



TURI SURFACE CLEANING LABORATORY
CLEANING CHEMICAL QUESTIONNAIRE

See letter for submission instructions.

D1

Material Safety Data Sheet (MSDS)
MUST Be Attached
(and Technical Data Sheet, if available)

1. Product/Trade Name (Please use a separate questionnaire for each cleaning chemical you want listed in the Directory): All-Kleen 36 Generic Chemical Family: Mild Organic Acid

Meets Specified Standard(s): ASTM: _____ Mil Spec: _____ FDA: _____ Other: _____

Primary Cleaner Classification (Check only one):

- | | | | |
|--|---|---|---------------------------------------|
| <input checked="" type="checkbox"/> Acidic Aqueous | <input type="checkbox"/> Semi-Aqueous | <input type="checkbox"/> Powder detergent | <input type="checkbox"/> Extracting |
| <input type="checkbox"/> Neutral Aqueous | <input type="checkbox"/> Terpene | <input type="checkbox"/> Enzymatic/ | <input type="checkbox"/> HCFC |
| <input type="checkbox"/> Alkaline Aqueous | <input type="checkbox"/> Petroleum distillate | <input type="checkbox"/> Microbial | <input type="checkbox"/> Alcohol |
| <input type="checkbox"/> Caustic | <input type="checkbox"/> Organic | <input type="checkbox"/> Blasting | <input type="checkbox"/> Other: _____ |

2. Chemical Constituents (Check all that apply & specify) Example ☒ Builder: Sodium Hydroxide 50% (as Concentrate)

Cleaner Containing: At Least Some Water (50 %) OR No/Minimal Water

- | | | |
|--|---|--|
| <input type="checkbox"/> Builder: _____ | <input checked="" type="checkbox"/> Water conditioner/Sequestering/ | <input type="checkbox"/> Supercritical fluid: _____ |
| <input checked="" type="checkbox"/> Surfactant: <u>Anionic Sulfonate</u> | Chelating agent: <u>Carboxylic acid</u> | <input type="checkbox"/> Blasting medium: _____ |
| <input checked="" type="checkbox"/> Emulsifier: <u>Emulsified nonionic</u> | <input type="checkbox"/> Corrosion inhibitor/Rust | <input checked="" type="checkbox"/> Other: <u>Inhibitor for Aluminum</u> |
| <input type="checkbox"/> Saponifier: _____ | prohibitor: _____ | <u>Sodium Nitrate</u> |
| <input checked="" type="checkbox"/> Other: <u>Alcohol</u> | <input type="checkbox"/> Anti-microbial: _____ | |
| <input type="checkbox"/> Rinse aid/Silicate: _____ | | |

3. Industrial Applications (Number all that apply, Most Used = 1)

- | | | | |
|---|--|--|--|
| <u>3</u> <input checked="" type="checkbox"/> Aerospace/Military | <u>1</u> <input checked="" type="checkbox"/> Metal Finishing | <input type="checkbox"/> PCBs | <input type="checkbox"/> Semiconductors |
| <input type="checkbox"/> Cleanrooms | <u>2</u> <input checked="" type="checkbox"/> Metal Fabrication | <input type="checkbox"/> Plastics | <input type="checkbox"/> General Cleaning (floors, etc.) |
| <input type="checkbox"/> Basic Electronics | <input type="checkbox"/> Optics | <input type="checkbox"/> Precision Instruments | <input type="checkbox"/> Maint./Repair (engines, etc.) |
| <input type="checkbox"/> Medical | <input type="checkbox"/> Painting | <input type="checkbox"/> Printing | <input type="checkbox"/> Other: _____ |

4. Contaminant Removal (Check all that apply & specify, if possible)

- | | | | |
|---|--|--|---|
| <input type="checkbox"/> Adhesives | <input type="checkbox"/> Coatings | <input checked="" type="checkbox"/> Greases | Example <input checked="" type="checkbox"/> Coatings <u>Conformal</u> |
| <input checked="" type="checkbox"/> Buffing/polishing | <input type="checkbox"/> Cutting/tapping | <input type="checkbox"/> Inks | <input type="checkbox"/> Mold releases/ |
| compounds | fluids | <input checked="" type="checkbox"/> Lubricating/ | Silicones |
| <input type="checkbox"/> Carbon deposits | <input checked="" type="checkbox"/> Fluxes | lapping oils | <input type="checkbox"/> Paints |
| | | | <input type="checkbox"/> Resins/Rosins |
| | | | <input type="checkbox"/> Rust/Scale |
| | | | <input type="checkbox"/> Waxes |
| | | | <input type="checkbox"/> Other: _____ |

