

## Full process explanation of HD (High Demands) UV bonding

When should a UV glue bonding be a High Demands bonding? In general, you can / will determine this based on the risk. What could happen if the bonding would fail later? If you assess that risk as "Large" then you should require high demands of the bonding, and if necessary, test the bonding according to this requirement. Below you see the necessary steps to prepare.

- 1 Thoroughly cleaning of the areas to bond.
- 2 Apply a special substrate (Pyrosil) layer on the areas to bond
- 3 Apply a Primer layer on the areas to bond.

### Cleaning

In case you apply UV glue for a type of bonding, thoroughly pre-cleaning of the areas to bond, is utmost important. The glass or metal areas must be clean, free of greaseproof and dry, before you apply the special Pyrosil substrate. There are special glass cleaners for this purpose available, e.g. from the Bohle company, on our website. To be sure of that all parts after cleaning are dry, you can use a hot Air gun, to be sure that microscopic water drops, will vaporize. (See the Hot Air Gun on our website)

### Applying the Pyrosil substrate

The Pyrosil is a type of Silicate mixed with gas. Silicate is one of the basic ingredients for the production of glass. Now an extreme thin layer of Silicate (< 1 micron), has to be applied on the areas to bond. This cannot be applied with a brush, the silicate is mixed in a gas cartridge. It has to be applied with a special, small gas burner. This gas burner must be completely empty first, before it can be filled with the Pyrosil/ gas mixture. The Pyrosil cartridges have a net content, enough for a surface of +/- 0.3 M<sup>2</sup>

### Applying the Primer

After the Pyrosil (silicate) is applied, one can apply the Primer, which can be done, with a small brush. A few minutes after the Primer is applied, it will be vaporized and you can start with the UV bonding. The Primer layer, on top of the silicate will guarantee a good bonding of the UV glue and the prepared glass.

**Attention !** The UV glue, as well as the Pyrosil and the Primer, have an **expiration date**. You can find this on the product leaflets or on the product itself.

### **The entire process, after the glass has been cleaned:**

- 1 Be sure that your Gas burner is empty.
- 2 Now fill the burner with the Pyrosil cartridge.
- 3 Shake the burner, filled with the Pyrosil, well, for +/- 30 seconds, to be sure the Pyrosil and gas are properly mixed.
- 4 Ignite the burner and go back and forth, with the end of the flame, over the area to bond, a few times. Now let the glass cool down. There were the Pyrosil should be, you can check this by scratching, with almost no pressure, with your fingernail over the Pyrosil area. You will feel a slight roughness on the treated area.
- 5 Now apply the Primer, with a small brush, on the fresh applied Pyrosil layer and wait a few minutes till it is vaporized. Now you can start the UV bonding.