



Heat Defender™ LA4000

General Description

LA4000 is a thixotropic compound suitable for filling and/or flooding the most common types of optical fiber cables, such as loose tube, slotted core, ribbon, etc. LA4000 was designed as a high temperature resistant material, and shows good TGA results up to 250C.

Performance in Optical Fiber Cables

The chemical properties of the compound remain stable if kept in a temperature range between -50°C to +85°C, and they have been tested with higher temperatures up to and exceeding 300°C.

Cables manufactured with LA4000 will show an excellent balance of properties and will pass both attenuation test at low temperatures and oil separation or drip test at high temperatures.

The compound does not affect inks generally used for optical fiber coating.

Processing

Gel may be pumped with the usual metering pump devices at room temperature (cold filling technology). Constant quality ensures high-speed, trouble-free production.

Health, Safety Precautions and Identification

LA4000 was tested according to EU recommendations 83/467/EEC and 84/449/EEC and found to be:

- non toxic
- non irritant to eyes
- non irritant to skin
- non nutritive to fungus

Good personal hygienic practice should be used, and prolonged contact with skin should be avoided. Based on our current knowledge and available information, LA4000 does not pose any health risks.

For further information, please refer to the Safety Data Sheet.

Packaging

20 kg pail	top internal diameter	328 ± 1 mm
	bottom internal diameter	312 ± 1 mm
	height	383 ± 1 mm
170 kg ribbed drum	internal diameter	571 ± 3 mm
	height	875 ± 5 mm
170 kg straight-sided drum	internal diameter	571 ± 3 mm
	height	885 ± 5 mm
850 kg returnable (IBC) container	length x width x height	1,200 x 1,000 x 1,185 mm
850 kg disposable lined container	length x width x height	1,200 x 1,000 x 1,400 mm

Other container types and sizes such as plastic or stainless steel can be tailored to customer requirements based on quantities and location.

Storage Information

Protect from moisture; storage life several years.

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Characteristics

Density (20°C) ASTM D1475	0.84 ± 0.02	g/cm ³
Flash Point DIN ISO 2592	> 260	°C
Viscosity DIN 53019 (20 s ⁻¹ , 25°C) DIN 53019 (20 s ⁻¹ , 80°C)	30,000 ± 3,000 8,000 ± 800	mPa•s mPa•s
Yield Stress (by means of flow curve, 20°C)	> 90	Pa
Cone Penetration DIN 51580, ASTM D937 20°C -40°C	> 360 > 220	1/10 mm 1/10 mm
Volatiles (by weight) 80°C/24 hrs	< 0.1	%
Oxidation Induction Time ASTM D3895	> 60	min
Oil Separation (FTM 791.C) 200°C/24 hrs	< 1	%
Dropping Point ASTM D2265	> 300	°C

Compatibilities

O. F. Coating	Compatible with O. F. coatings (UV Acrylate) commonly used in optical fiber cables
PET, PBT, PA, PC	Compatible with thermoplastic materials commonly used in optical fiber cables
PE	To be checked by the cable manufacturer; results are greatly influenced by material type

This Technical Information reflects the current knowledge, and is designed to inform and advise. Info-Gel assumes no liability for correctness. Modifications may be made in the interest of technical improvement.