

TECHNICAL DATA SHEET

MEGOLON® S642

MEGOLON® S642 is a thermoplastic, halogen free, fire retardant sheathing compound for general purpose applications.

APPLICATIONS

- Data cables
- Telecommunication cables
- Low and high voltage power cables
- Spain: UNE 21123-4

TECHNICAL PROPERTIES

Primary Properties	Unit	Nominal Value	Test Method
Tensile Strength	Mpa	12.5	IEC 60811-501
Elongation at break	%	150	IEC 60811-501
Oxygen Index	%	40	ISO 4589-2
Density	g/cc	1.53	ASTM D-792
Melt Flow Rate (21.6 kg, 150°C)	g/10 mins	6	ISO 1133
Mechanical Properties			
Tear Strength	N/mm	5	BS 6469:99.1
Tensile strength after 7 days at 100°C	Mpa	14.4	IEC 60811-401
Variation	%	+15	
Elongation at break after 7 days at 100°C	%	120	IEC 60811-401
Variation	%	-20	
Thermomechanical Properties			
Hot pressure at 80°C	%	30	IEC 60811-508
Hot deformation at 90°C	%	5	BS 6469:99.1
Cold elongation at -25°C	%	85	IEC 60811-505
Cold impact at -25°C	%	PASS	IEC 60811-506
Fire and Smoke Test Properties			
Flammability temperature index	°C	290	ISO 4589-3
Halogen acid gas evolution	%	ZERO	IEC 60754-1
Corrosivity of gases			IEC 60754-2
pH		5.0	
Conductivity	µS/mm	8	
Smoke density – Flaming mode	Ds max	158	ASTM E-662
Time to maximum	minutes	18	
Smoke density – Non-flaming mode	Ds max	156	ASTM E-662
Time to maximum	minutes	11	
Toxicity index		1.1	DEF STAN 02-713

Oil Resistance Properties

Medium	Temperature	Duration	Tensile Strength (Mpa)	Variation (%)	Elongation at Break (%)	Variation (%)	Volume Swell (%)
IRM 902	23°C	7 days	12.5	0	157	+5	+1
IRM 902	70°C	4 hours	10.6	-15	195	+30	+20
IRM 903	23°C	7 days	10.6	-15	128	-15	+35

Electrical Properties

	Unit	Nominal Value	Test Method
Dielectric constant at 50Hz		3.95	ASTM D-150
Dissipation factor at 50Hz		0.033	ASTM D-150
Insulation resistance at 20°C			BS 6469:99.2
Initial value	ohm.cm	5×10^{13}	
After 12 hours immersion in water	ohm.cm	8×10^{11}	

Other Properties

Hardness	Shore D	59	ASTM D-2240
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