

## megolon S500

### Sheathing Grade Compound

#### DESCRIPTION

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

#### TECHNICAL PROPERTIES

Primary Properties	Unit	Nominal Value	Test Method
Tensile strength	MPa	11	IEC 60811-1-1
Elongation at break	%	180	IEC 60811-1-1
Oxygen Index	%	35	ISO 4589-2
Density	g/cc	1.46	ASTM D-792
Melt Flow Rate (21.6 kg, 150°C)	g/10 mins.	6	ISO 1133

#### Mechanical Properties

Tear strength	N/mm	6.5	BS 6469:99.1
Tensile strength after 7 days at 100°C	MPa	12.5	IEC 60811-1-2
Variation	%	+12	
Elongation at break after 7 days at 100°C	%	148	IEC 60811-1-2
Variation	%	-18	

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## Thermomechanical Properties

Hot pressure at 80°C	%	25	IEC 60811-3-1
Hot deformation at 90°C	%	5	BS 6469:99.1
Cold elongation at -25°C	%	96	IEC 60811-1-4
Cold impact at -25°C	%	PASS	IEC 60811-1-4

## Fire and Smoke Test Properties

	Unit	Nominal Value	Test Method
Flammability temperature index	°C	255	ISO 4589-3
Halogen acid gas evolution	%	ZERO	IEC 60754-1
Corrosivity of gases			IEC 60754-2
pH		6.3	
Conductivity	µS/cm	13	
Smoke density – Flaming mode	Ds max	57	ASTM E-662
Time to maximum	minutes	7	
Smoke density – Non-flaming mode	Ds max	278	ASTM E-662
Time to maximum	minutes	12	
Toxicity index		1.5	NES 713

## Oil Resistance Properties

Medium	Temperature	Duration	Tensile Strength (MPa)	Variation (%)	Elongation at Break (%)	Variation (%)	Volume Swell (%)
IRM 902	23°C	7 days	10.5	-5	170	-6	+4
IRM 902	70°C	4 hours	10	-9	200	+11	+1
SAE 20	70°C	4 hours	8.5	-26	210	+17	n/a
IRM 903	23°C	7 days	9.5	-14	160	-11	+20

## Electrical Properties

	Unit	Nominal Value	Test Method
Dielectric constant at 50Hz		4.3	ASTM D-150
Dissipation factor at 50Hz		0.015	ASTM D-150
Insulation resistance at 20°C			BS 6469:99.2
Initial value	ohm.cm	5 x 10 <sup>14</sup>	
After 12 hours immersion in water	ohm.cm	2 x 10 <sup>14</sup>	

## Other Properties

Mooney viscosity (1+4 mins, 140°C)		37	ASTM D-1646
Hardness	Shore D	54	ASTM D-2240
Ozone resistance		PASS	ASTM D-470

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