

Product Information

009-0008 series

Air Dry Solvented Varnish
Electrical Insulation system
Dip & Bake / Spray / Brush



ELANTAS ZHUHAI CO LTD.

Fine Chemical Area
Gaolan Port Economic Zone
Zhuhai
Guangdong
P.R. China
519050

Tel: +86 756 7228717
Fax: +86 756 771 0416

www.elantas.com

Product Description

Elantas Zhuhai 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.

009-0008 gives a bright surface finish, excellent protection against leakage currents and is particularly useful for protecting metal surfaces against oxidation.

009-0008 is an ideal impregnant for small transformers and coils where a rapid air-drying film is required. This product is not recommended for the impregnation of deep section windings.

009-0008 is ideal for 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.

009-0008 is compatible with most insulation systems, has good chemical and water resistance, has a thermal rating on MW35 wire of 180°C and is **UL listed under the Underwriters Laboratories OBOR2 File E314793.**

Having the same resin and solvent base, a range of transparent and solid colours are available as follows which can be used as finishing varnishes on top of insulation systems up to class 180°C.

Dyed (transparent)	109-0008	Golden
Pigmented (opaque)	VA42	Red
Pigmented (opaque)	VA63	Black

Other colours available but subject to minimum quantity orders.

The range has excellent resistance to fungal growth.

Areas of Application

The preferred applications for 009-0008 series are via conventional dip and bake / trickle application for:

- Stators
- Transformers
- Coils

Please note that this product is not recommended for the impregnation of deep section windings.

Processing

009-0008 is only suitable for impregnating components at ambient temperatures. Coated components can, however, be forced dried at elevated temperatures up to a maximum of 80°C.

Cure characteristics

20°C	45-60 minutes
80°C	15-20 minutes

Application of 009-0008 can be by dip, flood, spray or brush.

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.

The viscosity of 009-0008 should be monitored regularly with reference to viscosity - temperature graphical representations which are available upon request.

Elantas Zhuhai X2 is the recommended solvent for viscosity modification purposes and is available from Elantas Zhuhai along with Type DIN4 Viscosity Measuring Cups.

Temperature / Viscosity relationship graphs for BSB4, DIN 4 and Ford 4 Flow Cups are available from Elantas Zhuhai upon request.

Packaging

009-0008 is currently sold in 4kg, 23kg & 190kg containers for ease of use.

VA42 and VA63 is currently sold in 5kg, 25kg & 200kg containers for ease of use.

Health & Safety

Refer to Elantas Zhuhai Material Safety Data Sheet (MSDS) for 009-0008.

Shelf life

24 months
(in unopened containers stored below 25°C).

Properties of component as supplied

Property	009-0008/109-0008	VA63	VA42
SPECIFIC GRAVITY @ 21° C, typical	0.94 - 0.98 gcm ⁻³	1.00 - 1.10 gcm ⁻³	1.00 - 1.10 gcm ⁻³
COLOUR	CLEAR / GOLDEN	BLACK	RED
NON-VOLATILE CONTENT	38-42%	50- 54%	50 - 54%
VISCOSITY @ 25° C Brookfield	240 - 300 cps	310-380 cps	310 - 380 cps
VISCOSITY @ 25° C BS 4# flow cup	95 - 130 s	130-150 s	130-150 s
REDUCER (THINNER)	X2 (xylene)	X2 (xylene)	X2 (xylene)

Electrical Properties

Sample thickness tested on aluminium panels. Experience has shown that for solid and semi-solid materials, the dielectric strength varies inversely as a fraction power of the specimen thickness.
All results followed cure of 7 days @ 20°C

DIELECTRIC STRENGTH (IEC 60464-2 / V/μm)	25°C	136
	90°C	67
	130°C	38
	155°C	35
	180°C	27
FOLLOWING IMMERSION IN WATER	24 HOURS	53
	7 DAYS	52

LOSS TANGENT (IEC 60250)	25°C	0.0437
	90°C	0.593
	130°C	0.695
	155°C	0.784
	180°C	>1

COMPARATIVE TRACKING INDEX (IEC 60455-2)	145 DROPS
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INSULATION RESISTANCE (BS 2782)	100V DC	1.25 x 10 ¹¹ ohm
	500V DC	2.80 x 10 ¹⁰ ohm
VOLUME RESISTIVITY (BS 2782)	100V DC	1.10 x 10 ¹⁵ ohmcm
	500V DC	2.47 x 10 ¹⁴ ohmcm

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