

SAFETY DATA SHEET

SECTION I: IDENTIFICATION

Product: Friction Plus

Description: Friction Vehicle Wash

Company Identification: Solutions² LLC
1621 N. 1st St.
Winterset, IA 50273
Phone: 515-493-1153
Website: www.Solutions2llc.com



Company Emergency Telephone Number: CHEMTREC 1-800-424-9300

SECTION II: HAZARD(S) IDENTIFICATION

Skin Corrosion/Irritation: Category 1 Sub-category A

Eye Damage/Eye Irritation: Category 1

Corrosive to Metals: Category 1

GHS LABEL ELEMENTS

Signal Word: **Danger**

Hazard Pictogram:



Hazard Statements: Causes severe burns and serious eye damage.
Causes serious eye damage.
May be corrosive to metals.

PRECAUTIONARY STATEMENTS

Prevention: Do not breathe dust/fumes/gas/mist/vapors/spray.
Wear protective gloves/protective clothing/eye protection/face protection.
Keep in original or other corrosion resistant container.

Response: Immediately call a POISON CENTER or doctor/physician.

Eyes: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

Skin: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse.

Inhalation: IF INHALED: Move victim to fresh air and keep at rest in a position comfortable for breathing.

Ingestion: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Spill: Absorb spillage to prevent material damage.

Storage: Store locked up.
Store in a corrosive resistant container.

Disposal: Dispose of contents and container in accordance with local, state and federal regulations.

Hazards Not Classified: Not applicable.

Additional Information: Corrosive.
Keep out of reach children.
Harmful contact may not cause immediate pain.
Harmful or fatal if swallowed.
Discard contaminated shoes/boots.
Inhalation of vapors/mist may cause respiratory irritation or damage.
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION III: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight - %
Water	7732-18-5	71-76%
Potassium Hydroxide	1310-58-3	5-10%
Amines, coco alkylidimethyl, N-oxides	61788-90-7	5-10%
Ethylenediaminetetraacetic acid, tetrasodium salt	64-02-8	1-6%
2-Butoxyethanol	111-76-2	3-8%
Alpha-sulfo-omega-hydroxypoly(oxy-1-2ethanidiyl)C10-16Alkyn Ethers, Sodium Salts	68585-34-2	0-5%
sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene,sodium	68439-57-6	0-5%

Specific chemical identity and/or exact percentage of mixture has been withheld as a trade secret.

SECTION IV: FIRST AID MEASURES

Eye Contact: Rinse with water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical assistance immediately.

Skin Contact: Immediately remove all contaminated clothing. Rinse with water or shower for at least 15 minutes. If irritation persists, IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.

Inhalation: Move victim to fresh air and keep at rest in a comfortable position for breathing. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN.

Ingestion: Rinse mouth. DO NOT INDUCE VOMITING. IMMEDIATELY CALL A POISON CENTER OR PHYSICIAN. Never give anything by mouth to an unconscious person.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SYMPTOMS OF EXPOSURE

Eye Contact: Pain, swelling, redness of the conjunctiva and tissue damage. Contact with eye may result in permanent damage.

Skin Contact: Pain, blistering, redness and possible chemical burn.

Inhalation: Irritation or damage to the mucus membranes of respiratory tract. Coughing and nasal discomfort.

Ingestion: Damage or chemical burns to mouth, throat and stomach. Pain, vomiting, nausea and diarrhea.

SECTION V: FIRE-FIGHTING MEASURES

Extinguishing Media: Product does not support combustion. Use extinguishing agent suitable for type of surrounding fire.

Specific Hazards from the Chemical: Dried product is capable of burning.

Hazardous Combustion Products: May include carbon monoxide, carbon dioxide and other toxic gases or vapors.

Protective Equipment / Precautions for Firefighters: Wear MSHA/NIOSH approved self-contained breathing apparatus (SCBA) and full protective gear. Cool fire-exposed containers with water spray.

SECTION VI: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Avoid contact with skin, eyes, or clothing. Use personal protective equipment as required.
- Environmental Precautions:** Do not rinse spill onto the ground, into storm sewers or bodies of water.
- Methods for Cleaning Up:** If safe to do so, prevent further leakage or spillage. Contain and collect spillage with non-combustible absorbent material. Place in container for disposal according to local/national regulations (see Section 13).

SECTION VII: HANDLING AND STORAGE

- Safe Handling:** Do not breathe mist or vapor. Do not get in eyes, on skin or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. Do not empty into drains.
- Storage Conditions for Safe Storage, Including any Incompatibilities:** Store in original tightly closed container. Store away from incompatible materials (see Section 10).

SECTION VIII: EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits: None established.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Potassium Hydroxide	Ceiling: 2 mg/m ³		TWA: 2 mg/m ³
2-Butoxyethanol	20 ppm (TWA)	240 mg/m ³ / 50 ppm (PEL)	24 mg/m ³ / 5 ppm (TWA)

