

Silicated Soaps and their Issues

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Silicated soaps are blended with silicates as a "builder" for the soap chemistry. Silicates have been used for quite some time as an emulsifier, or a chemical that attracts micro droplets of oil, cleaning oil of dirty parts. The silicates do the actual removal of the oils from parts.

The silicates that are blended into the soap are actually solids, or powders that are dissolved into the soap chemistry. When a wash bath becomes overly saturated with emulsifiable oils, the used up silicates that are attached to the micro droplets of oil begin to "drop out" of solution and form larger "clumps" of silicate/oil. This happens when all the free silicates are used up or have attached to all the oil they can. When the silicates are used up, no more oil will be removed from the parts. White spotting will appear on the parts (the spots being free floating silicates with oil), and oil will be left on the parts resulting in a slippery feel. The "clumped" up, dirty silicates will start to form particles large enough to be caught in filter bags and chip screens- causing a mess and plugging up filtration systems readily.

Conventional, porous membrane ultra filters cannot process wash baths running silicated soaps. Over time, the dropped out silicates plug the engineered pores in the membrane, stopping any ultra filtration from occurring.