

Chemicals

- **Sublime® (Descaler)**
- **Alimex (Descaler)**
- **Morcon-10 (Descaler)**

- **Sur-Clean (Degreaser)**
- **Sum-Clean (Degreaser)**

- **Varnasolv (Compressor Varnish Cleaner)**

Sum-Kool®

Chelating Descaler

Sum-Kool® Product Benefits

- Removes encrusted lime scale, rust and corrosion from water-wetted surfaces
- Non-toxic, non-hazardous and biodegradable
- Non-acid and does not require neutralization
- Non-corrosive and will not adversely affect the following materials: stainless steel, carbon steel, brass, admiralty metal, copper, iron, lead, aluminum, PVC plastic, polyethylene, rubber, leather or any metal or material normally found in water-wetted equipment
- Operates in a pH range from 6.0 to 8.5
- Can be disposed in municipal water handling operations

Sum-Kool® Applications

- All power plant boilers and piping systems including nuclear power plants
- Equipment in refineries, utility companies, paper mills, chemical plants, foundries and other industries
- Sewage disposal plants, water treating facilities and other municipal water handling operations
- Compressor stations and radiator systems of all types including closed loop cooling systems
- Any equipment that is water cooled in any manner or that requires the removal of multivalent metal ions
- Applications in office buildings, hospitals and electronic facilities where accidental spills or leaks could result in adverse effects
- Any cleaning application requiring a solution with an extremely low metal ion content

Materials Compatibility Warning

Sum-Kool® may adversely affect materials containing magnesium or zinc. These materials should be tested to ascertain the concentration, temperature and time effects before treatment with Sum-Kool®. It is recommended that treatment be at a concentration of less than 2 percent, a temperature not over 140°F and for less than 2 hours to prevent etching.

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Sum-Kool®

Application Procedures

Sum-Kool cleans by chemically tying up the multivalent metal ions in solution. The time required for any given application will depend upon the temperature available, the concentration of the Sum-Kool solution and the quantity of scale, rust and corrosion present.

Sum-Kool solution is most effectively used by circulating it through the equipment to be cleaned. When possible, circulation should be upflow to assure all of the internal surface is covered.

While it is difficult to provide a detail procedure for the cleaning operation, since every application is different, most applications have a number of steps in common.

1. The equipment to be cleaned (compressor, heat exchanger, pump, filter system, boiler, etc...) should be shut down, drained and a visual inspection made to ascertain the amount of scale deposited. Consult the Concentration Selection Guide for the approximate concentration of Sum-Kool to be used.
2. The equipment should be closed, filled with clean water and backflushed for 10 minutes to remove as much loose scale and debris as possible. The equipment should then be completely drained of all water.
3. A Sum-Kool solution of appropriate strength (from Concentration Selection Guide) should be added to the system and circulated while bringing the solution to the desired temperature (100°F - 200°F).
4. Circulation should continue for two to twenty four hours depending on the quantity and composition of scale to be removed. Inspection on 2 hour intervals should give you some guide as to the appropriate length of time.
5. When the cleaning solution is spent and scale is still present repeat the cleaning process.
6. There will normally be a slight odor of ammonia as the Sum-Kool solution is spent. The pH of the solution should also rise to approximately 8.0, however, if the pH of the water used to make the cleaning solution was very low the solution could become spent without reaching a pH of 8.0. Visual inspection is the best method of judging completion of the process.

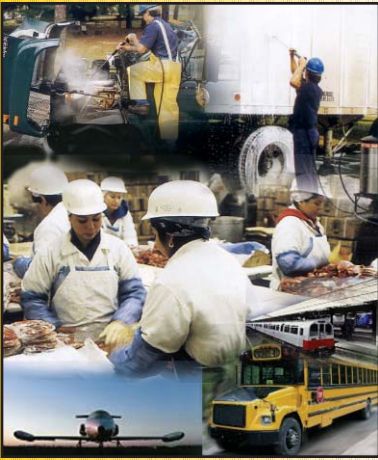
When the cleaning process is complete, drain the system and flush with fresh water before returning it to service.

