DOW Silicone Sealant Maintenance Guidelines

Silicones are used on high quality building projects because of their stable properties regardless of environmental conditions. Therefore, cured silicone sealants in weatherproofing joints or remedial repair joints do not require cleaning in order to functionally perform as a weatherseal. However, the joints may become dirty and it is desired by a building owner to clean them for aesthetic reasons. This can be accomplished during regular building washing that may occur annually; or it could be a scheduled maintenance event specific to cleaning the sealant. How often this is required is a decision for the building owner, and will be influenced by building location and the environment around the building. In general, Dow would recommend an annual cleaning procedure if desired to maintain peak aesthetic appearance.

A mild detergent and water solution will remove any dirt and most run-down materials from the sealant. These types of detergents are commonly available at hardware stores. A solution using a mild detergent and water could be sprayed on the joint if the building were being pressure washed anyway, and then the dirt from the surface can either be sprayed away or brushed away with a soft bristle brush. Testing or a mock-up would assist in determining if a brush is necessary. Soft bristle brushes with suitable bristles, available at hardware stores, have been found to work well. You could also choose to clean the joints individually; in which case the excess dirt and debris should be brushed away; then a detergent solution could be rubbed on; and then this solution should be wiped away with a clean rag. Again, the soft bristle brush could be used to loosen dirt which did not easily release.

In order to lessen the amount of materials required, it has also been found that the cleaning sponges that are pre-soaked with a detergent work well in cleaning stains from silicone surfaces. These are also commonly available in hardware stores. It would still be recommended to remove any excess dirt or debris from the sealant surface first; then if there are spots remaining, the pre-soaked sponges can be used at those areas to further clean the surface.

If the sealant is cleaned using pressure washing during a full building cleaning, Dow recommends that a mock – up area be tested in order to determine the psi required that will clean the sealant without damaging it. Dow warranties do not cover damage caused by water spray. Sealant joints and designs are unique to each building project, so the best way to proceed with pressure washing is to test small areas prior to cleaning the entire building. A starting point would be 1500 psi, fan blade, and a distance of 6-8” from the joint. Please also use caution to ensure that the swing stages in no way damage the silicone sealant joints during cleaning.

A properly designed and installed silicone joint will typically last 20 years or more without need of replacement. In instances where the joint has experienced damage – mechanical or otherwise – and replacement is required, follow the procedures below.

Assess problem with the joint.

1. If sealant is cured properly and performing in its application but its appearance is poor (e.g. due to improper tooling), then cleaning the sealant surface with a solvent and recapping the joint should be sufficient.
   - **a.** Clean sealant with a solvent (e.g. methylated spirit, isopropanol) to remove dirt. Allow solvent to evaporate.
   - **b.** Remask the joint.
   - **c.** Apply a thin bead of fresh sealant over the cured sealant.
   - **d.** Dry tool the sealant.
   - **e.** Remove the masking material.

2. If the sealant is mechanically damaged and a recapping will not improve the joint appearance, then remove the section of old sealant and replace.
   - **a.** Cut away the old sealant. If excellent adhesion to the substrate is still maintained, then leave some sealant at the edges of the joint (up to 0.08”/2 mm thick).
   - **b.** If adhesion to the substrate is poor, then remove sealant down to the substrate and clean the substrate and recondition if necessary (i.e. clean with solvent and prime with appropriate primer).
   - **c.** Mask the joint.
   - **d.** Reapply the sealant. (If resealing does not occur on the same day, the joint will have to be re-cleaned using a solvent such as methylated spirit or isopropanol before applying the fresh sealant.)
   - **e.** Dry tool the joint.
   - **f.** Remove the masking material.
   - **g.** Check adhesion after sealant has cured for 7-21 days.
   - **h.** The cure rate of the sealant will depend on the overall joint size and design.