

## **CASE STUDY: CLEANING PORTABLE TOILETS WITH CHRISAL®**

### **BACKGROUND**

In October 2011, Chrisal USA began a product trial with a portable toilet rental company to determine the efficacy, efficiency and cost of cleaning portable toilets using Chrisal products. The company has about 100 portable units and 20 mobile trailers. These units are used on construction and event sites all over Dade and Broward counties.

**Test period:** 4 weeks

**Location:** The company's facilities and on sites in the Miami area

The tests were initiated using two portable units and a 20-foot trailer that has a men's and ladies room built in.

### **THE ISSUES**

The most prevalent operational issues facing this industry are

- persistence of odours,
- difficulty removing contamination, and
- the use of toxic chemicals in these processes.

The current industry protocol includes the use of toxic products in the cleaning process and a toxic chemical placed in the tank to help mask odours. All of the products are toxic to some degree.

### **THE CURRENT PROCESS**

48% of the ingredients in the products used by the trial company are toxic. The company keeps 55-gallon drums of these chemicals outside in an open shed. Employees pour the chemicals into 5-gallon pails from a 1000-liter tote that has been premixed. They carry 5-gallon pails of this pre-mix around the site to toilets and trailers that require cleaning, which is awkward and potentially hazardous.

Employees wear heavy gloves and rubber boots to protect their skin, and respiratory masks to avoid inhaling toxic fumes. Some employees have developed sensitivity to the chemical fumes.

## **CLEANING PORTABLE TOILETS WITH CHRISAL<sup>®</sup>, CONTINUED**

Typically it takes approximately 7 minutes to clean a portable toilet with a broom and cleaning solution. The product is applied to the walls, floor and toilet area and then hosed off with clean water, rinsing the chemicals into the tank. The procedure is repeated on the outside and then the unit is ready to be returned to the field.

**Product consumption:** 1 ½ to 2 ½ gallons of the “Big Form Ultimate” mix and 2 odor pucks.

### **TRIAL PROCESS AND AREAS**

**Desired Outcome:** Elimination of odours

**Chrisal Product:** Heavy Duty Cleaner (HDC)

**Application:** HDC was dispensed using a PDU (portable dispensing unit) with a foaming head to propel foam

**Trial areas:** 13 portable toilets, a 20-foot trailer, 3 event trailers, 2 portable toilets in an amusement park and all of the holding tanks

**Product consumption:** 3 ½ ounces of HDC concentrate

**Event Trailer:** Even after being cleaned and emptied, odours are generated from agitation during transportation from site to site. Three trailers were cleaned with Chrisal heavy duty cleaner and Chrisal foam added to the holding tanks through the toilets and urinals.

**Amusement Park Toilets:** The holding tank was filled with 5 gallons of Chrisal HDC at a 1:100 dilution ratio.

### **RESULTS**

- Filling the holding tanks with HDC at full dilution (1:100) completely eliminated odours, in spite of heavy use by the public
- Odours were eliminated in holding tanks with residual waste that was treated with HDC
- Cleaned units remained odour-free after being transported to a new site
- Cost-savings - 50% reduction in labour and materials

## CLEANING PORTABLE TOILETS WITH CHRISAL<sup>®</sup>, CONTINUED

The following photos illustrate the testing process and equipment used:

### Preparation

Foaming Head



Inserting the quick disconnect into the foaming head



Attaching hose to foaming head with quick disconnect



**CLEANING PORTABLE TOILETS WITH CHRISAL<sup>®</sup>, CONTINUED**

**Application:** Cleaning the inside, outside and top of portable toilets and event trailers



**CLEANING PORTABLE TOILETS WITH CHRISAL<sup>®</sup>, CONTINUED**



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