| Physical Properties | | Concentration Selection Guide | |
|----------------------------------|---|-------------------------------|--|
| APPEARANCE | - | Blue Green Color | |
| | | Pleasant Odor | |
| SPECIFIC GRAVITY | - | 1.06 | |
| BOILING POINT | - | 214°F | |
| FREEZING POINT | - | 15°F | |
| FLASH POINT | - | None | |
| Scale Thickness | | % Sum-Kool in Water | |
| 1 /16" | | 5 % | |
| 1/8" | | 10% | |
| 1/4" | | 15% | |
| 1/2" | | 20% | |
| 1" | | 25%* | |
| *May require multiple cleanings. | | | |

| CLEANING TIME | Temperature & Cleaning Time | |
|--|-----------------------------|----------------------------------|
| Cleaning time depends on many factors including scale composition, solution temperature, solution concentration, thickness, surface area to volume ratio, agitation and recirculation rate. For this reason only approximate times can be given. | Solution Temperature | Approximate Cleaning Time |
| | °F | Hours |
| | 100 | 24+ |
| | 125 | 16-24 |
| | 150 | 8-16 |
| | 175 | 4-8 |
| | 200 | 2-4 |
| Sum-Kool can be used in a number of other applications such as on line cleaning and as a metal surface treatment to prevent corrosion. Consult with your Summit Technical Representative for additional information. | | |

Sur-Clean

Industrial Degreaser & Cleaner



Chemicals

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Chemical Equipment

- **Sublime® Skid**



Sur-Clean Product Benefits

- Cuts time and cost from your most difficult cleaning applications
- Safe for ferrous and non-ferrous metals
- A synthetic detergent with anti-redeposition agents to provide a non-caustic cleaner
- Low pH of 9.55
- Designed to quickly lift and suspend oil and dirt
- Environmentally safe water based industrial strength degreaser and cleaner
- Does not contain Phosphates, Petroleum Distillates, Chlorinated Hydrocarbons, Ethylene Glycol, Monobutyl Ether, Sodium Hydroxide, Sodium Silicates
- Does not contain chemicals subject to the reporting requirements of SARA Title III
- Authorized by the U.S.D.A. for use in Federally inspected meat and poultry plants
- Moderate heat will enhance cleaning time and efficiency
- Biodegradable, Non-Flammable, Non-Abrasive, Non-Corrosive and Non-toxic

Sur-Clean Applications

- **Dilution (1) Institutional** - For painted walls, glass fixtures, skylights, windows, ceramic and wood. Never stronger than Dilution (1) and rinse immediately.
(1:20) One part of Sur-Clean to twenty parts of water
- **Dilution (2) Commercial** - For floors of concrete, ceramic tile, terrazzo, magnesite, vinyl, rubber and plastic. *(1:13) One part of Sur-Clean to thirteen parts of water*
- **Dilution (3) General Surface Cleaning** - For airplanes, buses, trucks, trailers, boats, canopies, plastic, air-conditioning units, electric fans and motors, cooling coils and filters, white side wall tires. *(1:5) One part of Sur-Clean to five parts of water*
- **Dilution (4) Industrial** - For cleaning dirt and grease from equipment, lift trucks, engines, pipes, motor shells, electric motors and machinery. Printers - For cleaning ink from presses, walls and floors. *(1:3) One part of Sur-Clean to three parts of water*
- **Dilution (5) Maintenance** - For conveyors, engines, exhaust stains, machines, metal stock and welding equipment. Kitchen - for ovens, deep fat fryers, flues, ducts and canopies over ovens, greasy floors. *(1:2) One part of Sur-Clean to two parts of water*
- **Dilution (6) Vats** - For cleaning greasy and carboned parts.
(1:1) One part of Sur-Clean to one part of water

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Sur-Clean

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Directions

Soak, spray or wipe it on and rinse off thoroughly. For best results in cleaning vats, 12 hours of mild heat and agitation followed by pressure rinse is recommended.

Caution

MAY BE HARMFUL IF SWALLOWED.

CAN CAUSE EYE AND SKIN IRRITATION.