5. Substrate Compatibility (Check all that apply)

- | | | | | |
|--|--|---|---|---------------------------------------|
| <input checked="" type="checkbox"/> Aluminum | <input type="checkbox"/> Carbon steel | <input type="checkbox"/> Glass/quartz | <input type="checkbox"/> Rubber | <input type="checkbox"/> Nickel |
| <input type="checkbox"/> Alloys (Specify): _____ | <input type="checkbox"/> Ceramics | <input type="checkbox"/> Gold | <input checked="" type="checkbox"/> Stainless steel | <input type="checkbox"/> Tin |
| <input type="checkbox"/> Brass | <input type="checkbox"/> Copper | <input type="checkbox"/> Plastic (Specify): _____ | <input type="checkbox"/> Steel | <input type="checkbox"/> Other: _____ |
| | <input checked="" type="checkbox"/> Galvanized steel | | <input type="checkbox"/> Sterling/silver | |

6. Equipment Compatibility (Check all that apply & specify, if applicable)

- | | | |
|--|--|--|
| <input type="checkbox"/> Cold Solvent | <input checked="" type="checkbox"/> Mechanical Agitation | <input checked="" type="checkbox"/> Low Pressure Spray <u>5-15</u> psi-range |
| <input type="checkbox"/> Vapor Degreasing | <input checked="" type="checkbox"/> Ultrasonics | <input type="checkbox"/> High Pressure Spray _____ psi-range |
| <input type="checkbox"/> Manual Wipe | <input type="checkbox"/> Media Blasting | <input type="checkbox"/> Other: _____ |
| <input checked="" type="checkbox"/> Immersion/Soak | <input type="checkbox"/> Supercritical Extract | |

7. Recommended Concentrations: 5-20 Percent Volume (range)

Recommended Temperatures: 140-200 Deg. F (range)

8. Important Physical and Chemical Properties:

Maximum theoretical VOC content: _____

GWP: _____

Surface Tension: _____

Density: 9.5 lbs/gal

ODP: _____

Kb value: _____

Other: _____

9. Cost per pound/gallon: Smallest-unit price: _____ Large-volume price: _____ US\$

10. Additional pertinent information not found elsewhere on this form or MSDS:

HEATBATH *Technical Data*

C O R P O R A T I O N

BOX 2978, SPRINGFIELD, MA 01102-2978 • TEL: (413) 543-3381 • FAX: (413) 543-2378
Website: <http://www.heatbath.com>

ALU-KLEEN 36

CHARACTERISTICS:

Alu-Kleen 36 is a mild slightly acidic liquid cleaner concentrate for aluminum and aluminum alloys. Solutions of Alu-Kleen 36 will remove cutting and corrosion proofing oils, drawing compounds and some buffing compounds. In most cases there is no attack to the base metal.

FORM:

Mildly acidic liquid concentrate weighing 9.5 lbs./gallon, shipped in 500 lb. drums

EQUIPMENT:

Pumps, piping and tanks for Alu-Kleen 36 should be fabricated from stainless steel either Type 304 or Type 316.

OPERATION:

Concentration:	5 - 20% by volume
Temperature:	140° - 200°F
Time:	1 - 30 minutes (as required)

CONTROL:

1. Pipet a 5 ml. sample into a 300 ml. flask.
2. Add about 20 mls. water and 5 - 6 drops Phenolphthalein Indicator.
3. Titrate to a pink endpoint with 0.1N Sodium Hydroxide.
4. Calculation:

Mls. 0.1 N NaOH = Alu-Kleen 36 (% by volume)

Rev 1

SAFETY:

Alu-Kleen 36 is a mixture of organic acids and detergents. For skin contact wash with water. For eye contact flood with water and get medical attention if pain or irritation develop.

DISPOSAL:

Neutralize to pH 6.5 - 8.5 and skim accumulated oils before disposing of aqueous phase. Comply with all local, state and federal regulations.

TESTING CHEMICAL AND CONTROL EQUIPMENT:

Titration chemicals as well as automatic concentration control equipment are available upon request and may be obtained from Heatbath Corporation, Springfield, Massachusetts.

NON-WARRANTY:

The data contained in this bulletin is believed by Heatbath Corporation to be accurate, true and complete. Recommended parameters are based on a typical process and may be altered to accommodate specific requirements. Since, however, final use of the product is beyond our control, no warranty of results is expressed or should be implied.