

Product Information

Aquanel[®] 014-3997#

1 component water based Epoxy emulsion

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Aquanel® 014-3997#

Description:

Aquanel® 014-3997# is a single component, Class H, water emulsified, zero VOC epoxy resin system.

It is designed for use in applications where high bond strength and or good moisture and chemical resistance is required as an alternative to conventional solvent based varnishes.

Application:

Dip / Dip Roll impregnation / coating of static and rotating electrical machines.

Processing:

Aquanel® 014-3997# should be dip processed at room temperature.

Dip and cure cycle duration will be dependant upon component size.

For a complete guide to the processing of components and machines in Aquanel® 014-3997# please refer to the separate processing data sheet for this product.

Maintenance of Resin:

The shelf life of this product in unopened containers is typically 12 months when stored in a dry / controlled environment. It is recommended that if the product is stored for longer than shelf life, it should be tested to confirm the emulsification and performance characteristics, particularly if it has been exposed to wide variations in temperature and/or outdoor storage.

This product should be stored between 10 – 25°C.
DO NOT ALLOW THIS PRODUCT TO FREEZE

This product must be agitated before and during use.

The viscosity and gel-time of Aquanel® 014-3997# in tanks should be regularly monitored and maintained within the recommended limits.

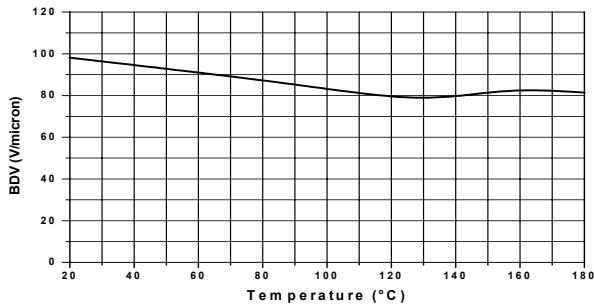
A Tank Sample Testing service is available from ELANTAS UK on request.

Properties:

Appearance	White liquid	
Viscosity	35 - 45 secs @ 25% Solids	BS B2 Flow Cup @ 21°C
Specific Gravity	1.04	g / cm ³
Mix Ratio	Single component	p.b.w.
Mix Ratio	Single component	p.b.v.
Gelation Time	15 -20 minutes	@ 165°C
Cure Schedule	Typical 4 hours	@ 165°C
Flash Point	> 100	° C

TYPICAL PROPERTIES

- DIELECTRIC STRENGTH
- BOND STRENGTH
- DIELECTRIC LOSS
- OTHER INFORMATION
- OTHER INFORMATION



DIELECTRIC STRENGTH

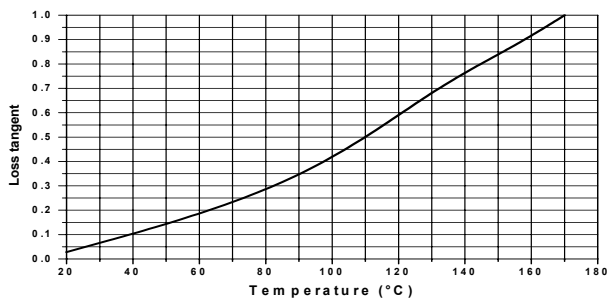
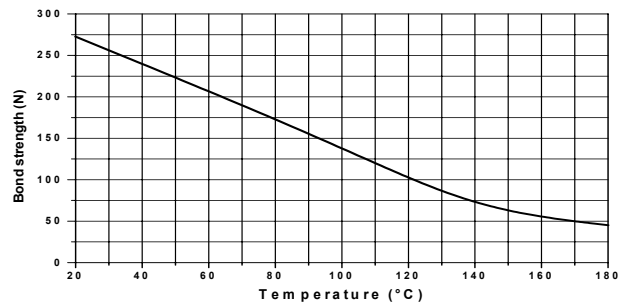
The dielectric breakdown strength was measured on a 50 micron film on Aluminium Panels according to IEC 60464-2, using a controlled rate of voltage rise of 500V/sec at 50 Hz.

The results show that the resin system retains the breakdown properties across its required temperature

BOND STRENGTH

This graph shows the effect of Temperature on the Helical Coil Bond Strength of the epoxy resin system. As can be seen from the graph the resin demonstrates good physical-mechanical properties and the profile is indicative of a high bond strength material.

(Helical Coil Bond Strength according ASTM D2519 using mw-35 type wire)



DIELECTRIC LOSS

The dielectric Loss Tangent vs. Temperature graph is characteristic of a very resilient material with good dielectric properties.

(Loss Tangent measured using an ampere turns bridge @ 50 Hz and 1000V (rms) on a 50-micron film on an aluminium substrate)

OTHER INFORMATION

Other variants of this resin system are available with various viscosities and non-volatile characteristics 20-50% (by weight).

For further information on these variants contact the ELANTAS UK Technical Sales department.

Our advice in application technology given verbally, in writing and by testing corresponds to the best of our knowledge and belief, but is intended as information given without oblige, also with respect to any protective rights held by third parties. It does not relieve you from your own responsibility to check the products for their suitability to the purposes and processes intended. The application, usage and processing of the products are beyond our reasonable control and will completely fall into your scope of responsibility. Should there nevertheless be a case of liability from our side, this will be limited to any damage to value of the merchandise delivered by us. Naturally, we assume responsibility for the unobjectionable quality of our products, as defined in our General Terms and conditions.