ELANTAS
Electrical Insulation

Product Information

Elmotherm® 009-0008#

Solvented Varnish

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Elmotherm® 009-0008#

Description:

Elmotherm® 009-0008# is a solvented, alkyd resin based, air-drying, Class '180°C' varnish with excellent electrical properties, good tank stability and anti-tracking qualities and incorporating a "user friendly" fungicide.

Elmotherm® 009-0008# gives a bright surface finish, excellent protection against leakage currents and is particularly useful for protecting metal surfaces against oxidation as well as being an ideal impregnant for; small transformers and coils where a rapid air-drying film is required, coating insulation boards and mouldings where a good anti-tracking finish is required and can also be used for the conformal coating of printed circuit boards.

Elmotherm® 009-0008# is compatible with most insulation systems, has good chemical and water resistance, has a thermal rating of 180°C and is UL listed under the Underwriters Laboratories OBOR2 File E151126(M).

Elmotherm® 009-0008# is also available in a range of colours - See Over

Application:

Elmotherm® 009-0008# is suitable for application by dip, flood, spray or brush.

Processing:

Components should be processed at ambient temperatures.

Coated components can, however, be forced dried at elevated temperatures up to a maximum of 80°C.

It is essential to ensure that tanks and containers of 009-0008 remain sealed or well-covered to minimise solvent loss and retain storage stability.

Maintenance of Resin:

The viscosity of Elmotherm® 009-0008# should be monitored regularly with reference to the Viscosity - Temperature graph overleaf. ELANTAS UK product X2 is the recommended solvent for viscosity modification purposes and is available from ELANTAS UK Ltd along with Type DIN4 Viscosity Measuring Cups. Temperature / Viscosity relationship graphs for BSB4, DIN 4 and Ford 4 Flow Cups are available from ELANTAS UK on request.

Properties:

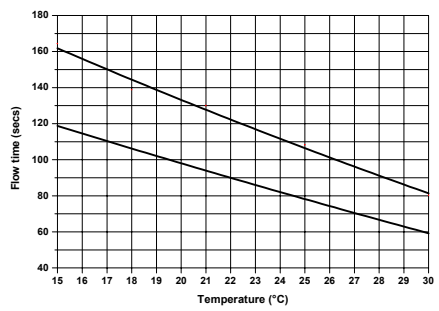
Appearance	Clear amber / brown liquid	
Viscosity	95 - 130 secs	B4 4 Flow Cup @ 21ºC
Specific Gravity	0.96	g / cm³
Mix Ratio	Single component	p.b.w.
Mix Ratio	Single component	p.b.v.
Gelation Time	1 hour	@ 21ºC
Cure Schedule	24 hours or 30 minutes	@ 25ºC @ 80ºC
Flash Point	25	º C

Elmotherm® 009-0008#

TYPICAL PROPERTIES

- ❑ VISCOSITY / TEMPERATURE
- ❑ DIELECTRIC STRENGTH
- ❑ THERMAL ENDURANCE
- ❑ DIELECTRIC LOSS
- ❑ GENERAL DATA

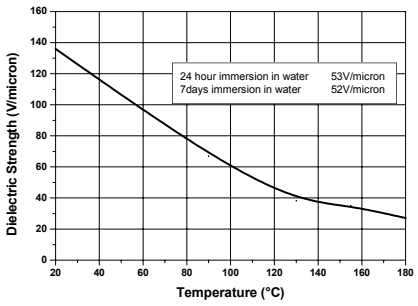
VISCOSITY



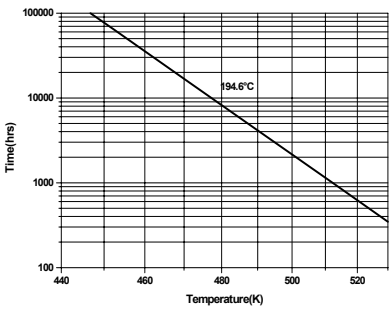
Comparison graph of Temperature vs Viscosity using a B4 flow cup. The graph, which shows the upper and lower limits of operating specification, is a small-scale version. Full-scale curves are available on request and these should be used as a guide to maintain and control tank viscosity.

DIELECTRIC STRENGTH

The dielectric breakdown strength was measured on a 50 micron film on Aluminium Panels according to IEC 60464-2, using a controlled rate of voltage rise of 500V/sec at 50 Hz.

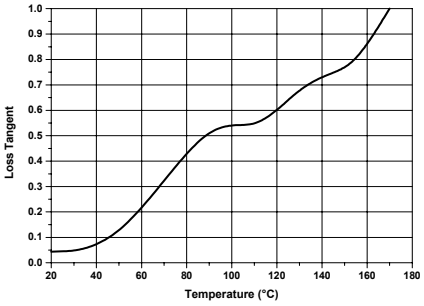


THERMAL ENDURANCE



Thermal Endurance characterisation has been assessed on the resin base using twisted pair ageing according to the procedures called up in UL1446.

The intercept with the 20,000 hour point is 194.6°C.



DIELECTRIC LOSS

The dielectric Loss Tangent vs Temperature graph is characteristic of a tough material.

(Loss Tangent measured using 50 micron film on aluminium panels according to IEC 60250)

GENERAL PROPERTIES OF THE ELMOTHERM ® 009-0008# PRODUCT RANGE

PROPERTIES OTHER PRODUCT		PRODUCTS					
		009-0008	109-0008	VA42	VA63	VA39	VA643
COLOUR		Clear	Golden	Red	Black	Grey	White
DYED / PIGMENTED			Dyed	Pigmented	Pigmented	Pigmented	Pigmented
VISCOSITY B4 CUP Secs @ 21°C (BS3900 Pt 6 (1971))		95—130	95—130	130—150	130—150	130—150	130—150
SPRAYING VISCOSITY Secs @ 21°C		30—35	30—35	30—35	30—35	30—35	30—35
NON-VOLATILE CONTENT % by weight		38—42	38—42	50—54	40– 44	45—49	44—48
CURE CHARACTERISTICS (minutes) (minimum component time at temperature)	@ 20°C @ 80°C	45-60 15-20	45-60 15-20	45-60 15-20	45-60 15-20	45-60 15-20	45-60 15-20
RESISTANCE TO TRACKING Drops @ 200 volts (to IEC 60424-2 (1974))		145	145	131	128	153	78

Whilst this air-drying varnish family of products can be used for conformal coating, ELANTAS UK also has a wide range of products specifically designed for this purpose, details of which are available on request.