ELFIX 510

ELFIX GLUES

Characteristic

ELFIX 510 is a two-component, electrically insulating sealant based on a modified epoxy resin with a different content of inorganic fillers. Cures at room temperature. Accelerating curing can be achieved with elevated curing temperature.

It is characterized by the following properties:

- excellent electrical and mechanical properties up to 135 °C
- Excellent adhesion to metals, glass, wood, concrete, ceramics, porcelain and thermosetting
- to thermoplastics (polyethylene, polypropylene, plasticized PVC) and to impure greasy surfaces, adhesion is insufficient

Field of application

ELFIX 510 is suitable for bonding, sealing and insulation in various industrial areas. In electrical engineering, for example, on the:

- Coiling of coils
- Fixing the winding faces of rotating machines
- Reinforcement of transformer coils
- Repair damaged cable sheaths.

It is also used to:

- Sealing cracks of various metal tanks, including gas tanks, molding and shaping
- In combination with glass fabric, it can be used to laminate damaged parts of a smaller body
- Households are used for various repairs and gluing of glass, porcelain, wood and metal objects

Processing

ELFIX 510 consists of two components:

- ELFIX 510 Z is a modified epoxy resin, yellow viscous substance free from clots, with no sedimentation
- ELFIX 410 S is an amino hardener, it is grey to black viscous substance free from clots, with no sedimentation

ELFIX 510 components Z and S are mixed at a prescribed weight ratio 3:2 and have to be thoroughly homogenized. The homogenized mixture is applied to the degreased and roughened surface of the bonded materials. The workability of the mixed mixture depends on quantity and temperature. The values in minutes listed in the table below serve as indicative times for processing the homogenized mixture in an amount of 50g - 500g. After curing, the material can be machined by grinding, sawing, turning, or coat with paint. Exact instructions for processing will be provided based on the specific application method. Exact instructions for processing will be provided based on the particular application method.

When handling the impregnator, follow the safety instructions in the Safety Data Sheet.

To clean equipment and work tools from non-hardened impregnant, it is recommended to use VUKI thinner T5.

Hardening

Hardening conditions:

- Conventional curing: 24 hours at 20°C
- Curing at elevated temperature: 1 hour at 100°C

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Processing properties

Parameter	Standard	Condition	Value		Unit	Description
			ELFIX 510 Z	ELFIX 510 S		
Fillers content			**39**	**40**	%	
Density	STN EN ISO 2811-1		**1,4**	**1,3**	g/cm^3	
Viscosity	STN 67 3014	20 °C	**max. 400000**	**max. 400000**	mPa.s	
Shelf life		max. 25 °C	**12**	**12**	month	
Parameters after mixing			**ELFIX 410**			
Pot life		10 - 15 °C 20 – 30 °C 50 – 60°C	**40 – 50** **20 – 30** **5 – 10**		Min	
Hardening time		20 °C 100 °C	**24** **1**		hour	

Parameters after hardening

Parameter	Standard	Condition	Value	Unit	Description
Tensile strength			**24**	MPa	
Bending strength			**36**	MPa	
Impact toughness			**7**	kJ/m	
Power loss factor			**3,5**	%	
Relative permittivity	STN EN 60455-2	50 Hz, 23 °C	**4,4**		
Volume resistivity	STN EN 62631-3-1		**10^{13}**	Ω.m	
Dielectric strength	STN EN 60243-1	23 °C	**14**	kV/mm	

Packing, storing and manipulation

Both components are supplied in non-returnable, clean, unused metal packaging weighing 5kg or 1kg, or in other packages, as agreed between the manufacturer and the customer. ELFIX 510 is stored in tightly closed containers in a dry, ventilated place at + 5 °C to + 25 °C. Subject to storage conditions, quality is guaranteed 12 months from the date of manufacture.

Safety

Safety and health instructions are given in the SDS.

Wastes resulting from the treatment of ELFIX 510 are disposed of as follows: The packaging is disposed of as other metal scrap after complete emptying. They must not be cut using open flame processes (flame cutting, etc.). ELFIX 510 residues are disposed of by incineration at temperatures above 800 °C in industrial waste incinerators for nitrogen oxides, carbon dioxide and water.

VUKI SINCE 1950

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NOTE

The information in this document is consistent with our best knowledge of the date of publication. This information can be a subject of revision without prior notice if new knowledge and experience are available. The data provided falls within the normal range of product properties and relates only to the specified material. These data may not apply to materials used in combination with other materials or ingredients or other processes, unless expressly stated otherwise. The data provided should not be used to set limits or used separately as a basis for the sample: they are not intended to compensate for any testing that may be necessary to make a decision as to whether the specific material is suitable for your particular purpose. Because VUKI cannot predict all variants of end-use product conditions, VUKI does not provide guarantees and has no responsibility with respect to any use of this information. Nothing in this publication is considered to be a use or recommendation to violate any patent rights.

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