

Casico™ FR6082

Polyethylene

Borealis AG

Message:

Casico FR6082 is a thermoplastic, reduced fire hazard, zero halogen black jacketing compound combined with high mechanical strength, toughness and excellent extrusion properties. The composition is based on the elements Carbon, Hydrogen, Oxygen, Silicon and Calcium. Compounds based on these elements will therefore be the only significant constituents of the combustion fumes. Other elements may be present in concentrations less than 0.1%. Casico FR6082 contains 2,5% well dispersed furnace black of nominal particle size less than 25 nanometres in order to ensure excellent weathering resistance.

General Information	
Filler / Reinforcement	Filler
Additive	Carbon Black (3%) Flame Retardant
Features	Flame Retardant Good Processability Good Toughness Good UV Resistance Good Weather Resistance Halogen Free High Strength Moisture Resistant
Uses	Cable Jacketing Low Voltage Insulation
Agency Ratings	ASTM D 1248, III, Class C, Cat. 4 BS 7655 LTS 1-4 EN 50290-2-27 EN 50363 TM7 HD 603 S1 DMO 1 HD 620 S2 DMZ 2-5 IEC 60502-1 Type ST3 IEC 60502-1 Type ST7 IEC 60502-2 Type ST3 IEC 60502-2 Type ST7 ISO 1872 PE KCGH 33D003 VDE 0207 Teil 24 HM2 VDE 0207 Teil 24 HM4 VDE 0207 Teil 24 HM5

Appearance	Natural Color		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density ¹	1.18	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) ² (190°C/2.16 kg)	0.60	g/10 min	ISO 1133
Water Absorption - 14 days (70°C)	0.800	mg/cm ²	IEC 60811-1-3
Tear Resistance	1.5	kN/m	HD 605 S1/A1
Retention of Tensile Properties (110°C) ³	< 15	%	IEC 60811-1-2
Cold Bend (-40°C)	Pass		IEC 60811-1-4
Cold Impact (-40°C)	Pass		IEC 60811-1-4
Corrosivity of Combustion Fumes			IEC 60754-2
--	6.50	µS/cm	
Acidity	5.60	pH	
Vertical Flame Test - Single	Pass		IEC 60332-1
Pressure Test ⁴			IEC 60811-3-1
105°C	6.0	%	
110°C	8.0	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness ⁵ (Shore D, 15 sec)	53		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	15.0	MPa	IEC 60811-1-1
Tensile Strain ⁶ (Break)	> 450	%	IEC 60811-1-1
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity ⁷	1.7E+16	ohms · cm	IEC 60093
Electric Strength ⁸	> 10	kV/mm	IEC 60243-1
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	28	%	ISO 4589-2
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	160	°C	
Cylinder Zone 2 Temp.	170	°C	
Cylinder Zone 3 Temp.	180	°C	
Cylinder Zone 4 Temp.	190	°C	
Die Temperature	190	°C	
NOTE			
1.	Compound		
2.	Compound		
3.	7 days, NHxMH; 0,7 mm insulation		
4.	at high temperature, 6 hrs, NHxMH; 0,7 mm insulation		
5.	Compound		
6.	NHxMH; 0,7 mm insulation		

7.	Compound
8.	Compound

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