



### Icema™ R 145/31

**Type of Adhesive** Solvent-free moisture cure one-component polyurethane adhesive.

**Product Benefits**

- solvent free
- high strength
- medium open time

**Typical Applications** Bonding for different kinds of assembly work.

**Suitable substrates** Galvanised steel, high-grade steel, undercoated steel, aluminium, non-ferrous metals, as well as thermosetting plastics, HPL, PS, GRP, rigid PVC, ABS, wood and cemented materials.

Due to the large number of different areas of application and possible differences in the reaction of the bond, testing is required before use in production.

#### Typical Properties

Property	Value
Colour	yellow
Density at 20°C	approx. 1.10 g/cm <sup>3</sup>
Viscosity at 20°C	approx. 7 200 mPa.s
Shelf life	12 months



### Application Instructions

- Application temperature: at least 10°C  
Open time (20°C, 50% relative humidity):
- without spraying with water: approx. 45 minutes
  - after spraying with water: approx. 15 minutes

Cleaning agent: ISA-Verdünner 1 (for cleaning equipment)  
Use: 100 – 200 g/m<sup>2</sup>, according to type of application

### Instructions for use:

This adhesive crosslinks in the presence of moisture to form a solid, permanently elastic film. Although the water vapour in the ambient air and parts to be bonded may already be sufficient for this process, water is usually sprayed onto the bonding site. Analyses on the influence of temperature and humidity on the solidity of a completely cured glueing are to be conducted with respect to the specific application.

More moisture and higher temperatures accelerate the crosslinking process and therefore influence the shelf life, open wet time 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 render the adhesive unsuitable.

The foam that develops in the glue joint when bonding together porous materials normally penetrates the underground quite independent of the processing viscosity. This also holds true for EPS foam, as long as the adhesive still features a processing viscosity of less than 8000 mPa.s (20°C). Homogeneous penetration is no longer guaranteed for higher viscosities. Visible bulges may very likely form on the top layer. With the glueing of dense materials, e.g. aluminium sheet with extruded polystyrene HR-foam, there is generally the liability of bulges to appear, as the foaming adhesive cannot expand freely. A possible solution are ventilation slots that are cut 1 – 2 mm deep into the HR-foam.

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### Instructions for Application:

This adhesive is applied to one side of the bond. The following are suitable for application: hand rollers, toothed trowel, rolling machines, the "Lutzke" spinning technique" or the "airless air-combi" spraying technique. When applied by spraying, suction ventilation is absolutely necessary.

### Addition of Moisture:

To accelerate curing and gain independence from the varying degrees of moisture available, a fine spray of water is usually supplied to the bonding site.

Although water is sprayed in most cases onto the coating film of 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

Please contact your local Sales Office for available cleaning solutions.

### Typical Packaging

Please contact your local Sales Office for available packaging options.

### Storage Conditions

In original sealed packaging protected from sun, dust, moisture and high temperatures. Clean and dry conditions above -25°C and below +35°C. Protect from moisture.

### Disposal Advice

Please refer to the MSDS for disposal instructions.

### Safety Advice

Please refer to the MSDS for safety advice.

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