

KLM 474 SOLVENT FREE EPOXY ADHESIVE

DESCRIPTION

KLM 474 is a solvent free epoxy based adhesive.

APPLICATION AREAS

KLM 474 is used in wood, plywood, FRP and sheet metal adhesion. It has a high humidity tolerance.

TECHNICAL PROPERTIES

Number of Components	2	Conventional Working Life (min., at 20°C, %65 rel. hum., 500 ml) (EN ISO 302-7)	60*
Mixing Ratio	A/B		
By Weight	50/50		
By Volume	50/50	Curing Periods (at 23°C) (TS 4317)	
Mix. Density (g/cm ³ , at 20°C) (TS EN ISO 2811-1)	30 – 60	Surface Dry (min.)	90 – 120
		Dry to Touch (hours)	7 – 8
		Fully Cured (week)	1
Mix. Viscosity (mPas, at 25°C, DIN 53229)	3.000 – 4.000	Conventional Assembly Time (for 290 mm) (min., at 20°C, %65 rel. hum.) (EN ISO 302-5)	120*

** These values are only given for comparison with other types of adhesive systems. They are not intended to be used for production.*

ADVANTAGES

- **KLM 474** provides perfect adhesion and water isolation,
- It can adhere on wood surfaces even at humid conditions.
- 1:1 mixing ratio by weight and volume makes it very easy to use.

CERTIFICATES

Lloyd's Register Certificate No: MATS 2344/3
Rina Certificate No: DIP 078611XT

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MECHANICAL PROPERTIES

EN ISO 302: ADHESIVES FOR LOAD-BEARING TIMBER STRUCTURES – TEST METHODS			
PART 1: DETERMINATION OF BOND STRENGTH IN LONGITUDINAL TENSILE SHEAR STRENGTH	CONDITIONING		VALUE (N/mm ²)
	A1		12,5
	A2		6,0
	A3		11,5
	A4		6,7
	A5		11,0
PART 2: DETERMINATION OF RESISTANCE TO DELAMINATION	D, DELAMINATION, %		2,5
PART 3: DETERMINATION OF THE EFFECT OF ACID DAMAGE TO WOOD FIBRES BY TEMPERATURE AND HUMIDITY CYCLING ON THE TRANSVERSE TENSILE STRENGTH	TRAVERSE TENSILE STRENGTH (N/mm ²)	THE LOAD AT FAILURE (N)	EST. OF THE PROP. OF TESTED SURFACE COV. BY WOOD FIBRE (%)
	2,8	3.400	70
PART 4: DETERMINATION OF THE EFFECTS OF WOOD SHRINKAGE ON THE SHEAR STRENGTH *	SHEAR STRENGTH (N/mm ²)	MAXIMUM LOAD AT FAILURE (N)	EST. OF THE PROP. OF TESTED SURFACE COV. BY WOOD FIBRE (%)
	2,4	48.000	95

* Test conducted according to the standard given above does not represent the performance of the adhered pieces in practice. Designer has to consider this notice using the values.

APPLICATION

WORKING CONDITIONS

The temperature in the operation area should be in the range of 10°C – 30°C.

MIXING

Component A and B are mixed in their own cans with a mixer. Then the component B is poured into the can of component A during stirring, and they are mixed together using a mixer, till a homogenous mixture is obtained. The mixing period shouldn't exceed 2 – 5 minutes. Because mixer could introduce air bubbles into mixture, the rotation of the mixer shouldn't exceed 400-500 rpm. If product is purchased in big containers (i.e. drums), please use the necessary measurement instruments for correct mixing.

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SURFACE PREPARATION AND APPLICATION METHOD

Before application, surface must be free of rust, oil, gres, dust and any other contaminants.

Following primers are recommended for the following materials:

Wood: **AV 483 Solvent Free Epoxy Based Impregnation Primer**

GRP: **KL 675 Solvent Free Epoxy Based Lamination and Osmosis Treatment System**

Metal: If SA 2½ grade sandblasting is possible: **GR 406 Zinc Rich Epoxy Primer**.

If St 2 grade surface preparation is possible: **GR 4480** or **GR 4490 Solvent Based Surface Tolerant Epoxy Primer** or **SH 5080 Surface Tolerant Epoxy System**.

After surface preparation and primer application, **KLM 474 Solvent Free Epoxy Adhesive** is applied onto surface using a trowel, roller or brush. Adhered parts must be kept in press at 25 °C for 10 - 12 hours.

THINNER

DO NOT ADD ANY THINNER!!!

EQUIPMENT CLEANING

Right after the equipment is used, they must be dipped into a cup filled with **PR 20 Brush Cleaner**.

Following this, they must be washed with water.

CONSUMPTION

It changes according to application.

PACKAGE

A and B components are provided in 2 separate packages.

STORAGE AND SHELF LIFE

KLM 474 should be kept in its original package and in closed and dry places, which are at 15 – 25 °C. It must not stay under direct sun light. Under these conditions, the shelf life is 12 months.

SAFETY MEASURES

Product's skin contact must be avoided. In case of contact, skin must be washed with water. Eyes should be flushed with water and medical attention must be sought immediately. Wear suitable protective clothing, gloves and goggles. Keep away from children.

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ATTENTION

- Application surface temperature must be between 10°C-30°C.
- No stepping or water contact is allowed on the application area at least for 24 hours.
- Just enough quantities of the product must be mixed for the application. Application mustn't stop till the whole mixture is consumed.
- **KLM 474's** complete curing time at 20-25°C is approximately 7 days.

The above specifications are based on laboratory test results. This data sheet is valid until subsequent issue. We reserve the right to change the given data without notice.

**Duratek®**

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