

PRIMARY INSTALLATIONS

When bonding the strain gauges, the most suitable adhesive should be selected for each application. A typical installation procedure is described below using the fast-curing adhesive CN.

1. Preparation

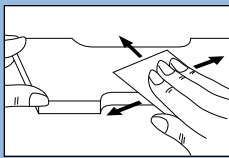
The following items are required for bonding and lead wire connection: Strain gauges, bonding adhesive, connecting terminals, test specimen, solvent, cleaning tissue for industrial use, soldering iron, solder, abrasive paper (120 - 320 grit), marking pencil, scale, tweezers, extension lead wire, polyethylene sheet, nippers.

2. Positioning

Roughly determine the location on the test specimen where the strain gauge is to be bonded.

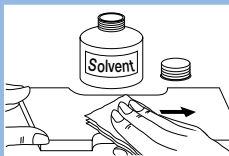
3. Surface preparation

Before bonding, remove all grease, rust, paint, etc., from the bonding area. Sand an area somewhat larger than the bonding area uniformly and finely with abrasive paper. Finish the surface with #120 to 180 abrasive paper for steel, or #240 to 320 for aluminium.



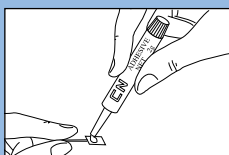
4. Fine cleaning

Clean the bonding area with industrial tissue paper or cloth soaked in a small quantity of chemical solvent such as acetone. Continue cleaning until a new tissue or cloth comes away completely free of contamination. Following the surface preparation, be sure to attach the gauge before the surface becomes covered with an oxidizing membrane or becomes newly contaminated.



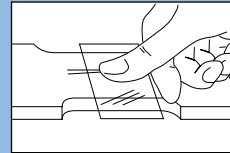
5. Applying bonding adhesive

Drop the proper amount of adhesive onto the back of the gauge base. Usually one drop of adhesive will suffice, but you may increase the number of drops according to the size of the gauge. Use the adhesive nozzle to spread the adhesive over the back surface thinly and uniformly.



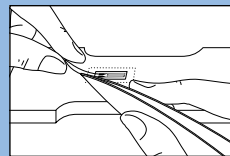
6. Curing and pressing

Place the gauge on the guide mark, place a polyethylene sheet onto it and press down on the gauge constantly using your thumb or a gauge pressing device. This should be done quickly as the curing process is completed very fast. The curing time varies depending on the gauge, test specimen, temperature, humidity and pressing force. The curing time under normal conditions is 20 - 60 seconds.



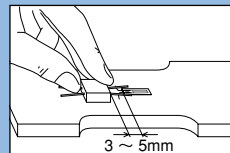
7. Raising the gauge leads

After curing completely, remove the polyethylene sheet, and raise the gauge leads with a pair of tweezers.



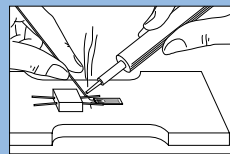
8. Bonding connecting terminals

Position the proper size connecting terminals adjacent to the bonded gauge. A distance of 3 - 5mm generally allows for easier wiring later.



9. Soldering the gauge leads

Wrap the gauge leads around the connecting terminal wires. Solder the junction area with a little slack in the gauge leads, taking care to prevent excessive tension during measurement.



10. Soldering extension lead wires

Solder an extension lead wire to the terminal wires on the opposite side of the connecting terminals. Clip off any excess extension lead wire with a pair of pliers or wire cutters.

