## Frequently Asked Questions about Sublime Descaler

#### What is Sublime?

Sublime is an enhanced 10% HCL compound designed to react with alkali salt deposits on water-wetted metal surfaces. In the process of dissolving scale, it releases CO2, consuming approximately 1.5 lbs per gallon while creating a disposable solution that is pH neutral and biodegradable.

### What type of material will Sublime remove?

Sublime is designed to penetrate and remove encrusted lime scale, rust, dirt and corrosion by-products, especially calcium and magnesium compounds

#### Is Sublime safe to use?

Yes. Used as directed, Sublime is non-toxic, non-corrosive, non-flammable and non-hazardous as regulated by OSHA and DOT. [40CRF-261 and DOT 173.240(a)]

# Is it biodegradable?

Yes. Once depleted to a neutral solution it is biodegradable with a Biological Oxygen Demand (BOD) > 6 ppm.

# Why does Sublime change colors?

This is no marketing gimmick, but a practical visual indicator that (1) the solution is depleted and it's time to discard it (2) it has reached a pH range of 5.8 to 6.0 and is safe to dispose of and (3) if color has not changed and equipment is clean, it can be saved for reuse.

# Why does Sublime need to be vented?

When dissolved in an acid solution, alkaline deposits produce water and CO2 gas. Venting prevents the potential for an explosive build-up of pressure.

### How do I know when Sublime is finished cleaning and inaccessible parts are really clean?

Recirculated Sublime will remain yellow in color and rinse water should be clear. Consider the condition of exterior end caps and fins as a reliable indicator of interior cleanliness. Increased volume and reduced amperage load will provide a further confirmation.

#### What industries can benefit most from the use of Sublime?

Any industry whose production process creates a water-wetted surface in vacuum pumps, pipes, tanks, molds, washers, extruders, exchangers, evaporators, boilers, turbines, fans, bearings, compressors and more.

These industries include Oil and Gas, Paper, Food and Beverage, Ethanol, Automotive, Textiles, Utilities and many more.

## Is it safe to use in food processing plants?

Sublime is certified by NSF International as meeting the USDA H-1 standard food grade classification, authorizing its use in federally inspected meat and poultry plants where there is incidental food contact.

### Does it comply with government regulations?

As previously noted, Sublime is in compliance with all standards set forth by OSHA, DOT and USDA.

### What kind of savings can I expect using Sublime?

Savings can be significant, but will vary depending on equipment and industrial application. Here are comparative examples that demonstrate Sublime's potential return on investment:

**Vacuum Pump Amperage:** We do know that the cost of one ampere is \$1,000 to \$1,400 per year. Reduce vacuum pump motor draw by 20 amps and you can realize a minimum annual savings of \$20,000.

**Paper Mill Downtime:** Unscheduled downtime in a paper mill can run \$18,000 per minute. Compare that to the mill's annual operating maintenance budget of only 1.0%.

**Pump Descaling Service:** To disassemble and service a Nash Model 904-R vacuum pump for scale can cost from \$8,000 to \$30,000, whereas a \$6,800 investment in Sublime will produce results in two to four hours.

#### How do I clean with Sublime?

Sublime can clean actively by using up flow circulation or passively by filling and allowing it to sit. Because passive cleaning is not as effective, that method is not recommended.

#### How much time will it take to clean with Sublime?

Subject to specific application, using up-flow circulation procedures, the process takes between two to four hours.

### What do I do with Sublime after completing the cleaning process?

If it is still yellow, you can use it again! If the color has changed to purple (indicating a spent solution) it can be safely disposed of following government waste water regulations.

### Can Sublime be stored after it is used?

Yes. Color will tell you if Sublime still has cleaning capacity. Until it turns purple, it is good to go!

#### Will freezing affect Sublime?

No, Sublime can freeze and unfreeze without being affected.