

FIX D4

WATER RESISTANT WOOD ADHESIVE

Water resistant wood adhesive based on polyurethane, which hardens with the help of humidity. Joint prepared with this glue is water resistant D4 according to EN 204 and temperature resistant from -40 °C to +90 °C.

PROPERTIES

- For indoor and outdoor surfaces.
- D4 water resistant joint.
- High temperature resistance.
- Solvent free.

TESTS AND CERTIFICATES

- Classification of non-structural adhesives for wood and wood products: EN 204 D4 [wood-wood]

AREA OF USE

- For gluing wood: all types of wood (even exotic), wood with a high moisture content, wooden products for the exterior - joinery.
- For gluing metals: various steels (except galvanized and stainless steel), chemically treated or painted aluminium.
- For adhesion of insulation materials: PU foam, mineral wool, glass wool, polystyrene foam.
- For gluing other materials: various plastics, gypsum boards, ceramics, stone, concrete.
- It is recommended that at least one of the surfaces is porous.

TECHNICAL DATA

Base	polyisocyanate prepolymer
Appearance	dark brown liquid
Joint colour	beige
Viscosity at 23 °C [Brookfield RVT, vr.4/20 rpm ⁻¹]	2500- 4000 mPa s
Dry matter content	98-100 %
Open time at 20 °C, 65% relative humidity:	
- Without water mist application: approx. 20 minutes	
- By applying water mist: approx. 12 minutes	

INSTRUCTIONS FOR USE

- Preparation of glued elements: Surfaces to be glued must be clean and dry. Everything that is not firmly adhered to the surfaces must be removed: e.g.: dust, rust, poor coating, etc. It is also necessary to remove a layer of oil from metal surfaces and a layer of release agent (silicone, wax ...) from plastic surfaces. For degreasing, we recommend the use of organic solvents such as acetone or cleaning gasoline. Smooth surfaces should be roughened over the entire surface. Sandblasting or sanding with coarse sandpaper [granulation 60 to 80] is recommended. Grinding should be in all directions or circular. After sanding, the surface must be blown out with compressed air [do not wipe]. Aluminium surfaces must be pre-chemically treated by anodizing, chromating or phosphating, so they are not sanded. Raw, poorly chemically treated and very smooth [e.g. polished, even if processed] aluminium is not suitable for gluing. In any case, we recommend a preliminary gluing test.
- Application method: Apply the glue on one side with a nozzle, brush, roller or spatula. The adhesive hardens with moisture, so in the case of gluing dry wood [moisture below 15 %] or gluing other materials together, we recommend applying water in the form of water mist on the adhesive film or other glued surface [up to 40 g/m²].



- Compression and hardening: Immediately after applying the adhesive, the adhesives are compressed so that the surfaces fit well. Use a press to achieve sufficient contact. When pressing wood, we recommend the use of a pressure of 0.2 to 0.6 N/mm² for low density wood and 0.5 to 1.2 N/mm² for high density wood.
- The curing time depends on the temperature of environment, the adhesive and glued elements, the humidity of the wood, the relative humidity and the amount of adhesive applied. Increased humidity, added water in the form of water mist and elevated temperature shorten the open time of the adhesive and accelerate the curing reaction of the adhesive. Immediately after applying the adhesive and spraying with water mist, the adhesives are compressed so that the surfaces fit well. The curing process can be shortened by heating the glued elements, but not above 60 °C.

Adhesive	Minimum compression time [sheet metal/mineral wool]			
	at +15 °C	at +20 °C	at +45 °C	at +60 °C
FIX D4 with water mist	60 min	20 min	15 min	10 min

- **WARNING:** during the curing reaction of the adhesive, carbon dioxide gas is formed, so the adhesive more or less foams depending on the thickness of the application, the gap between the glued elements, temperature, humidity and pressure. For porous materials, it penetrates inside and fills the gaps, but for gluing two closed non-porous surfaces, this can be annoying.
- The optimal working conditions are:
Temperature of room, adhesives and glued materials: 18-20 °C
Relative humidity in the room: 60-70%
Wood moisture: min 8%
Adhesive application rate: 80 -250 g/m²
- We do not recommend gluing at temperatures below + 15 °C.
- Due to the different composition of glued elements, many different materials and large differences in adhesive properties, we recommend testing them before using the adhesive in production. The glued elements can be processed after 24 hours, and the final strength and water resistance of the joint is reached after a few days.
- **Cleaning:** Hardened adhesive is chemically very durable, so tools [mixers, applicator blades, applicator rollers, etc.] are accordingly difficult to clean. Cleaning is most effective while the glue is still fresh, i.e. not cured:
 1. Wipe the uncured adhesive mechanically with a cloth or paper and, if necessary, use organic solvents: polyurethane varnish thinner, acetone or ethyl acetate.
 2. Leave the cured adhesive to soak in one of the above-mentioned solvents for several hours. The glue swells and can be removed mechanically.

