

Frequently asked questions about Silicone Sealants

1. Why does silicone sealant not work on concrete?

Most silicones are acid curing, and these are not compatible with concrete which has an alkaline pH. For cement base surfaces and bricks a neutral curing acid-free silicone sealant should be used such as Bostik Build Silicone Sealant.

2. What mileage can I expect from a 300ml cartridge?

Use the following formulation :

$$L = \frac{300}{W \times D}$$

Where: L = Length of sealant in metres obtained per cartridge
W = Width of the joint in mm
D = Depth of the joint in mm

A joint of 5mm width and 5mm depth yields approx. 12.0m per 300ml cartridge

A joint of 4mm width and 4mm depth yields approx. 18.75m per 280ml cartridge

3. What sealant should I use for building fish tanks/aquariums?

Bostik Marine Silicone Sealant. It does not contain a fungicide which most other grades of silicone contain. The fungicide in a standard silicone is what may affect fish.

4. Why do you recommend Bostik Build Silicone Sealant for copper?

Bostik Build Silicone Sealant is neutral curing, acid free and will not react with copper and other metals. Traditional acid curing silicones are not suitable for metal as they release acid while they cure which can lead to corrosion.

5. Why should I put expansion joints along my concrete path?

There will be a tendency for the pathway to crack due to thermal expansion and contraction of the concrete. Use an acid free silicone like Bostik Build Silicone Sealant or Alcolin Expansion Joint Sealer for the expansion joint.

6. Can I paint over silicone?

No. It will peel off. If you need to paint over a sealant, then use Alcolin 1001 Uses MS Polymer, Alcolin Permomastic, Alcolin Woodmate or Alcolin Acrylic Sealant, as paint will adhere to these products. Be aware that if the sealant experiences much movement, and the paint is less flexible than the sealant, then the paint can craze.

7. How long does a silicone sealant take to set?

Silicone sealant takes about 1 hour to form a skin and hardens at a rate of 2mm per 24 hours. A shower or bath area can be used the next day.

8. How do I remove hard/old silicone?

Cut as much away as you can with a knife/blade. Then apply a liberal layer of Bostik Silicone Stripper over the remaining silicone residue.

Alternatively, soak a cloth with turpentine/paraffin and place over the residue. Put a plastic sheet over the cloth to prevent drying and leave overnight. It should be swollen enough to remove.

9. How do I remove mould growth on my silicone?

Alcolin Silicone Sealant does not support mould growth. The mould grows on the surface that has a residue of soap/shampoo. Use an old toothbrush dipped in bleach to scrub the mouldy surface regularly.

10. On what surfaces should I not use Alcolin Silicone Sealant?

Because standard silicones release acetic acid during curing, it should not be used on the following surfaces – marble, concrete, plaster, copper, brass, bronze, mild steel and galvanized iron. For these surfaces use Bostik Mirror or Bostik Build, which are neutral curing silicones and acid free. All silicones are not suitable for natural stone as plasticizers and oils in the formulation may migrate out of the silicone and cause discolouration of the stone.

11. What surface preparation should be done before applying a sealant?

The substrate should be clean, dry, and free of all loose material, dust, dirt, rust, oil and other contaminants. Wipe the surface with a solvent like Acetone or turpentine (do not use an alcohol based solvent as this may effect the curing of the silicone). Do not clean with soapy water, as residue of soap will interfere with adhesion.

12. How do I clean silicone from surfaces before it has set?

Clean with a solvent like lacquer thinners, turpentine, paraffin or acetone. Do not use water or alcohol.

13. Can I use silicone to fix a leak in my electric kettle?

Yes, it is 100% waterproof and heat resistant.

14. Is silicone safe for children?

Cured silicone is non-toxic. The biggest danger would be choking on a piece of dried silicone rubber. Silicone is suitable for applications in contact with food.

15. What is the difference between acetoxy and neutral-curing silicones?

Acetoxy silicones release acetic acid when curing, whereas neutral curing silicone release methanol when curing.

Because neutral cure only releases methanol on curing it is therefore acid-free and does not corrode metallic surfaces as would do an acid curing silicone. Neutral curing silicones are therefore suitable for metallic surfaces such as copper, brass, bronze, zinc, and iron. It is also compatible with alkaline surfaces such as concrete, plaster and brick. Adhesion to plastics is

better – e.g. PVC, ABS, polyester, acrylic, polycarbonate. Neither silicone can be over painted, and neither are suitable for natural stone due to plasticizer and oil migration from the silicone.

16. What is the difference between Alcolin Silicone Sealant Mould Resistant and Alcolin K86 Silicone Sealant?

They are of the same quality except that one is 300ml and the other 280ml.

17. Is silicone suitable as a sealant for joining natural stone table tops e.g marble / granite?

None of the standard silicones (acetoxo curing and neutral curing) are suitable for the above application. These sealants can cause discoloration of the natural stones. The plasticizer of the sealant can migrate into the stones causing staining. Use Alcolin 1001 Uses MS Polymer for this application.

18. Looking for high temperature resistant silicone adhesive to bond/repair silicone belts for fabric fusing machines. What product can I use?

Try Bostik super gasket – it has a high temperature resistance. Must sand and degrease surface before applying.

19. Want to glue a 1.5kg metal sign onto glass. There is only an area of 6cm² to which I can apply the glue.

Due to differential expansion rates, adhesive must be flexible. The adhesive must be able to bond both metal and glass and should be neutral curing so it won't affect the metal. There are several choices such as Bostik Super Gasket, Bostik Build, Alcolin 1000 Uses, Alcolin Polyurethane Adhesive and Sealant and Evo-Stik Sticks like.

- The tensile strength of Bostik Super Gasket is 2N/mm² – 20kg/cm², and will support a weight of 120kg for a 6cm² bond area (ideal conditions)
- Bostik Build has a tensile strength of 0.5N/mm² – 5kg/cm² = 30kg/6cm² bond area
- Alcolin 1000 Uses has a tensile strength of 1.25N/mm² – 12.5kg/cm² = 75kg/6cm² bond area
- Alcolin Polyurethane Adhesive and Sealant has a tensile strength of 0.75N/mm² – 7.5kg/cm² = 45kg/6cm² bond area
- Evo-Stik Sticks Like has a tensile strength of 1.5N/mm² – 15kg/cm² = 90kg/6cm² bond area

The strongest adhesive to use would be Bostik Super Gasket.

20. Does silicone conduct electricity?

Silicone is an excellent insulator and is widely used for insulation of electrical boards and circuits. That said however, due to the carbon black content in black silicones e.g. Bostik Super Gasket and Bostik Car, these two silicones are conductive and should not be used for electrical insulation.

