

# HOUGHTON CHEMICAL CORPORATION

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## Product Data Sheet SECURITY<sup>®</sup> Scrub

SECURITY<sup>®</sup> Scrub is a blend of organic surface reduction and dispersal agents for pre-operational cleaning applications of industrial water systems, including boiler, closed-loop or cooling systems. Designed to clean fouled surfaces of heat transfer equipment, to cleanse the system of dirt, debris, oil, mill scales and general grime, SECURITY<sup>®</sup> Scrub is especially effective in both cleaning and scrubbing away the dirt-like deposits while providing a passivated corrosion-inhibitory film on the cleansed metal surface.

The product works by penetrating the matrix of organic deposits, chelating metallic ion deposits, dispersing particulate matter and reducing the surface tension of the dirt/oil film as well as providing a surface-scrubbing action to clean away the dirt, oil, and mill scales. The passivating chemicals then adhere to the cleaned surfaces, providing a temporary film to prevent corrosion until the system is charged with a product providing long-term corrosion inhibition.

Contact Houghton Chemical Corporation for a Safety Data Sheet (SDS) containing product health & safety information.

### Typical Properties SECURITY<sup>®</sup> Scrub

Property	Value
Active Ingredients	5-25%
Other Ingredients	75-95%
Appearance	Liquid, Clear, Amber
Specific Gravity 60/60°F (15/15°C)	1.09
Density	9.09 pounds / gallon
Odor	Slightly Aromatic
pH	10 - 12

#### General Data:

- Requires a minimum of 8 hours recirculation
- Cleaner action usually complete within 48 hours
- Lightly fouled systems generally require about 0.5% to 1.5% volume/volume dosage
- Moderate to heavily fouled systems generally require between 1.5% and 10% volume/volume dosage
- Elevated temperatures (between 130°F and 195°F) enhance cleaning action
- SECURITY<sup>®</sup> Scrub provides temporary passivation to protect the Heat Transfer System between cleaner flush & drain and Hydronic Fluid charge

#### Cautionary Information:

SECURITY<sup>®</sup> Scrub is a system pre-treatment product, and is not intended for use as an on-line treatment.

Typical properties, not to be construed as specifications. As use conditions are not within its control, Houghton does not guarantee results from use of the information or products herein; and gives no warranty, express or implied.

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## Application Rates and Control Parameters for SECURITY® Scrub

The following is the procedure for using SECURITY® Scrub to clean dirt, grime, oil, and mill scale from closed-loop water systems. Where possible, heat the circulating fluid to between 130°F and 195°F. Heating speeds the reaction and can reduce the time or concentration required for the product to clean the system.

### DOSAGE

The required dosage of SECURITY® Scrub will vary from system to system, depending on factors such as system size and the severity of the dirt, grime, oil & mill scale left in the equipment.

- A) For a preventative maintenance cleaning of previously cleaned but not yet in service, the recommended dosage is 100 ppm (1 gallon per 1,000 system gallons)
- B) For lightly to moderately soiled systems, the recommended dosage is 500 – 1500 ppm (5 – 15 gallons per 1,000 system gallons).
- C) For heavily soiled systems, the recommended dosage is 1500 – 10,000 ppm (15 – 100 gallons per 1,000 system gallons).

### DISPOSAL

- A) Consult your local municipality or commercial waste removal company regarding the disposal of spent cleaning solution.

### PROCEDURE

1. Ensure the side-stream filtration, pumps, and any system heaters are available and in working order.
2. Pre-mix SECURITY® Scrub 1:1 with water to make a 50% solution prior to adding to the Heat Transfer System.
3. Fill the Heat Transfer System with good-quality water, adding SECURITY® Scrub at the dosage recommended above. If system heating is available, set the temperature to between 130°F and 195°F.
4. Recirculate the Cleaning Solution through the Heat Transfer System. If system heat is available, the recommended process time is 4 – 12 hours. Without system heat, the recommended process time is 8 – 24 hours. For Heat Transfer System installations that are more heavily soiled, a longer recirculation time may be required to penetrate and disperse the dirt, grime, oil and mill scale. SECURITY® Scrub will temporarily passivate the Heat Transfer System, protecting against oxidization after the Cleaning Solution is flushed and drained from the Heat Transfer System.
5. Once the SECURITY® Scrub product has removed the soil from the pipe, allow the Cleaning Solution to cool (if necessary), drain and flush the Heat Transfer System to waste. Continue flushing the Heat Transfer System until the discharge water remains clear. Clean the side-stream filtration as necessary.
6. When the Heat Transfer System has been thoroughly flushed and emptied, charge the Heat Transfer System without delay using a Houghton Chemical Corporation Hydronic Fluid. The passivation of the Heat Transfer System imparted by SECURITY® Scrub is temporary; the corrosion inhibitors in the Hydronic Fluid will provide long-term corrosion protection to the Heat Transfer System.

### NOTES

It may not be possible to remove all of the dirt, grime, oil and mill scale with a single treatment. Some dirt, grime, oil and mill scale may remain after flushing the system; side-stream filtration (25-micron) will help alleviate this condition. Because SECURITY® Scrub is so effective, systems with large amounts of dirt, grime, oil and mill scale may tend to slough large amounts of deposited material; therefore, it is necessary to take adequate precautions to prevent plugging of screens, small lines and heat exchangers.

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