
Damisol® 3500 LoV 1-component-resin

Damisol® 3500 LoV is a Freon resistant heat curing epoxy resin with low viscosity.

Attributes

Damisol® 3500 LoV has the following properties:

- low viscosity
- Freon resistant
- very low VOC emission
- suitable for dipping- and vacuum-impregnating processes
- excellent long-term heat resistance

Application

Damisol® 3500 LoV is mainly used for the impregnation of medium and low voltage industrial motors. Due to the very good electrical, mechanical and thermal properties of Damisol® 3500 LoV it is also suitable for traction motors and transformers.

Standards

- Thermal class H (UL 1446) / E98511

Delivery forms

Damisol® 3500 LoV is available in:

- 20 kg cans
- 200 kg drums
- 1000 kg container

Storage

Damisol® 3500 LoV can be stored 12 months in sealed containers at room temperature (max. 25 °C). Higher temperature can be reached during short period of time. If storing the resin in a supply tank, dry air or "Nitrogen" is recommended. Protect from light, sun and heat.

Hardening

The curing time is 2.5 h at 170 °C. The exact curing time depends on different parameters.

Protection

Please avoid contact of Damisol® 3500 LoV with skin. Use safety gloves and glasses.

Please refer to the material safety data sheet for complete information.

Processing

The most commonly used processes are atmospheric impregnation and vacuum pressure impregnation (VPI). However, the good stability of the resin also allows processing at elevated temperatures (dipping, rolling and trickling processes). With the "hot dipping process", the engine can be heated up to 90 °C before impregnation.

Mechanical	Unit of measure	Condition	Values	Test method
Gel time	min	at 130 °C	12±3	gel norm 20g
Glass transition temperature	°C		122	IEC 61006
Water absorption	%	after 24h at 23 °C	≤ 0.3	ISO 62 (method 1)
Bond strength	daN	at 180 °C	8.3	IEC 1033

Electrical	Unit of measure	Condition	Values	Test method
Dielectric strength at 23 °C and 50 % r.h.	kV/mm		159	DIN 46448/VDE 0360
Dielectric strength at 23 °C after 96 h storage at 92 % r.h.	kV/mm		143	DIN 46448/VDE 0360
Dielectric loss factor	%	at 25 °C tan delta	< 1	IEC 60250
Dielectric loss factor	%	at 105 °C tan delta	≤ 2	IEC 60250
Dielectric loss factor	%	130 °C tan delta	≤ 5.5	IEC 60250

Chemical	Unit of measure	Condition	Values	test method
----------	-----------------	-----------	--------	-------------

Chemical	Unit of measure	Condition	Values	test method
Resistance	%	transformer oil	< 0.1	ISO 175
Resistance	%	chemicals HCl 10 %	≤ 0.14	ISO 175

Liquid phase	Unit of measure	Condition	Values	test method
Colour			yellowish	
Flashpoint	°C		≥100	ISO 3679
Viscosity	mPas	at 25 °C	600 ± 200	ISO 2884-1
VOC acc. 31. BlmSchV	%		< 2	IEC 60455-3