

Communication Markets Division

# 3M™ Scotchcast™ Encapsulating and Blocking Compound 4407

3M™ Scotchcast™ Encapsulating and Blocking Compound 4407 is a hard encapsulant designed specifically for permanent splice protection and cable blocking applications. Scotchcast 4407 compound is formulated for virtually every telecommunications application requiring a hard, non-reenterable compound with good handling and performance characteristics. Scotchcast 4407 compound is a two-part polyurethane compound. It features excellent wetting properties and low viscosity, which means it flows quickly and freely. Its low temperature cure properties mean that it may be used in a wide range of temperatures. Scotchcast 4407 compound doesn't contain TDI and meets applicable OSHA standards for safety.



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## 3M Scotchcast Encapsulating Compound 4407 Properties

| Property                 | Test Method                                         | Typical Value                                            |
|--------------------------|-----------------------------------------------------|----------------------------------------------------------|
| Tensile strength         | ASTM D 412                                          | 500 psi (3.45 MPa)                                       |
| Elongation               | ASTM D 412                                          | 150%                                                     |
| Hardness                 | Shore A                                             | 70                                                       |
| Apparent free isocyanate | ASTM D 2615-70 (Adaptation)                         | 2.60%                                                    |
| Viscosity                | Brookfield at 20 rpm                                | 1200 cps mixed                                           |
| Gel time                 | 180 gm sample at 23°F                               | 15-21 min.                                               |
| Exotherm                 | 180 gm sample at 75°F                               | 150°F (66°C) max.                                        |
| Water Absorption         | 7 days in 73°F water                                | 0.28% weight gain                                        |
| Insulation resistance    | Aged 28 days/95°F/95% rel. humidity                 | 5 × 10" ohms                                             |
| Dielectric constant      | ASTM D 150-70                                       | 4.7 at 10 <sup>3</sup> Hz<br>3.8 at 10 <sup>6</sup> Hz   |
| Dissipation factor       | ASTM D 150-70                                       | 0.04 at 10 <sup>3</sup> Hz<br>0.05 at 10 <sup>6</sup> Hz |
| Hydrolytic stability     | 7 days in water at 212°F                            | +2.0% weight gain<br>-10 points, Shore A hardness        |
| Dry heat aging           | 21 days at 225°F                                    | 6.0% weight loss<br>+11 Shore A                          |
| Copper corrosion         | 30 days at 95°F/95% rel. humidity under 45V         | 0                                                        |
| Stress cracking          | On cut and stressed polyethelene for 48 hours/120°F | 0                                                        |
| Fungi resistance         | ASTM G 21-70                                        | 0                                                        |

## Ordering Information

| Part Number | Product Description                     | Package Quantity | Packaging Type         | 3M Stock Number |
|-------------|-----------------------------------------|------------------|------------------------|-----------------|
| 4407-A      | Encapsulating compound 89 ml (94g)      | 10 each          | Guard bag overpacked   | 80-6100-6033-9  |
| 4407-B      | Encapsulating compound 197 ml (209g)    | 10 each          | Guard bag overpacked   | 80-6100-6034-7  |
| 4407-E      | Encapsulating compound 283 ml (300g)    | 10 each          | Guard bag overpacked   | 80-6100-6040-4  |
| 4407-C      | Encapsulating compound 396 ml (420g)    | 10 each          | Guard bag overpacked   | 80-6100-6036-2  |
| 4407-D      | Encapsulating compound 636 ml (675g)    | 10 each          | Guard bag overpacked   | 80-6100-6038-8  |
| 4407-1500/F | Encapsulating compound 1,415 ml (1500g) | 2 each           | Two part foil film bag | 80-6110-1252-9  |

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