ADHESIVE APPLICATION

Guidelines for Surface Preparation and Activation of the Adhesive

1. Surface Preparation

1.1 Recommended Chemicals

The use of a 50:50 mixture of isopropyl alcohol (IPA) and water is recommended. Where heavy grease or oil is present there may be a need to first cut the oil with a degreasing solvent such as heptane or mineral spirits, but this should always be followed by a IPA-water cleaning to ensure that any residue or film is cleaned up. One way to assess cleanliness is that a surface prepared for bonding should be as one prepared for painting.

1.2 Cleaning Procedure

- Spray or wipe the IPA solution onto the surface and scrub with a clean rag or paper towel until it is dry.
- It is better to use one rag for cleaning and one for drying.
- Cotton rags and paper towels work best.
- Be sure to change rags and towels often to avoid smearing and contaminating.
- On surfaces with an oily film, the 50:50 IPA water solution is usually adequate but where heavy oils or grease is present, a degreasing solvent is suggested to cut the film.

The more oil that is present, the more important it is to change rags. Degreasing solvents usually leave a residue behind, and it is necessary to follow up by cleaning with the IPA/water solution.

1.3 Heavy Grime or Oxidised Surfaces

If there is a hard film of dirt, oxidised paint or oxidised metal, it will probably be necessary to abrade the surface. Scotch Brite pads (green or maroon) or abrasive paper (220grit or finer) can be used to cut the problem surface and expose a suitable layer on which to bond. Always clean the surface with the IPA/water solution after abrasion.

Abrasion of a surface can serve several functions. It can be used to remove caked on dirt or oxide (as outline above). It can be used to create additional surface area which may enhance adhesion, and it can be used to smooth the surface to obtain a more flatness and therefore surface contact with the adhesive. Very small scratches in the surface, generated with a circular motion rather than a straight line are more desirable. A surface with lots of micro scratches in it can have 30 to 40% additional available surface area for the adhesive to make a bond.

1.4 Plastics and Paints

Some plastics and paints may require special surface preparation because of additives which impede adhesion.

2. Activating the Adhesive using Industrial Grade Acetone

2.1 Procedure

- With solvent activation it is important that the solvent be allowed sufficient time to solvate (activate the adhesive).
- The solvent is applied to the adhesive surface after the release liner is removed.
- This may be applied by spray bottle, brush or roller.
- Allow the solvent to flash off (evaporate), until the adhesive reaches a pressure sensitive state, i.e. adhesive legs should appear when testing with the finger.
- At this stage the adhesive has enough integrity to hold the nameplate in position while it dries.
- Pressure should be exerted over the entire surface to gain the optimum contact and therefore the best bond.
- Allow 24 hours for the adhesive to cure (dry).