Engineering Controls: Ensure good general ventilation. Eye wash stations and shower facilities should be readily accessible in areas where product is handled.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Eye/Face Protection:** Wear splash goggles. For product usage over head wear a face shield over goggles.
- Skin/Body Protection:** Wear rubber or other chemical resistant gloves. Use of apron, boots and other protective equipment should be considered to prevent or minimize product exposure.
- Respiratory Protection:** Not required with expected use. If occupational exposure limits are exceeded or respiratory irritation occurs, use MSHA/NIOSH approved respirator conditions and chemicals in Section 3.
- General Hygiene:** Wash hands and any other exposed skin thoroughly after handling. For further guidance reference 29 CFR 1910.132-138.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Color	Liquid / Yellowish
Odor	Mild
pH	14.0
Melting Point / Freezing Point	No information available
Boiling Point / Boiling Range	212° F
Flash Point	> 100° C / > 212° F
Evaporation Rate	No information available
Flammability (Solid, gas)	No information available
Upper Flammability Limit	No information available
Lower Flammability Limit	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Specific Gravity	1.04
Solubility(ies)	No information available
Partition Coefficient	No information available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	No information available

SECTION X: STABILITY AND REACTIVITY

Reactivity:	Product considered to be non-reactive under normal use conditions.
Chemical Stability:	Stable under normal conditions.
Possibility of Hazardous Reaction:	Contact with aluminum or other reactive metals may release hydrogen gas.
Conditions to Avoid:	Extreme high or low temperatures. Direct sunlight.
Incompatible Material:	Strong oxidizing agents. Strong acids.
Hazardous Decomposition:	May include carbon monoxide, carbon dioxide and other toxic gases or vapors.

SECTION XI: TOXICOLOGICAL INFORMATION

NUMERICAL MEASURES OF TOXICITY

Acute Toxicity Estimates (ATE):	ATEmix (oral):	2,148 mg/kg
	ATEmix (dermal):	25,027 mg/kg

INFORMATION ON TOXICOLOGICAL EFFECTS

Component Acute Toxicity:

Chemical Name	Oral LD50	Dermal LD50
Potassium Hydroxide	273 mg/kg (Rat)	
Amines, coco alkyldimethyl, N-oxides	4,656 mg/kg (Rat)	
Ethylenediaminetetraacetic acid, tetrasodium salt	1,780 mg/kg (Rat)	
2-Butoxyethanol	1,300 mg/kg (Rat)	> 2,000 mg/kg (Rat)
Alpha-sulfo-omega-hydroxypoly(oxy-1-2ethanidiyl) C10-16Alkyn Ethers, Sodium Salts	4,100 mg/kg (Rat)	> 2,000 mg/kg (Rat)
sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium	> 5,000 mg/kg	

Likely Routes of Exposure: Eyes, Skin, Ingestion, Inhalation.

SYMPTOMS OF EXPOSURE

Eye Contact: Pain, swelling, redness of the conjunctiva and tissue damage. Contact with eye may result in permanent damage.

Skin Contact: Pain, blistering, redness and possible chemical burn.

Inhalation: Irritation or damage to the mucus membranes of respiratory tract. Coughing and nasal discomfort.

Ingestion: Damage or chemical burns to mouth, throat and stomach. Pain, vomiting, nausea and diarrhea.

IMMEDIATE, DELAYED, CHRONIC EFFECTS

Product Information: Data not available or insufficient.

Target Organ Effects: Eyes, Respiratory System, Skin.

Carcinogenicity: No components present at 0.1% or greater are listed to be carcinogens by ACGIH, IARC, NTP or OSHA.

SECTION XII: ECOLOGICAL INFORMATION**Ecotoxicity:**

Chemical Name	Algae/Aquatic Plants	Fish	Microtoxicity	Crustacea
Potassium Hydroxide		177.7778 mg/l, 96 hrs est.		
Amines, coco alkyldimethyl, N-oxides		10-100 mg/l, 96 hrs		
Ethylenediaminetetraacetic acid, tetrasodium salt	> 100 mg/l, 72 hrs	> 100 mg/l, 96 hrs		> 500 mg/l, 24 hrs
2-Butoxyethanol		1,250 mg/l, 96 hrs		
Alpha-sulfo-omega-hydroxypoly (oxy-1-2ethanidiyl)C10-16Alkyn Ethers, Sodium Salts	27 mg/l, 72 hrs	7.1 mg/l, 96 hrs		7.2 mg/l, 48 hrs
Sulfonic acids, c14-16-alkane hydroxy and c14-16-alkene, sodium		1-10 mg/l, 96 hrs		1-10 mg/l, 48 hrs

Persistence and Degradability: Not available.

Bioaccumulative Potential: Not available.

Mobility in Soil: Not available.

SECTION XIII: DISPOSAL CONSIDERATIONS

Disposal of Waste: Dispose of in accordance with federal, state and local regulations.

Contaminated Packaging: Dispose of in accordance with federal, state and local regulations.

SECTION XIV: TRANSPORT INFORMATION**DOT:**

UNID #: 1760

Proper Shipping Name: Compound, Cleaning Liquid, (Potassium Hydroxide Solution)

Hazard Class: 8

Packing Group: III

SECTION XV: REGULATORY INFORMATION**TSCA Status: (Toxic Substance Control Act Section 8(b) Inventory):**

All chemical components in this product are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

SARA 313: This product does not contain listed substances above the "de minimus" level.

SARA 311/312 HAZARD CATEGORIES

Acute Health Hazard: Yes

Chronic Health Hazard: No

Fire Hazard: No

Sudden Release of Pressure Hazard: No

Reactive Hazard: No

California Proposition 65: This product does not contain any Proposition 65 chemicals.

SECTION XVI: OTHER INFORMATION

Issue Date: 06/01/15

HAZARD RATINGS:

Version #: 1

NFPA: Health: 2 Flammability: 0 Reactivity: 0
HMIS: Health: 2 Flammability: 0 Physical Hazard: 0

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