



# Cleaning Techniques for Silicone Residue and Oils on Equipment and Flooring

Silicones are widely used throughout the medical and electronics markets as skin contact adhesives, construction adhesives, elastomers to provide support or a flexible optical lens, or for the management of heat within a device. It is common that the converting environment may become contaminated with residual silicone oils as part of the normal handling process of these materials when using silicone-based products in a manufacturing setting. We are frequently asked “How do I clean the equipment after processing?” or “How do I clean the floors if they do become slippery during handling?”

Polymer Science utilizes a tiered approach when it comes to the cleaning of silicone residuals and oils on equipment and floors. The first step would be to scrape any solids away from the surface with a tool or cloth that will not damage the surface. These solids should be disposed of prior to removal of liquid residue and oils. Isopropyl Alcohol at >90% concentration should then be used as a cleaning solvent. This solvent is gentle enough not to damage metal surfaces and is readily available throughout most manufacturing facilities. The >90% isopropyl alcohol is applied to a cloth and wiped until the surface is clean. If the surface still has a residue, other cleaners may be needed.

An industrial cleaner such as Alconox® or Detonox® may also be an alternative water-based option for you. The detergent solution should be heated to about 80C and then rinsed at 80C or higher with water prior to wiping. A possible final wipe with a lower concentration of isopropyl alcohol to expedite the drying process may be needed. Using the hot solution and rinse will mitigate risk of forming miscelles as a result of thermal shock if a hot detergent solution and then cold rinse solution is used which could redeposit the silicone fluids onto the surface being cleaned.

Silicone-specific cleaners are also an option. Many products on the market are designed to depolymerize and dissolve silicone resins in solvent and aqueous varieties. Products which are known to dissolve silicones include organic acids such as dodecylbenzenesulfonic acid in a petroleum distillate or aqueous solvent mixtures which may contain a blend of inorganic and organic compounds such as monomethyl ethers, higher molecular weight ethoxylated alcohols and quaternary ammonium salts. Dow Corporation® offers Dowsil™ DS-2025 Silicone Cleaning Solvent and Dowsil™ DS-1000 Aqueous Silicone Cleaner specifically designed for this purpose.

If additional technical support is required, please reach out to our team of highly skilled engineers by phone, e-mail or visiting our website at <http://www.polymer-science.com>.