

megolon S340

Sheathing Grade Compound

DESCRIPTION

MEGOLON™ S340 is a thermoplastic, halogen free, fire retardant cable sheathing compound for general purpose applications. MEGOLON™ S340 exhibits an enhanced fire test performance with a high oxygen index whilst retaining similar mechanical properties to MEGOLON™ S300

APPLICATIONS

- UK: BS 7655:6.1 types LTS1 and LTS3, BS7878:7 (HD 624.7 S1) and LUL SE569. MEGOLON™ S340 also meets the requirements of BS 7655:4.1 type TM1 for a general purpose PVC sheathing compound
- 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 | 14.5 | IEC 60811-1-1 |
| Elongation at break | % | 150 | IEC 60811-1-1 |
| Oxygen Index | % | 40 | ISO 4589-2 |
| Density | g/cc | 1.55 | ASTM D-792 |
| Melt Flow Rate (21.6 kg, 150°C) | g/10 mins. | 4.5 | ISO 1133 |

Mechanical Properties

| | | | |
|---|------|-----|---------------|
| Tear strength | N/mm | 5 | BS 6469:99.1 |
| Tensile strength after 7 days at 100°C | MPa | 18 | IEC 60811-1-2 |
| Variation | % | +26 | |
| Elongation at break after 7 days at 100°C | % | 116 | IEC 60811-1-2 |
| Variation | % | -23 | |

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| Thermomechanical Properties | Unit | Nominal Value | Test Method |
|-----------------------------|------|---------------|---------------|
| Hot pressure at 80°C | % | 15 | IEC 60811-3-1 |
| Hot deformation at 90°C | % | 2 | BS 6469:99.1 |
| Cold elongation at -25°C | % | 65 | IEC 60811-1-4 |
| Cold impact at -25°C | % | PASS | IEC 60811-1-4 |

Fire and Smoke Test Properties

| | | | |
|----------------------------------|---------|------|-------------|
| Flammability temperature index | °C | 300 | ISO 4589-3 |
| Halogen acid gas evolution | % | ZERO | IEC 60754-1 |
| Corrosivity of gases | | | IEC 60754-2 |
| pH | | 4.3 | |
| Conductivity | µS/cm | 28 | |
| Smoke density – Flaming mode | Ds max | 122 | ASTM E-662 |
| Time to maximum | minutes | 10 | |
| Smoke density – Non-flaming mode | Ds max | 273 | ASTM E-662 |
| Time to maximum | minutes | 13 | |
| Toxicity index | | 2 | NES 713 |

Oil Resistance Properties

| Medium | Temperature | Duration | Tensile Strength (MPa) | Variation (%) | Elongation at Break (%) | Variation (%) | Volume Swell (%) |
|---------|-------------|----------|------------------------|---------------|-------------------------|---------------|------------------|
| IRM 902 | 23°C | 7 days | 13 | -10 | 135 | -10 | +1 |
| IRM 902 | 70°C | 4 hours | 13 | -10 | 165 | +10 | +3 |
| IRM 903 | 23°C | 7 days | 11.5 | -20 | 150 | 0 | +10 |

Electrical Properties

| Electrical Properties | Unit | Nominal Value | Test Method |
|-----------------------------------|--------|----------------------|--------------|
| Dielectric constant at 50Hz | | 4.8 | ASTM D-150 |
| Dissipation factor at 50Hz | | 0.02 | ASTM D-150 |
| Insulation resistance at 20°C | | | BS 6469:99.2 |
| Initial value | ohm.cm | 1 x 10 ¹⁴ | |
| After 12 hours immersion in water | ohm.cm | 5 x 10 ¹³ | |

Other Properties

| | | | |
|------------------------------------|---------|------|--------------|
| Mooney viscosity (1+4 mins, 140°C) | | 45 | ASTM D-1646 |
| Hardness | Shore D | 58 | ASTM D-2240 |
| Ozone resistance | | PASS | ASTM D-470 |
| Water immersion – 7 days at 70°C | | | BS 6469:99.1 |
| Variation of tensile strength | % | 0 | |
| Variation of elongation at break | % | -15 | |

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