Mecoline S TP 1003 F

Thermoplastic

Melos GmbH

Message:

Halogen-free, low smoke, thermoplastic, highly flame retardant compound for the sheathing of low and medium voltage cables in General Installation applications.

General Information			
Additive	Flame Retardant		
Features	Flame Retardant Halogen Free Low Smoke Emission		
Uses	Cable Jacketing Low Voltage Insulation Medium Voltage Insulation Wire & Cable Applications		
Wire Types	HM2 HM4 LTS 1 LTS 4 SHF1		
Agency Ratings	BS 6724 BS 7655:6.1 Type LTS 2 CEI 2011 M1 EN 50363-8 TM7 IEC 60092-359 SHF-1 NFC 32-323 VDE 0207 part 24 HM2 VDE 0207 part 24 HM4 VDE 0250 part 215 HM5 VDE 0276 part 604 HM4 VDE 0281 part 14 TM7		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**

Density	1.57	g/cm³	ISO 1183/A
Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)	6.0	g/10 min	ISO 1133
Water Absorption (23°C, 24 hr)	0.070	%	IEC 811-1-3
Water Absorption			
after 240h at 70°C	1.17	mg/cm²	IEC 811-1-3
after 24h at 23°C	0.0650	mg/cm²	ASTM D570
pH	> 5.3		IEC 60754-2
Abrasion	181	mm³	VDE 0472
Hot Pressure Test			IEC 811-3-1
penetration 6h at 100°C	9.0	%	
penetration 6h at 90°C	5.0	%	
Temperature Index	300	°C	ASTM D2863
Conductivity	< 8.40	µS/mm	
Smoke Density			ASTM E662
Flaming mode	150		
Non-flaming mode	290		
Toxicity	1.10		NES 713
Tear Strength	4.50	MPa	BS 6469 99.1
Head Temperature	140 to 160	°C	
Extruder Screw L/D Ratio	20.0:1.0 to 25.0:1.0		
Extruder Screw Compression Ratio	1.0:1.2		
Mooney Viscosity (ML 1+4, 140°C)	35	MU	DIN 53523
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D)	53		ISO 7619
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress	11.7	MPa	IEC 811-1-1
Tensile Strain (Break)	200	%	IEC 811-1-1
Aging	**Nominal Value**	**Unit**	**Test Method**
Change in Tensile Strength in Air			IEC 811-1-2
100°C, 240 hr	13	%	
110°C, 168 hr	7.3	%	
Change in Tensile Strain at Break in Air			IEC 811-1-2
100°C, 240 hr	-14	%	
110°C, 168 hr	-14	%	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity [1]	2.5E+12	ohms·cm	DIN VDE 0303
Dielectric Constant (50 Hz)	4.80		IEC 60250
Dissipation Factor (50 Hz)	0.080		IEC 60250
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	40	%	ASTM D2863
Extrusion	**Nominal Value**	**Unit**	

Cylinder Zone 1 Temp.	90.0 to 110	°C
Cylinder Zone 2 Temp.	105 to 125	°C
Cylinder Zone 3 Temp.	120 to 140	°C
Cylinder Zone 4 Temp.	120 to 140	°C
Cylinder Zone 5 Temp.	130 to 150	°C
Adapter Temperature	135 to 155	°C
Die Temperature	150 to 170	°C

NOTE	
1.	16h at 20°C, 500V

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