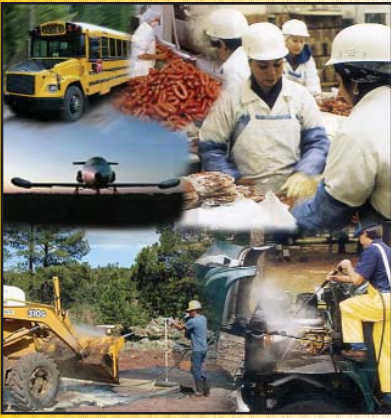
CONSULT MATERIAL SAFETY DATA SHEET FOR FIRST AID INSTRUCTIONS.

KEEP OUT OF REACH OF CHILDREN.

Technical Data

| | |
|----------------|--------------|
| pH: | 9.5 |
| Color: | Clear Blue |
| Odor: | Mint |
| Density: | 8.34 lbs/gal |
| Flash Point: | None |
| Rinse Ability: | Complete |





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Industrial Degreaser & Cleaner

Sum-Clean Product Benefits

- Cuts time and costs from your most difficult cleaning applications
- Safe for ferrous and non-ferrous metals
- A synthetic detergent with anti-redeposition agents to provide a non-caustic cleaner
- pH of 11.0
- Designed to quickly lift and suspend oil and dirt
- Environmentally safe water based industrial strength degreaser and cleaner
- Does not contain Phosphates, Petroleum Distillates, Chlorinated Hydrocarbons, Ethylene Glycol, Monobutyl Ether, Sodium Hydroxide, Sodium Silicates
- Does not contain chemicals subject to the reporting requirements of SARA Title III
- Authorized by the U.S.D.A. for use in Federally inspected meat and poultry plants
- Moderate heat will enhance cleaning time and efficiency
- Biodegradable, Non-Flammable, Non-Abrasive, Non-Corrosive and Non-toxic

Sum-Clean Applications

- **Dilution (1) Institutional** - For painted walls, glass fixtures, skylights, windows, ceramic and wood. Never stronger than Dilution (1) and rinse immediately.
(1:40) One part of Sum-Clean to forty parts of water
- **Dilution (2) Commercial** - For floors of concrete, ceramic tile, terrazzo, magnesite, vinyl, rubber and plastic. *(1:25) One part of Sum-Clean to twentyfive parts of water*
- **Dilution (3) General Surface Cleaning** - For airplanes, buses, trucks, trailers, boats, canopies, plastic, air-conditioning units, electric fans and motors, cooling coils and filters, white sidewall tires. *(1:10) One part of Sum-Clean to ten parts of water*
- **Dilution (4) Industrial** - For cleaning dirt and grease from equipment, lift trucks, engines, pipes, motor shells, electric motors and machinery. Printers - For cleaning ink from presses, walls and floors. *(1:5) One part of Sum-Clean to five parts of water*
- **Dilution (5) Maintenance** - For conveyors, engines, exhaust stains, machines, metal stock and welding equipment. Kitchen - for ovens, deep fat fryers, flues, ducts and canopies over ovens, greasy floors. *(1:2) One part of Sum-Clean to two parts of water*
- **Dilution (6) Vats** - For cleaning greasy and carboned parts.
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Directions

Soak, spray or wipe it on and rinse off thoroughly. For best results in cleaning vats, 12 hours of mild heat and agitation followed by pressure rinse is recommended.

Caution

- Contains: Alkaline silicates. May be harmful if swallowed. Can cause eye and skin irritation.
- External: Flood with water and wash with vinegar.
- Internal: Give juice of lemon, grapefruit or orange freely, follow with olive oil.
- Eyes: Wash with 5-6% boric acid solution. If irritation or pain persists, call physician.

KEEP OUT OF THE REACH OF CHILDREN

Technical Data

| | |
|--------------------------|--|
| pH: | 11.0 |
| Color: | Green |
| Odor: | Fresh |
| Density: | 8.34 lbs/gal |
| Flash Point: | None |
| Rinse Ability: | Completely |
| Type Cleaner | Water Soluble Degreaser |
| Active Ingredients: | Detergents, Builders Soluble Solvents |
| Degreasing Efficiency | Excellent |
| Specific Gravity | 1.045 |
| Stability (Hot or Cold): | Excellent |
| Ferrous Metals | None |
| Non-Ferrous Metals | None |

