SynFlex Elektro GmbH
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Damisol® 3418 API 1-component-resin

Damisol® 3418 API is a one component class H high voltage epoxy resin.

Attributes

Damisol® 3418 API has the following properties:

- no VOC (Volatile Organic Compound)
- low viscosity
- high thermal and chemical resistance
- high dielectric properties
- suitable for API market

Application

Damisol® 3418 API can be used on any kind of high voltage equipment. The maximum voltage will depend on process possibilities. On rotating machines, the resin is mainly used up to 15 kV in combination with the Mica tape. It is particularly suitable for harsh environment like oil and gas industry (API-compliance).

Standards

- VOC-free acc. 1999/13/EU
- Temperature index 200 °C -IEC 60216

Delivery forms

Damisol® 3418 API is available in

- 20 kg cans
- 230 kg drums
- 1100 kg container

Storage

Damisol® 3418 API 01 can be stored minimum 12 months at max. 25 °C in sealed containers, protected from light and sun. Higher temperature can be achieved during short period of time.

Hardening

Pre-heating of the oven to 120 °C is recommended.
Recommended curing time in 2 steps:

- 4 h at 120 °C
- 8 h at 160 °C

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Protection

Refer to the material safety data sheet for complete information.

Processing

The low viscosity of this resin allows room temperature (20-25 °C) VPI impregnation. For high main wall insulation thickness, the motor temperature can achieve 60 °C (measured on steel) before impregnation. It is not recommended to perheat the resin.

It is recommended to use Nitrogen or dry air (Dew point -60 °C recommended) during the pressure phase. The storage tank has to be maintained under vacuum 5-10 mbars.

If regularly used, we recommend to maintain the resin temperature at room temperature (23 °C max.). If not used during a few days, in order to prolong its viscosity stability, it will have to be a cooled down to 15 °C (or lower). Nevertheless it is recommende to refresh regularly with new resin (at least 10 % of the storage tank volume per month). The resin has to protected from moisture, heat and contamination. A regular viscosity check is therefore necessary.

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Mechanical	Unit of measure	Conditions	Value	Test method
Viscosity	mPas	at 25 °C	200-600	ISO 2884
Gel time	min	at 135 °C, 12 g	20-26	
Density	g/cm³	at 23 °C	1.15	

Thermal	Unit of measure	Conditions	Value	Test method
Temperature index	°C	-10 % weight loss limit	201	IEC 60216
Glass transition temperature	°C		136	DMA

Chemical	Unit of measure	Condition	Value	Test method
Water absorption	%	after 7 d at 23 °C	< 0.37	ISO 62

Liquid phase	Unit of measure	Conditions	Value	Test method
Flashpoint	°C		≥110	ISO 3679

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