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TECHNICAL DATA SHEET

Icema™ R 145/75

Type of Adhesive

Solvent-free moisture cure one-component polyurethane adhesive.

Product Benefits

Very good adhesion to pre-treated metals.

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, DKS, PS, GF-polyesters, rigid PVC, ABS, wood and cemented materials.

Due to the large number of different materials, applications and possible resulting differences in the adhesion properties, an adhesion test is mandatory before introducing the adhesive into the actual production process.

Typical Properties

Property	Value
Colour	yellow/orange
Density at 20°C	approx. 1.10 g/cm^3
Viscosity at 20°C	approx. 5 100 mPa.s
Shelf life	6 months

Application Instructions

Application temperature: at least +10°C

Open time (20°C, 50% relative humidity):
- without spraying with water: approx. 7 minutes
- after spraying with water: approx. 3 minutes

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

Instructions for use:
General:
This product cross-links 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 strength of a completely cured glue are to be carried out with respect to the specific application.

More moisture and higher temperatures accelerate the cross-linking 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 guide numbers 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 eclude using 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 rigid-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. With the bonding of dense materials, e.g. aluminium sheet with extruded polystyrene rigid 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.

Application Instructions

Instructions for Application:
This product is applied to one side of the bond. The following tools are suitable for application: hand rollers, toothed trowel, the ”Lutzke” spinning technique” or the ”airless air-combi” spraying technique.
When applied by spraying an exhauster 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.
Approximately 10% water of 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 surfaces. 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.

Pressing Times:
The pressing times required are completely dependent on the temperature and degree of moisture available.
The following are standard values if water is sprayed onto the bonding site, at:

- +20°C approx. 15 minutes
- +40°C approx. 4 minutes
- +60°C approx. 1 minute

With these times a strength is reached which allows further working of the parts. The final strength is reached after several days.

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

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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 +5°C and below +25°C. Protect from moisture. Opened containers must be closed airtight and used up as soon as possible.
Disposal Advice	Please refer to the MSDS for disposal instructions.
Safety Advice	Please refer to the MSDS for safety advice.

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