

330-GLUE1

Description

330-GLUE-1 is a solvent-free, hot-curing 2-part adhesive based on epoxy resins with high media and temperature resistance. It does not contain fillers. It can be used in UHV down to 10^{-10} mbar and below.



330-GLUE-1 is suitable for high-temperature resistant structural bonding of metals, glass, and ceramics. This adhesive can be used to achieve vacuum tight bonds and it shows remarkably constant adhesive strength even at high temperatures. For the hardening process, a temperature of 130°C is required.

Viscosity at room temperature is medium to low, the mixed glue has a pot life of approx. 5 hours. At 60°C this is reduced to about half an hour.

Property	Value
Pot Life	~5h at RT / ~ 0.5h at 60°C
Colour (hardened)	amber
Usable temperature	77K to 250°C max. in vacuum
Decomposition Temperature	298°C
Tensile Shear Strength	>10 MPa on Stainless Steel (1.4301) etched and Aluminium AlCuMg1, up to 160°C
Mixing Ratio	1:1
Curing temperatures	80°C 1h / 130°C 2h
Storage	8-12°C (do not freeze)
Lifetime of unmixed glue	min 6 months

To receive high bonding strength, the surfaces must be free of grease, metals are ideally etched or treated with grinding paper grit size 400.

To avoid bubbles, the mixed glue should be evacuated for some minutes. During this process, the glue foams, so the container must have at least 5 times the volume of the glue.

If the hardening process is done in air, a thin sticky layer remains on the glue surface. This can be removed with Acetone. If hardened in vacuum, this step is not required.