5	mg/g	IEC 754-1
Toxicity	2.30		EN 50305
Mooney Viscosity (ML 1+4, 140°C)	39	MU	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D)	52		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			IEC 60811-1-1
	11.0	MPa	
110°C ⁵	10.7	MPa	
Tensile Strain			IEC 60811-1-1
Break	180	%	
Break, 110°C ⁶	160	%	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			IEC 60093
7	4.8E+14	ohms	
8	3.7E+14	ohms	
Volume Resistivity			IEC 60093
9	1.1E+15	ohms•cm	
70°C ¹⁰	3.6E+14	ohms•cm	
Dielectric Constant			IEC 60250
50 Hz ¹¹	3.70		
20°C, 50 Hz ¹²	6.10		
Dissipation Factor			IEC 60250
50 Hz ¹³	0.026		
20°C, 50 Hz ¹⁴	0.13		
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	36	%	ISO 4589-2
Extrusion	Nominal Value	Unit	

Cylinder Zone 1 Temp.	130	°C
Cylinder Zone 2 Temp.	140	°C
Cylinder Zone 3 Temp.	145	°C
Cylinder Zone 4 Temp.	150	°C
Cylinder Zone 5 Temp.	160	°C
Melt Temperature	165 to 175	°C
Die Temperature	165	°C
NOTE		
1.	10 days	
2.	Oil Ageing IRM 902, 4 h	
3.	Oil Ageing IRM 902, 4 h	
4.	4 hours	
5.	Aged 7 days	
6.	Aged 7 days	
	70°C, 7 days duration of water	
7.	immersion	
8.	0 h duration of water immersion	
9.	0 h duration of water immersion	
	7 days duration of water	
10.	immersion	
11.	0 h duration of water immersion	
12.	24 h duration of water immersion	
13.	0 h duration of water immersion	
14.	24 h duration of water immersion	

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