

## **Icema™ R 145/12**

**Type of Product** Moisture curing one component polyurethane adhesive.

**Product Characteristics**

- solvent free
- good adhesion to a variety of different substrates
- medium open time
- good balance between open time/press time

**Typical Applications** Different kinds of assembly work as well as production of sandwich panels for the caravan industry. Door production.

**Suitable substrates** Treated metals, galvanised or treaded steel, anodized or coated aluminium, thermosetting plastics, HPL, GRP, rigid PVC, PS, ABS, wood and cemented materials.

### **Typical Properties**

Property	Value
Base	polyurethane
Colour	yellow orange
Density at 20°C	approx. 1.10 g/cm <sup>3</sup>
Viscosity at 20°C	approx. 3 700 mPa.s
Shelf life	12 months

**Application Instructions**

Application temperature: at least +10°C  
According to type of application use: 100 – 200 g/m²

Open time (at +20°C, 50% relative humidity):

- without spraying of water: approx. 18 minutes
- after spraying of water: approx. 9 minutes

**General:**

This adhesive cross links in the presence of moisture to form a solid, permanently elastic film. The water in the ambient air and parts to be bonded may already be sufficient for this process. In normal cases water is sprayed. Analyses on the influence of temperature and humidity on the strength of a completely cured glue should be carried out with respect to the specific application. More moisture and higher temperatures accelerate the cross-linking process and therefore influences the shelf life, open- and curing time of the adhesive. The times indicated in this data sheet are therefore only guidelines, which may vary according to the existing conditions.

**Special attention:**

Carbon dioxide forms during the curing reaction so that the adhesive foams to a varying degree, depending on the amount applied, the type of bond, the temperature and the pressure exerted. This property is desired for many applications and is a special advantage of this adhesive. In certain individual applications foaming may however be disadvantageous or exclude this type of adhesive. The foam developing in the glue joint, when bonding together porous materials, normally penetrates the underground quite independently of the processing viscosity. This also holds true for EPS foam, as long as the adhesive still features a processing viscosity of less than 8 000 mPa.s (+20°C). Homogeneous penetration is no longer guaranteed for higher viscosities. Visible bulges may very likely form on the top layer. The bonding of dense materials, e.g. aluminium sheet with extruded polystyrene foam, there is generally the liability of bulges to appear, as the foaming adhesive cannot expand freely. A possible solution are ventilation slots, cutting 1 – 2 mm deep into the rigid-foam.

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**Application Instructions****Instructions for Application:**

This adhesive is applied onto one side.

Following methods are suitable for application: hand rollers or toothed trowel; nozzle or spinning application; spraying (ventilation is necessary).

**Addition of Moisture:**

To accelerate curing and gain independence from the varying degrees of moisture available, a fine spray of water is applied. The water is sprayed onto the applied adhesive. In some cases, the opposite side may also be sprayed.

Usually 5 – 10% of the applied adhesive is sufficient.

**Assembling and Pressing:**

The parts may be assembled and pressed immediately after applying the adhesive and spraying it with water. This must take place within the open wet time. The parts should continue to be pressed until the adhesive has cured to ensure the closest contact of the bonding surface.

The amount of pressure required, and the type of pressing process employed is largely determined by the type and size of the parts to be bonded, since the adhesive itself does not require pressure in order to cure and the pressure only serves to hold the bonding parts together. The pressing times required are completely dependent on substrate, temperature and degree of moisture available.

Exact times for the applications must be individually determined, as they may vary due to existing conditions. Ask for our advice on this.

**Cleaning Instructions  
Typical Packaging  
Storage Conditions**

Please contact your local Sales Office for available cleaning solutions. Please contact your local Sales Office for available packaging options. In original sealed packaging protected from sun, dust, moisture and high temperatures. Clean and dry conditions above -25°C and below +35°C.

**Disposal Advice  
Safety Advice**

Please refer to the MSDS for disposal instructions. Please refer to the MSDS for safety advice.

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