

# TECHNICAL DATA SHEET

## OPGW Series – 400H (0.50)

Thixotropic Filling Compound for OPGW Cables



UNIGEL OPGW-400H contains an efficient hydrogen scavenger to absorb any hydrogen that may arise from the laser welding process or be generated throughout the life span of the cable. It is flexible down to  $-50^{\circ}\text{C}$ , non-draining at  $80^{\circ}\text{C}$  and thixotropic for controlled filling at ambient temperature. OPGW-400H exhibits zero oil separation and provides excellent resistance to corrosion and oxidation for long-term stability.

| Properties   | Typical Value | Test Method                            |
|--|---------------|--|
| Appearance   | Brown/Black   | Visual                                 |
| Density, $25^{\circ}\text{C}$ (g/ml)                         | 0.86          | ASTM D1475                             |
| Flash Point ( $^{\circ}\text{C}$ )                           | $\geq 220$    | ASTM D92                               |
| Drop Point ( $^{\circ}\text{C}$ )                            | $\geq 170$    | ASTM D 566                             |
| Cone Penetration, $25^{\circ}\text{C}$ (dmm)                 | $\geq 385$    | ASTM D 217 (M)                         |
| Cone Penetration, $-40^{\circ}\text{C}$ (dmm)                | $\geq 190$    | ASTM D 217 (M)                         |
| Viscosity, $50 \text{ s}^{-1}$ , $25^{\circ}\text{C}$ (Pa.s) | 6.4           | UNIGEL - CR Ramp 0-100 $\text{s}^{-1}$ |
| Oil Separation, $100^{\circ}\text{C}$ , 24 hours (Wt %)      | Zero          | FTM 791-321 (M)                        |
| Volatile Loss, $100^{\circ}\text{C}$ , 24 hours (%)          | $\leq 1.0$    | FTM 791-321 (M)                        |
| Oxidation OIT, $190^{\circ}\text{C}$ (min)                   | $\geq 30$     | ASTM D3895                             |
| Acid Value (mg KOH/g)  | $\leq 0.1$    | ASTM D974-85                           |
| Water Content (ppm)  | $\leq 100$    | ASTM D4019-88                          |
| Hydrogen Absorption, 24hrs ( $\text{cm}^3/\text{g}$ )        | $\geq 0.175$  | UNIGEL                                 |
| Water Resistance @ $20^{\circ}\text{C}$ / 7 days             | Pass          | SH/T0453                               |
| Fungal Growth  | Nil           | ASTM G21                               |

| Packaging Type    | Net Weight (kg) | Supply Options |
|-------------------|-----------------|----------------|
| 210 Litre Drum    | 175kg           | Single Journey |
| 1000 Litre Unibag | 750kg           | Single Journey |

### Compatibility

UNIGEL OPGW-400H is compatible with most OPGW cable materials. Tests on typical materials such as aluminium, stainless steel tape and optical fibre show no reaction but it is recommended that compatibility tests are made with all materials likely to come into contact with the gel.

### Processing

UNIGEL OPGW-400H is suitable for cold filling with conventional pumping equipment.

The data presented herein is given in good faith and correct to the best of our knowledge at publication. Values quoted are typical and do not constitute a guarantee of performance and UNIGEL reserve the right to make alterations without notice. UNIGEL is a registered trademark of UNIGEL IP Ltd.

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