

# MITOPUR E20

## one component polyurethane adhesives

**DESCRIPTION** MITOPUR E20 is one component polyurethane, solvents free adhesive which hardens with humidity cross-linking reaction. Joint prepared with this glue is water resistant and temperature resistant from - 40°C to + 90°C and will meet requirements according to EN 204, stress group D4.

**FIELDS OF APPLICATION**

Bonding of composite elements based on:

- wood all types of wood  
wood with high moisture content  
for exterior exposure (windows and doors)
- metals different types of steel, sheet aluminum
- insulating materials polystyrene, PVC, ABS, polyurethane ...  
polyurethane foams, mineral and glasfiber boards
- other materials: hard plastic materials, cement, ceramics, stone ...

Recommendation: at least one surface should be porous.

**CHARACTERISTICS**

Chemical base	isocyanate prepolymer
Appearance	brown liquid
Appearance of glue film	beige
Viscosity at 23°C,(ISO 2555-Brookfield RVT, spindle 5 / 50 rpm))	2 500 – 5 000 mPas
Open time at 20°C and 65% RH	
- Mitopur E20:	
- without purposeful moisture supply	app. 20 minutes
- with purposeful moisture supply	app. 12 minutes

**DANGEROUS GOODS CLASSIFICATION** The product is classified as dangerous ( see safety data sheet)

**APPLICATION**

**Preparing of the gluing surfaces**  
The adherents must be clean, free from dust, grease and other dirtiness. Remove release agents from plastic surfaces, roughen and remove dust from sheet metals and hard plastics, pretreat aluminium foils and prime metal if necessary. Sanding of very smooth surfaces is recommended. Aluminium surfaces should be treated chemically.

**Applying of adhesive**  
Single sided application to the surface which is less porous is sufficient.  
Application methods:  
- with spatula, roller, brush  
Clean tools and applicators immediately after use.

**Hardening and pressing time**  
The adhesive cures with moisture. If moisture of wood is less than 15% or in the case of bonding two unporous surfaces we recommend purposeful moisture supply (atomizing of water, app. 40 g/m<sup>2</sup>).  
A pressing power that guarantees sufficient contact of adherents is sufficient. A good joint fit should be achieved. For bonding wood we recommend:  
- for soft wood 0,2 - 0,6 N/mm<sup>2</sup>  
- for hard wood 0,5 - 1,2 N/mm<sup>2</sup>

The squeezed out glue must be removed immediately.

The hardening time is depending on temperature (environment, adherents, glue), humidity of air and adherents, quantity of applied adhesive and purposeful moisture supply. Higher air humidity, purposeful moisture supply and increased temperature accelerate curing reaction.

Immediately after glue applying purposeful moisture supply is recommended. Then press gluing parts together with the pressure which makes them fit is sufficient. Hardening of the adhesive and pressing time can be shorted by heating, but not above 60°C.

Adhesive	Minimum pressing time (iron plates/mineral wool)			
	at 15°C	at 20°C	at 45°C	at 60°C
MITOPUR E20 with water supply	60 min	20 min	15 min	10 min

WARNING: during reaction of curing carbon dioxide is released. Depending on quantity of glue applied and additional moisture supply foaming in the glue line will occur. That might be disturbing specially in the case of gluing two unporous surfaces together.

**The most convenient binding conditions are:**

- temperature of wood and all materials involved 18 - 20 °C
- relative humidity 60 - 70 %
- moisture of wood min 8%
- glue application 80 - 200 g/m<sup>2</sup>
- purposeful moisture supply app. 40 g/m<sup>2</sup>

Do not glue at temperatures below +15°C.

Because of various gluing materials and their different adherence characteristics, exact values must be established for the particular application according to conditions in question. Avoid additional working operations on glued particles before 24 hours after gluing. The final strength and water resistance is achieved after some days.

**CLEANING**

Hardened reactive adhesives are chemically very resistant, therefore is cleaning of tools from rests of adhesive very hard.

Cleaning is easier when the adhesive is still unhardened.

Still liquid unhardened adhesive is possible to remove mechanically with paper or rag soaked with cleaner Mitopur CL04 or thinner Mitosol S50. Difficult to clean parts can be cleaned by soaking in cleaner or thinner.

Testing of cleaning is recommended before use.

**PACKING**

Mitopur E20 metal drum 225kg, metal tin 20kg and 6kg, plastic bottles 500g and other packing units according to agreement.

**STORAGE**

Keep in air-tightly closed original packing in dry place at temperatures between +5°C and +25°C. Protect from humidity. In contact with moisture carbon dioxide is released.

Opened doses should be used as soon as possible.

Properly stored adhesive could be used at least 6 months.

The information provided herein, especially recommendations for the usage and application of our products, is based on our knowledge, results of laboratory tests and practical experience gained to date. We guarantee a constant quality of our products under our technical specifications. Technical advice of our application department is available without obligation. This does not release the buyer from testing our products in his own responsibility with respect to their suitability for intended application and application process. Such an evaluation should be repeated if materials are changed in any way or bought from a different source. We do not accept any liability with regard to above information or with regard to any verbal recommendation since different materials used in conjunction with our products as well as varying working conditions are beyond our control.