

Casico™ FR4807

Polyolefin
Borealis AG

Message:

Casico FR4807 is a thermoplastic, low smoke zero halogen (LSZH) flame retardant, UV stabilised, natural jacketing compound combining with excellent extrusion properties.

It is based on the novel technology, Casico, containing inorganic filler and a novel char-forming additive which confer flame retardancy with very limited smoke generation.

It can be used in areas sensitive to smoke or corrosive and toxic combustion products. For most cable constructions, Casico FR4807 has sufficient flame retardancy to satisfy single wire vertical burning tests.

Casico FR4807 meets the applicable requirements below using sound commercial extrusion practice and testing procedures:

BS 7655 LTS3
EN 50173
EN 50290-2-27
EN 50363-8 TM7
IEC 60227
VDE 0207 Teil 24 (HM2)
VDE 0250 Teil 215

General Information	
Filler / Reinforcement	Filler
Additive	Flame Retardant
	UV Stabilizer
Features	Flame Retardant
	Good Colorability
	Good Corrosion Resistance
	Good Processability
	Halogen Free
	Low Smoke Emission
	Low Toxicity
	Moisture Resistant
Uses	Cable Jacketing
	Flexible Cord Insulation
	Flexible Jacketing
	Wire & Cable Applications
Agency Ratings	BS 7655 LTS3
	EN 50173
	IEC 60227
	VDE 0207 Teil 24 (HM2)
Appearance	Natural Color

Forms	Granules		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density ¹	1.15	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.0	g/10 min	ISO 1133
Water Absorption (70°C) ²	0.400	mg/cm ²	IEC 60811-1-3
Cold Bend (-40°C) ³	Pass		IEC 60811-1-4
Cold Impact (-40°C) ⁴	Pass		IEC 60811-1-4
NBS Smoke Density			ASTM E662
-- ⁵	6.0	min	
-- ⁶	46.0		
-- ⁷	20.0	min	
-- ⁸	54.0		
Breakdown Duration ⁹	Pass		IEC 60227-2/2.3
Breakdown Voltage ¹⁰	32000	V	ISO 6722
Cone Calorimeter			ISO 5660
-- ¹¹	1.80	kg/m ³	
Average Heat Release ¹²	193	kW/m ²	
CO ¹³	0.260	kg/m ³	
Heat Combustion ¹⁴	28.0		
Ignition time ¹⁵	2.2	min	
Max Heat Release ¹⁶	335	kW/m ²	
Smoke Obscuration ¹⁷	531		
Corrosion - of Combustion Fumes ¹⁸	1.80	µS/cm	IEC 60754-2
Pressure Test (80°C) ¹⁹	17	%	IEC 60811-3-1
Hardness	Nominal Value	Unit	Test Method
Shore Hardness ²⁰ (Shore D, 15 sec)	31		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	11.5	MPa	IEC 60811-1-1
Tensile Strain ²¹ (Break)	700	%	IEC 60811-1-1
Flexural Modulus ²²	100	MPa	ISO 178
Aging	Nominal Value	Unit	Test Method
Change in Tensile Stress			
-- ²³	> -80	%	ISO 1817
100°C, 240 hr ²⁴	> -80	%	IEC 60811-1-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity ²⁵	6.0E+15	ohms · cm	IEC 60093
Electric Strength	> 20	kV/mm	IEC 60243-1
Flammability	Nominal Value	Unit	Test Method
Oxygen Index ²⁶	34	%	
Extrusion	Nominal Value	Unit	

Cylinder Zone 1 Temp.	110	°C
Cylinder Zone 2 Temp.	140	°C
Cylinder Zone 3 Temp.	160	°C
Cylinder Zone 4 Temp.	170	°C
Die Temperature	170	°C
NOTE		
1.	Compound, ISO 1872-2	
2.	14 days, Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
3.	Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
4.	Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
5.	Time to Dmax, (76x76x0.7 mm plaque), Flaming mode	
6.	Optical smoke density Dmax, (76x76x0.7 mm plaque), Flaming mode	
7.	Time to Dmax, (76x76x0.7 mm plaque), Non-flaming mode	
8.	Optical smoke density Dmax, (76x76x0.7 mm plaque), Non-flaming mode	
9.	Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
10.	Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
11.	heat flux 35 kW/m ² , 3 mm plaque	
12.	heat flux 35 kW/m ² , 3 mm plaque	
13.	heat flux 35 kW/m ² , 3 mm plaque	
14.	heat flux 35 kW/m ² , 3 mm plaque, MJ/dm ³	
15.	heat flux 35 kW/m ² , 3 mm plaque	
16.	heat flux 35 kW/m ² , 3 mm plaque	
17.	heat flux 35 kW/m ² , 3 mm plaque, m ² /dm ³	
18.	Compound, 5.3	
19.	at high temperature, 4 hrs, Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
20.	Compound	
21.	Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
22.	Compound	
23.	After UV ageing, Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	
24.	Cable (0.7 mm insulation over 1.5 mm ² solid Cu)	

25.	Compound
26.	Compound

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

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



WECHAT