Product Information

ALBIFLEX® 246

PRODUCT DESCRIPTION

ALBIFLEX® 246 is a novel Bisphenol-A-epoxy silicone block copolymer resin which is used to manufacture high-performance elastomers. ALBIFLEX® 246 is liquid at ambient temperature, epoxy reactive and cures with all aliphatic and cycloaliphatic epoxy resin curing agents. It can be processed by all conventional casting or molding techniques.

Typical Properties

Property	Unit	Value
Appearance		yellowish, opaque liquid
Density	g/cm³	1.10
Epoxy Equivalent Weight	g/eq	1100-1300
Viscosity at 25°C	mPa·s	27000-35000

The data represents typical values (no product specification)

TYPICAL APPLICATIONS

ALBIFLEX® 246 is particularly well suited for use in elastic bonding, jointing and sealing compounds in electrical/electronic applications, for use as a binding agent in high-quality coating systems for printed circuit boards and as a base polymer for potting and casting compounds for electronic components. Along with excellent mechanical properties, ALBIFLEX® 246 provides outstanding compatibility with many resins and hardeners.

BENEFITS & ADVANTAGES

The specially designed block copolymer structure of ALBIFLEX® 246, made up of epoxy and silicone segments, provides an outstanding combination of properties

- Much higher strength than 1 or 2 component silicone elastomers
- Excellent adhesion on most substrates
- Better thermal stability than polyurethane elastomer-sLower water vapor permeability than silicones
- Hardness between Shore A 30 and D 80, depending on the curing agent used, with excellent elongation
- Very low halogen content

Upon curing ALBIFLEX® 246 forms a segmented molecular structure consisting of soft polysiloxane and rigid polyepoxy segments. This type of molecular structure is found in many high-performance elastomers, i. e. in polyurethanes and many thermoplastic elastomers. The combination of polysiloxane and epoxy units in the polymer structure creates an elastomeric material combining the outstanding electrical and thermal properties of silicones with the high mechanical strength and the excellent adhesion of epoxy resins.

DOSAGE

ALBIFLEX® 246 can be cured with almost any epoxy resin curing agent including all kinds of aliphatic or cyclo-aliphatic amines and amides, acid anhydrides and catalytic curing agents (e.g. tertiary amines and boron tri-fluoride complexes). Elastomer products with high thermal stability, strength and elongation at break can be obtained by curing with cycloaliphatic amines, anhydrides, or DICY. ALBIFLEX® 246 can also be cured with resin/curing agent pre adducts or pre condensates or with mixed curing agent systems.

ALBIFLEX® 246 shows only limited compatibility with aromatic amines. Suitable curing agents include pre-condensates, adduct and mixed curing agent systems. Curing agents should be avoided which show turbidity (i.e. increased turbidity as compared to ALBIFLEX®) upon mix-

ing with ALBIFLEX® 246 as this is an indication of incompatibility. However, possible whitening during curing is not an indication of a problem but instead of the desired separation in soft and rigid phases. Unlike normal epoxy resins, ALBIFLEX® 246 does not necessarily have to be cured with the stoichiometric ratio of curing agent.

ALBIFLEX® 246 can be formulated with other epoxy resins, reactive diluents, plasticizers, etc. for further modification of finished product properties. Since ALBIFLEX® 246 has only limited compatibility with aromatic epoxy resins (e.g. formulations based on Bisphenol A-F or novolac), for toughening ALBIFLEX 246 should be used in dosage levels <20% (recommended 3-6%). For flexibility a dosage level >80% is required.

PACKAGING

25 kg pail

SHELF LIFE

6 month if stored in the original unopened container. At a storage temperature of 2°C to 8°C shelf life can be significantly prolonged.

HAZARDOUS SUBSTANCE

Information concerning

- Classification and labelling according to regulations for transport and for dangerous substances
- Protective measures for storage and handling
- Measures in case of accidents and fire
- Toxicity and ecological effects

is given in our material safety data sheets.

REGISTRATION LISTING SUMMARY

The relevant components of ALBIFLEX® 246 are listed/ registered or exempt in the following chemical inventories.

Registration Listings	
Registry	**Status**
Canada (DSL)	Yes
China (IECSC)	Yes
EU (EINECS/ELINCS)	Yes
Taiwan (TCSI)	Yes
USA (TSCA)	Yes

Disclaimer

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