

Nano470

Important Information

SURFACE

Make sure the surfaces of the pieces of glass to be bonded are flat. Uneven surfaces will lead to uneven cure and bond failure.

CLEANING

Do not use glass cleaners or chemicals as they may contain separating agents or tensides, which can lead to a considerable loss of strength. In some cases, this will not be noticeable immediately and in severe cases, could lead to eventual bond failure.

For the strongest bond use IPA Isopropanol Alcohol. When using this technique you must use a dryer, after IPA application, to warm up the glass pieces to remove all moisture, as condensation forms when IPA evaporates. Failure to do this properly will lead to considerable loss of strength, which may not be immediately noticeable.

WARMING

The glass should be totally free of water or condensation before bonding. If the room temperature is below 25 degrees Celsius, it is important to slowly heat up the glass pieces with a dryer, (not heat gun), to remove non-visible condensation. The adhesive should also be at room temperature. Cold adhesive will be slow to cure and may not bond as efficiently as warm adhesive. Ideal adhesive temperature would be 20-24 degrees Celsius.

CURING LIGHT

The light source used, either UV or White Fluorescent light, must be turned on 5 minutes before curing to gain maximum brightness. The curing time is related to the wattage of the light source. The larger the wattage the quicker the bonding. Second cure must be for a minimum of 10 minutes, no matter what wattage is used.

The light needs to extend past the joint to be cured. Do not move the light during curing

MOVEMENT

The glass pieces should not move during bonding. Movement could lead to a weaker bond or failure.

SHELF SIZE.

It is recommended that shelves that will be put under significant and sustained load should have a support. The longer the shelf and / or wider the shelf will require more supports, as the load increases.

It is recommended that the minimum thickness of the shelf is 10mm.

Remember for 6mm glass with polished a edge, there will only be 4mm of usable bonded surface. So consider this when putting your construction under load.

DISREGARDING ANY OF THESE RECOMMENDATIONS MAY LEAD TO A CONSIDERABLE LOSS OF STRENGTH, WHICH MAY NOT BE IMMEDIATELY NOTICEABLE

Instructions for Use For Glass Bonding with Nano470 IC40/80 Visible light & UV-curing Adhesive

1. Choosing Glass

The type of glass on which you wish to use Nano470IC40/80 will affect the type and strength of bonding success.

Transparent, UVA light permeable float glass. Clear float glass, mirror (on front) tempered glass and smooth, plane wired glass can be bonded without problems.

Nano470 IC40/80 is not designed to be used on glass with coloured or textured glass.

Glass, like patterned glass, wired glass, sand-blasted glass or stained glass can have difficulty in achieving a good bond and required strength.

One good rule of thumb to remember is that the smoother the bonding surfaces and the thinner the layer of adhesive used, the stronger the bond will be.

2. Surface Preparation

Cleaning:

All surfaces to be bonded must be completely clean, free of grease and dry.

Temperature.

Any condensation in the glass (weather visible or invisible) must be removed before bonding. This will allow for a durable and stable bond.

Adhesive should be at a minimum of room temperature.

3. Using Positioning Devices

To ensure optimal bonding it is essential not to let parts moving about during the curing time. It is therefore crucial to use appropriate positioning devices.

4. Adhesive Application

- Pre-check that all parts to be bonding fit correctly and are aligned using the appropriate positioning devices.
- Excessive amounts of adhesive applied to a joint can lead to inferior bonding strength.
- Apply the adhesive in a 'caterpillar' fashion **before** joining parts.
- Parts should be lowered slowly and evenly to avoid trapping any air within the joint and allow for an even spread of the adhesive.
- You may find it necessary to raise and lower the parts before final cure occurs. This will allow for maximum distribution of the adhesive over the whole area of the joint.

5. Curing

The procedure for curing off the adhesive is a two step process.

- First allow for a pre-cure (approximately 60-80% of the final cure). This allows for clean up of the excess adhesive around the joint area.
- After the remaining cure has taken place the bond is fully complete and able to withstand maximum loads. 10 minutes minimum

The lamp used should exceed the dimensions of the joint to be bonded. An overlap should occur between lamp and glass.

The lamp should be held as close as possible to the joint while curing is taking place.

The glass should not be moved during curing.

Ensure there is no vibration of the joint or lamp during the curing process.

6. Testing Your Work

These instructions for use are only to be used as a guideline for working. It is the responsibility of the end user to test Nano470 IC40/80 for strength, bond-ability and observe any characteristics which appear when used with specific glass materials, and on particular projects.

It is essential that thorough testing occurs to satisfy the end user that Nano470 IC40/80 is indeed the correct bonding adhesive to be used for a particular application/project.

WARRANTY: J&S Adhesives Ltd guarantees that products and materials supplied by us are of satisfactory quality. However the final quality of the bond achieved will depend upon many variables which are outside our control. We will therefore have to reject any liability over and above the replacement of faulty material. This refers especially to any indirect or consequential loss, damages or expenses.