TECHNICAL DATA SHEET

Application

UNIGEL 400N is a water-blocking compound specifically designed for filling optical fiber buffer loose tubes at high line speeds.

Description

UNIGEL 400N is a soft, non-sticky hydrophobic compound, flexible down to –50°C, non-draining at 80°C and thixotropic for controlled filling at ambient temperature. UNIGEL 400N is non nutritive to fungus, exhibits low hydrogen generation, zero oil separation with excellent resistance to oxidation for long-term stability.

Properties	Typical Value	Test Method
Appearance	Translucent	Visual
Color stability @ 130°C / 120hrs	<2.5	ASTM D127
Density @ 20°C (g/ml)	0.85	ASTM D1475
Flash point (°C)	> 220	ASTM D92
Drop point (°C)	>170	ASTM D 566-93
Cone penetration @ 25°C (dmm)	440	ASTM D 217
Cone penetration @ -40°C (dmm)	>230	ASTM D 217
Viscosity @ 50 1/S / 25°C (Pa.s)	4.3	CR Ramp 0-50 1/s
Oil separation @ 100°C / 24 hours (Wt %)	Zero	FTM 791(321)
Volatility @ 100°C / 24 hours (%)	<1.0	FTM 791(321)
Oxidation OIT @ 190°C (min)	>30	ASTM D3895
Acid value (mg KOH/g)	<0.1	ASTM D974-85
Water Content (ppm)	< 100	ASTM D4019-88
Hydrogen generation 80°C / 24hours(µl/g)	<0.02	UNIGEL
Water resistance @ 20°C / 7days	Pass	SH/T0453
Fungal growth	Nil	BS 5980

Compatibility

UNIGEL 400N is compatible with most cable grade polymers. Tests on typical acrylate coated optical fiber shows no reaction but it is recommended that compatibility tests are made with all materials likely to come into contact with the gel.

Processing

UNIGEL 400N is suitable for cold pumping and processing enabling cable filling without voids created by compound shrinkage. A line-synchronized gel metering system is available comprising of a drum pump, de-aeration, filtration unit and a metering control unit for stable dosing of the gel.

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