



MAINTENANCE MANUAL for SILICONE SEALANTS

Silicone sealants are an elastic material designed to accommodate differential movement between two substrates.

Silicone is a very chemically resistant material. Maintenance is minimal.

Cleaning:

They are not very abrasion resistant; therefore **avoid** scrubbing with an abrasive cleaner such as Ajax or abrasive pad; also avoid bleaches and oxidising cleaners.

Silicone can be stained by fumes; this will not generally damage the silicone, but can change the appearance, and cannot be removed.

Cleaning with a soft cloth and normal household detergent will normally be sufficient to clean a silicone surface.

Repair:

If the silicone is damaged silicone can be repaired with the same silicone as initially used. Contact Roseal Ltd on 07936 821 739 to obtain the correct silicone to repair the damaged seal. Before repairing make certain that the substrate to be repaired is clean dry and free of oil and grease.

Mould and mildew formation on sealants

The common issue with silicone sealant is the growth of mould on the surface. If left un-cleaned, it has the potential to grow into the body of the sealant. It is therefore critical to remove the mould as soon as it is noticed. Following is information to assist in minimising mould growth on sealants.

The appearance of mould and mildew on sealants is a recurring event. This can be noted by the appearance of black spots and stains on the surface of the cured sealant. Fungi are microbes; out of approximately 250,000 known types of fungi. There are approximately 50,000 types which belong to the group known as mould fungi.

The black spots which appear on the surface are actually products of the metabolism of mould fungi.

1) Reasons

Mould growth is the result of a number of environmental conditions:

- a) High moisture content and bad air circulation in bathrooms and kitchens
- b) Organic waste materials on the sealant surface (soaps, body fats and kitchen residue)
- c) Warm temperatures and humidity

Elastic sealant joints (silicones, hybrid polymers) are excellent insulators; therefore they are not thermo conductive. As a result they are the warmest part of a tiled surface and the most suited substrate for the growth of mould fungi, especially on the organic waste materials present. Mould



fungi reproduce through microscopic spores, very often single cells. They distribute like dust, are very resistant and have a long life span.

Once these spores arrive on a sealant joint where the three factors (moisture, organic waste, high temperature) for growth are present, the spores will first absorb moisture and swell and then a circular thread appears which grows into a germ tissue.

This germ tissue (mycelium) can grow very quickly. At this stage the growth of the mould fungus is limited to the organic waste materials on the sealant surface (primary mould growth).

2) Counter measures

Roseal LTD provide a wide range of Silicone Sealants which contains an effective mould inhibitor (fungicides). Roseal LTD only uses fungicides which are free of heavy metals in order to protect the environment.

These mould inhibitors will block the formation of the mould, but will be consumed by this process. This means that the amount of fungicide in the cured sealant is decreasing over time and that after some time, when the total amount of free fungicide is depleted, mould may form on the surface of the sealant again.

A sealant surface containing mould inhibitors will therefore remain mould-free for a longer time than a sealant surface not containing this fungicide. After a period of time, (depending on the environment in which the product is applied) formation of mould will appear on a sanitary sealant surface as well.

3) Mould and mildew prevention

It should be mentioned that a good hygiene of the sealant surface will help in preventing the formation of this kind of contamination. Regular cleaning and disinfecting of the surfaces will help keep the sealant (and of course all other materials in that area) potentially free from mould.

The environmental parameters (temperature, humidity, amount of spores) are very important as well. It is virtually impossible to prevent the presence of fungi spores in the surrounding environment. However in an environment which is regularly aerated and is kept dry the anti mould performance of sanitary sealants can last much longer.

In addition the joint surfaces need to be cleaned regularly with a neutral or alkali based cleaner and disinfected regularly with a germ killing disinfectant. Acid based cleaning agents must not be used as they promote growth of mould.

4) What to do once mould grows on the sealant surface

As long as the mould growth is limited to the surface, anti mould sprays or similar products should be applied. Such products will kill the mould fungi and the black residue can be cleaned off easily. Once the mould grows into the sealant joint, it is necessary to completely remove the sealant. Before applying a new sanitary sealant you should ensure that the joint area is completely free of fungi. The application of an anti mould spray/cleaner will help in sanitising the area.