



In Brief

RESION AcryWeld is a very thin, transparent, single-component solvent-based adhesive for fast bonding of rigid plastics such as acrylic (PMMA), polycarbonate, ABS and polystyrene.

Thanks to its water-like consistency, this adhesive is particularly suitable for capillary bonding. The adhesive flows naturally between closely fitting parts, creating strong and virtually invisible bonds.

Applications

RESION AcryWeld is suitable for bonding various rigid plastics, including PMMA (acrylic), polycarbonate, ABS, polystyrene, PVC, CAB and PETG.

The adhesive is commonly used for manufacturing displays, advertising objects, plastic housings and other constructions requiring fast and strong bonding.

Also suitable for bonding Alurapid (3D) tapes and Elkamet.

Not all plastics and material grades react in the same way to the adhesive. Always carry out a preliminary test to determine whether the adhesive is suitable for the intended application.

Properties

- Very thin, water-like consistency
- Transparent
- Fast bonding
- Suitable for capillary bonding
- High final bond strength
- Easy application using a dispensing needle or syringe
- Suitable for various rigid plastics
- Single-component adhesive, no mixing required



Application Instructions

Ensure that the surfaces to be bonded are clean, dry and free from oil and grease. Degrease the surfaces beforehand using a suitable degreasing agent.

Apply the adhesive at a temperature between 18°C and 25°C. Ensure adequate ventilation during application.

Apply the adhesive using a syringe, dispensing needle, dropper or brush. Join the parts before the adhesive evaporates.

When applying the adhesive to only one surface, allow it to react briefly with the dry opposing surface before pressing the parts together.

Due to the rapid evaporation of the solvents, application with a brush may not be suitable in all situations.

Capillary Bonding

For capillary bonding, first position the parts against each other. Then apply a small amount of adhesive along the joint using a dispensing needle or syringe.

Due to capillary action, the adhesive flows approximately 6 mm into the joint.

Wait a few seconds to allow the adhesive to react with the plastic, then gently press the parts together.

Important Information for Acrylic

When bonding acrylic (PMMA), stress cracking may occur if the material has previously been mechanically or thermally processed.

It is therefore recommended to relieve any internal stresses in the material before bonding.



Application Data

Property	Value
Application temperature	18°C to 25°C
Reaction time	1–2 minutes
Stated curing time	3 minutes
65–80% bond strength	After 24–72 hours
Full bond strength	Approximately 7 days
Application method	Dispensing needle, syringe, dropper or brush

Initial bond strength is achieved very quickly. The final strength of the adhesive bond continues to increase over the following days.



Technical Data

Property	Value
Product type	Solvent-based adhesive
Number of components	1
Colour	Transparent
Consistency	Very thin / water-like
Odour	Pungent
Shear strength	14–18 MPa
Joint elongation	None

Bond Strength

The values below indicate the typical shear strength of various bonded plastics.

Material	After 24 hours	After 7 days
Acrylic (PMMA)	14.0 MPa	17.5 MPa
Polycarbonate (PC)	11.5 MPa	17.0 MPa
Polystyrene (PS)	9.5 MPa	14.0 MPa

These values are based on tests carried out by the original manufacturer. Actual bond strength may vary depending on the type of plastic, surface preparation and application conditions.



Tips

- For precise bonding, preferably use a dispensing needle or syringe.
- Ensure that the parts fit closely together for optimal capillary action.
- Do not apply more adhesive than necessary.
- Prevent the adhesive from evaporating before joining the parts.
- Always carry out a preliminary test when working with unfamiliar plastics.
- Be aware of possible stress cracking when bonding mechanically or thermally processed acrylic.

Safety

Work in a well-ventilated area. Before use, consult the current Safety Data Sheet (SDS) for information on hazards, required personal protective equipment and safety precautions.

Storage and Shelf Life

Store RESION AcryWeld in its original, unopened packaging at a temperature between 5°C and 23°C.

The product is sensitive to freezing and must be protected from frost.

When stored under the specified conditions, the shelf life is 36 months in the original, unopened packaging.