

Fact Sheet- Sure Klean® 600 Detergent Wastewater Properties and Handling



Product Description and Use

Sure Klean® 600 Detergent is a proprietary cleaner designed for cleaning new masonry surfaces. This product is a blend of hydrochloric acid and low (<0.5%) concentrations of surfactants and wetting agents. The product is supplied as a field dilutable concentrate. Depending on the substrate, it is diluted with 4-10 parts water per 1 part product for application. When properly diluted and applied, Sure Klean® 600 Detergent will not harm masonry surfaces or mortar joints while effectively removing job-site soiling and excess mortar. Sure Klean® 600 Detergent has been widely specified on commercial and residential construction for over 40 years.

Application of the field diluted product is simple:

- Masonry surface is pre-wetted as necessary and product is applied.
- Product is allowed to dwell on surface and is scrubbed if needed.
- Product and excess mortar are removed with high pressure (400 psi) water spray.

Always test each type of surface and stain before overall application to ensure suitability and desired results.

Properties of Wastewater

Sure Klean® 600 Detergent is an acidic product containing low concentrations of common surfactants and wetting agents. The main concern with wastewater is its acidity, measured by its pH. There are several factors that determine the pH of wastewater generated during cleaning:

- Interaction of cleaner with masonry surface.
- Concentrate dilution ratio and application coverage rate.
- Overall dilution during pressure washing operations.
- Interaction of rinse water with excess mortar on the ground.
- Interaction of rinse water with minerals in soil.

While the concentration of product in rinse water varies widely from site to site, here is an example of a typical site:

- For new, fired clay brick, 1 gallon of concentrate is diluted with 6 gallons of water.
- This mixture is applied to 600-900 square feet of masonry.
- After appropriate dwell period, product is pressure washed from wall. Typical production rate is 10-20 square feet per minute with a flow rate of 3-6 gallons per minute (GPM).
- On multiple story buildings, additional water will be used to keep lower levels wetted while upper levels are cleaned.

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In this example the cleaning operation generated between 96 and 546 gallons of water per gallon of concentrated product. This translates to a total upper-bound acid concentration of 0.3-0.05% by weight, and surfactant and wetting agent concentrations of less than 0.005-0.001%.

Wastewater Handling

In new construction applications, masonry cleaning occurs before landscaping activities. Past experience on thousands of projects indicates that the properties of the wastewater are such that if properly neutralized there should be no problems encountered if allowed to soak into the soil. Typically, landscapers will adjust soil pH before planting grass, shrubbery and trees.

A common method of neutralizing rinse water is to spread hydrated lime ($\text{Ca}(\text{OH})_2$) at the base of the wall. If it appears that run-off may enter storm sewers, it may be necessary to dig a small trench and fill it with lime. Barring any neutralization effect of mortar on the wall or at its base, it takes approximately 2.4 pounds of lime to neutralize 1 gallon of concentrated Sure Klean[®] 600 Detergent. The end product of neutralization is an aqueous solution of calcium chloride. Using an excess quantity of lime should not be harmful as it is commonly used as a soil amendment in many regions.

Many industrial and commercial facilities are subject to a number of restrictions regarding quality of wastewater discharged to their storm or sanitary sewer connections. Federal regulations restrict certain types of discharges. Always check with facility management and local regulatory agencies on any restrictions if rinse water is to be disposed of in this manner.

Assistance

For assistance, please contact PROSOCO's Regulatory Department at 785-865-4200, or our regional office at 1-800-255-4255.

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