

# Sublime®

Water Scale Solvent



**The Summit  
solution  
to equipment  
cleaning**






# Sublime®

Water Scale Solvent

**removes**  
**lime deposits,**  
**magnesium,**  
**calcium,**

**corrosion,**  
**rust &**  
**dirt.**



(Left)  
Here is an excellent example of scale formation in a two-pass shell and tube heat exchanger and end caps.

(Right)  
This is the same exchanger after being cleaned with Sublime. Notice that the end cap at left contains a mixture of both calcium scale and rust. The Sublime cleaning process removed both.

# Sublime®

## Water Scale Solvent

**changes  
color from  
yellow  
to purple  
when  
it is  
spent.**



***This is a visual demonstration of the color change that takes place when the Sublime is spent. The fresh solution is yellow and the spent solution is purple.***

**N**on-distilled water contains mineral salts, of which those of calcium and magnesium in particular, form scale. The tendency to form scale is increased when the water comes in contact with hot surfaces. Scale formation in process equipment causes billions of dollars in lost revenues due to equipment down time, increased power consumption and maintenance cost associated with scale removal. Sublime provides a quick and simple method for bringing scaled process equipment back into service.

Sublime is a water-based solvent containing wetting agents, corrosion inhibitors and degreasing compounds. It is designed to penetrate and remove encrusted lime scale, rust, corrosion products and dirt from water-wetted surfaces in process equipment. Sublime can also be used to remove lime scale in commercial and industrial applications.

With a pleasant citrus-lime fragrance that masks the obnoxious odors normally associated with dissolving water scale and corrosion, Sublime changes from a pale yellow color to a vivid bluish-purple color when it is spent. It is low-foaming and quickly releases the carbon dioxide ( $\text{CO}_2$ ) gas generated by the reaction of lime scale with Sublime.

**Why use Sublime?** The formation of scale in process equipment increases pressure drop, requiring more pumping horsepower to maintain volumetric throughput. Heat transfer surfaces gradually become fouled and thermal efficiencies decrease.

Pieces of scale attach themselves to rotating equipment, i.e., pumps and mixers, and cause bearing failure. If these problems sound familiar, then you know why you need to periodically clean the lime scale and rust out of the system with Sublime.

Sublime provides an excellent method to clean equipment without expensive disassembly. In many applications, the cleaning can be accomplished while the system is in operation. Sublime can remove scale in small, inaccessible places that cannot otherwise be cleaned.

### **Why does Sublime change color?**

Sublime comes in a pale yellow color that changes to a deep bluish-purple color when it is spent. There are four important advantages to this color change:

1. You know when the solution is spent and should be discarded.
2. You don't spend time circulating a spent solution.
3. The color change occurs at a pH of 5.8 to 6.0 which is well within the safe disposal range of most of the current governmental waste water regulations.

4. If the equipment is clean and Sublime has not changed color, you can save it and use it again.

**Where is Sublime used?** Sublime is especially designed to safely remove lime deposits or water scale from:

- Power plant boilers and piping systems and all types of evaporating equipment





ISO  
9001:2000  
Registered

- Equipment in refineries, utility companies, paper mills, chemical plants, foundries, rubber plants and other industries

- Food processing plants, meat packing plants and breweries

- Sewage disposal plants, water treating facilities and other municipal water handling operations

- Any equipment that is water cooled in any manner

Sublime is not recommended for use on aluminum, certain aluminum alloys, zinc (hot dipped galvanized sheet) and alloys of magnesium. It is recommended that test samples of materials in question be evaluated in the laboratory before using Sublime to treat lime or water scale deposits on these materials.

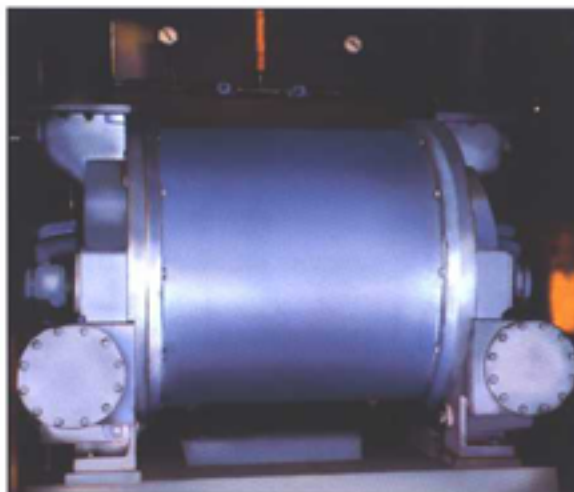
Concentrated Sublime solution may discolor some chromed and stainless steel surfaces. It is recommended that Sublime be diluted 1:1 with water before using on these surfaces.

**Application.** Sublime is most effectively used by circulating through the equipment to be cleaned. When possible, circulation should be up-flow. Sublime can also be used by filling the equipment to be cleaned and allowing it to set until scale has disappeared. The cleaning operation normally takes two to six hours. The equipment should be vented at all times since carbon dioxide gas evolves during the disassociation of the lime scale. For more detailed instructions, contact your Sublime distributor.

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Water Scale Solvent

**is easy to  
use, environ-  
mentally  
friendly  
& exceeds  
government  
regulations.**



*By using Sublime to clean your vacuum pump, you can save hundreds of dollars in energy costs, downtime and labor. If your vacuum pump starts to draw high amps or if it should suddenly seize, Sublime can do the job simply and easily.*

**Availability.** Sublime is available in premium D.O.T. 34 approved 55 and 30 gallon reusable drums. It is also available in 5 gallon polyethylene pails.

**Sublime meets or exceeds government regulations.** Sublime is non-toxic, non-corrosive, non-flammable and non-hazardous when used as directed. The ingredients in Sublime, when spent, are not listed as hazardous waste, nor does it possess any of the hazardous characteristics specified in 40 CFR 261. Sublime has a low B.O.D.

Sublime is U.S.D.A. approved acceptable for use as an acid cleaner in all departments of official establishments operating under the Federal Meat, Poultry, Shell Egg Grading and Egg Products Inspection Program.

Sublime meets all the requirements of the U.S. Department of Transportation regulations given in 173.240 (a) for shipment without hazardous warning. Additional information on compliance

with governmental regulations can be obtained by contacting Summit Industrial Products, Inc. Sublime is easy to use, environmentally friendly and exceeds government regulations.

## Consider the following advantages of using Sublime:

- Does not require premixing
- Does not separate
- Changes color when spent
- Non-hazardous • Non-Corrosive
- Non-Flammable • Pleasant Odor
- Free Rinsing • Low-Foaming

A product of...



1315 Belmeade Drive, Kingsport, TN 37664,  
Toll Free: (888) 355-6004, Tel: (423) 343-7552, Fax: (423) 343-7553,  
E-mail: sales@bartassociates.com, Website: www.bartassociates.com