

MEGOLON™ S500

Thermoplastic

AlphaGary

Message:

MEGOLON™ S500 is a thermoplastic, halogen free, fire retardant cable sheathing compound for general purpose applications. It exhibits good processing characteristics - using a low compression, MEG type screw, processing speeds similar to those of PVC can be achieved. It can also be processed on a simple PVC screw at lower speeds.

APPLICATIONS

UK: BS 7878: 7 (HD 624.7 S1)

Germany: DIN VDE 0207, part 24, type HM2

France: Norme Française NF C 32-323

General Information			
Features	Flame Retardant		
	General Purpose		
	Good Processability		
	Halogen Free		
Uses	Cable Jacketing		
	General Purpose		
Agency Ratings	BS 7878:7 (HD 624.7 S1)		
	DIN VDE 0207, Part 24, Type HM2		
	NFC 32-323		
Forms	Pellets		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.46	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (150°C/21.6 kg)	6.0	g/10 min	ISO 1133
Mooney Viscosity (ML 1+4, 140°C)	37	MU	ASTM D1646
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	54		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			
-- ¹	12.5	MPa	IEC 60811-1-2
--	11.0	MPa	IEC 60811-1-1
Tensile Strain			
Break ²	150	%	IEC 60811-1-2
Break	180	%	IEC 60811-1-1
Elongation at Break			

after 4 hours, in IRM 902 Oil : 70°C	200	%	
after 4 hours, in SAE 20 Oil : 70°C	210	%	
after 7 days, in IRM 902 Oil : 23°C	170	%	
after 7 days, in IRM 903 Oil : 23°C	160	%	
Tensile Strength			
after 4 hours, in IRM 902 Oil : 70°C	10.0	MPa	
after 4 hours, in SAE 20 Oil : 70°C	8.50	MPa	
after 7 days, in IRM 902 Oil : 23°C	10.5	MPa	
after 7 days, in IRM 903 Oil : 23°C	9.50	MPa	
Cold Elongation (-25°C)	96	%	IEC 60811-1-4
Cold Impact (-25°C)	pass		IEC 60811-1-4
Hot Deformation (90°C)	5.0	%	BS 6469 99.1
Hot Pressure Test (80°C)	25	%	IEC 60811-3-1
Insulation Resistance			BS 6469 99.2
20°C	5.0E+14	ohms·cm	
after 12 hours immersion in water : 20°C	2.0E+14	ohms·cm	
Acid Gas Emission Conductivity	13.0	µS/cm	IEC 60754-2
Acid Gas Emission pH	6.30		IEC 60754-2
Flammability Temperature Index	255	°C	ISO 4589-3
Smoke Density			ASTM E662
Flaming mode ³	< 57	Ds	
Non-flaming mode ⁴	< 280	Ds	
Toxicity	1.50		NES 713
Halogen Acid Gas Evolution	0.0	%	IEC 60754-1
Ozone Resistance	pass		ASTM D470
Draw Down	1.5:1.0		
Extruder Screw Compression Ratio	1.0:1.0 to 2.0:1.0		
Elastomers	Nominal Value	Unit	Test Method
Tear Strength	6.50	kN/m	BS 6469 99.1
Aging	Nominal Value	Unit	
Change in Tensile Strength in Air (100°C, 168 hr)	12	%	
Change in Tensile Strain at Break in Air (100°C, 168 hr)	-18	%	
Change in Tensile Stress			
23°C, 168 hr, in IRM 902 Oil	-5.0	%	
23°C, 168 hr, in IRM 903 Oil	-14	%	
70°C, 4 hr, in IRM 902 Oil	-9.0	%	
70°C, 4 hr, in SAE 20 Oil	-26	%	
Change in Tensile Strain at Break			
23°C, 168 hr, in IRM 902 Oil	-6.0	%	
23°C, 168 hr, in IRM 903 Oil	-11	%	
70°C, 4 hr, in IRM 902 Oil	11	%	

70°C, 4 hr, in SAE 20 Oil	17	%	
Change in Volume			
23°C, 168 hr, in IRM 902 Oil	4.0	%	
23°C, 168 hr, in IRM 903 Oil	20	%	
70°C, 4 hr, in IRM 902 Oil	1.0	%	
Electrical	Nominal Value	Unit	Test Method
Dielectric Constant (50 Hz)	4.30		ASTM D150
Dissipation Factor (50 Hz)	0.015		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	35	%	ISO 4589-2
Extrusion	Nominal Value	Unit	
Drying Temperature	60.0 to 70.0	°C	
Cylinder Zone 1 Temp.	135	°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.	after 7 days at 100°C		
2.	after 7 days at 100°C		
3.	Time to maximum: 7 minutes		
4.	Time to maximum: 12 minutes		

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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