Attention! Organic solvents are volatile and flammable; mixtures of vapour and air are explosive. Before use, be sure to read the safety data sheet and follow the instructions for safe handling of hazardous substances, i.e. preparations. Alcohol, nitro thinner and thinner for alkyd paints are not suitable solvents for polyurethane adhesives.

PACKAGING

- 500 ml bottle

STORAGE

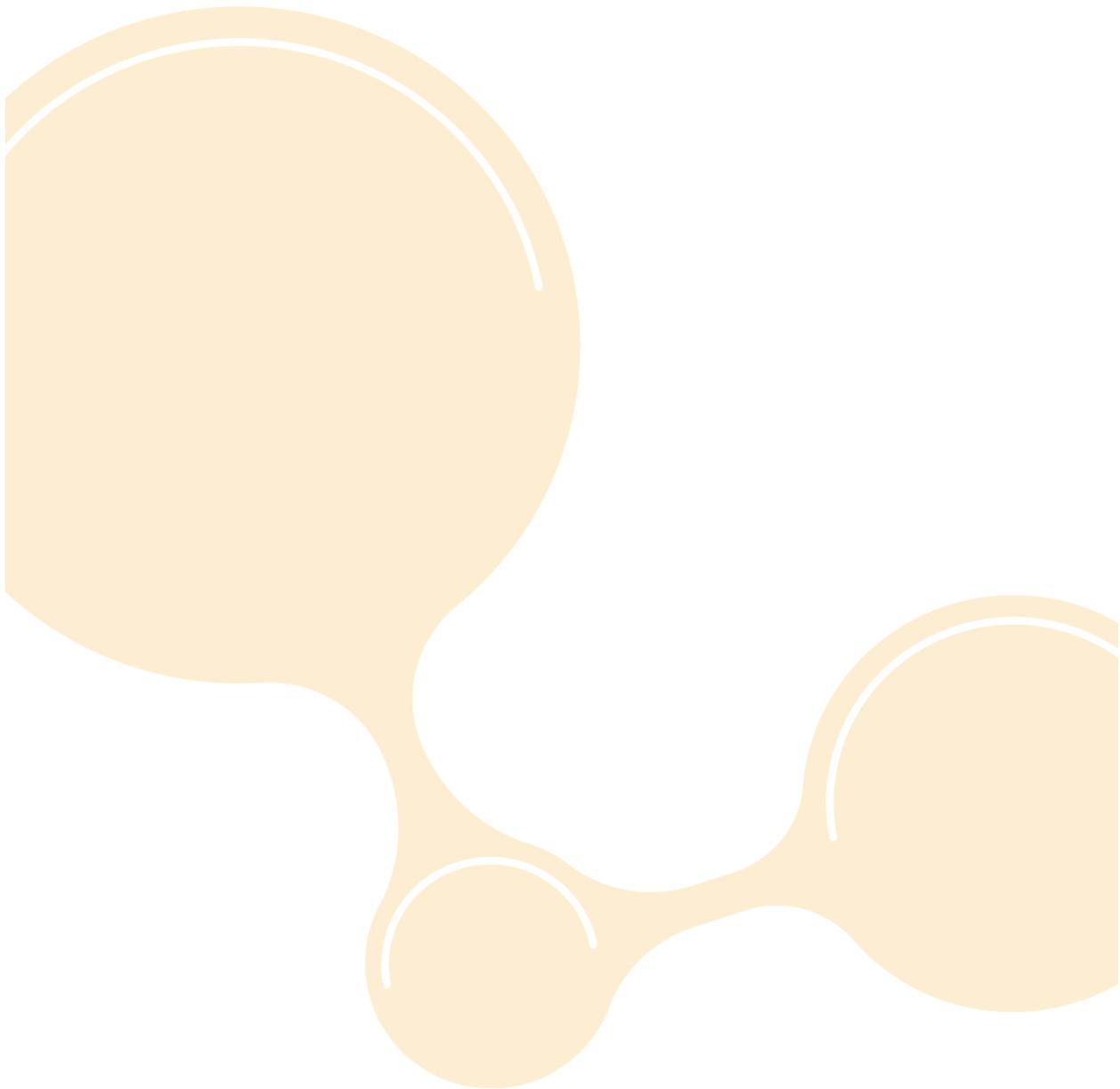
12 months in a dry place at a temperature between 5 °C and 25 °C, in the original sealed packaging. The adhesive must not come into contact with water. Upon reaction with water, carbon dioxide gas is evolved. Opened packaging must be airtight, protected from moisture and used as soon as possible.

HEALTH, SAFETY, HANDLING AND DISPOSAL INFORMATION

Additional safety information, safe handling instructions, information on personal protective equipment, and disposal information can be found in the safety data sheet. Safety data sheet available on request. You can also obtain a copy from your TTK sales representative.

WARNING

The information given is based on our tests and practical experience. However, due to specific conditions and working methods we recommend preliminary tests for each case of use.



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