

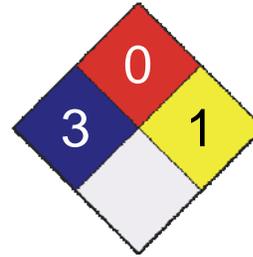
# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Product Name** Tri-Pow'r HD (4371-88)  
**CAS #** Mixture  
**Product use** Heavy Duty Cleaner/Degreaser  
**Manufacturer** Nu-Calgon  
 2008 Altom Court  
 St. Louis, MO 63146 US  
 Phone: 314-469-7000 / 800-554-5499  
 Emergency Phone: 1-800-424-9300 (CHEMTREC)

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	/ 3
Flammability	0
Physical Hazard	1
Personal Protection	X



## 2. Hazards Identification

**Emergency overview** DANGER -- CORROSIVE  
 CAUSES SKIN AND EYE BURNS.

**Potential short term health effects**

**Routes of exposure** Eye, Skin contact, Inhalation, Ingestion.

**Eyes** Causes chemical burns. May cause blindness.

**Skin** Causes chemical burns. Harmful contact may not cause immediate pain.

**Inhalation** May cause respiratory tract irritation or chemical burns.

**Ingestion** Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.

**Target organs** Eyes. Respiratory system. Skin.

**Chronic effects** Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

**Signs and symptoms** The product causes burns of eyes, skin and mucous membranes.

## 3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent
Potassium hydroxide	1310-58-3	3 - 7
Silicic acid, sodium salt	1344-09-8	3 - 7
Alkyl polyglycoside	110615-47-9	1 - 5
Sodium carbonate	497-19-8	1 - 5

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Immediately flush with cool water. Remove contact lenses, if applicable, and continue flushing for 15 minutes. Obtain medical attention immediately.

**Skin contact** Immediately flush with water. Wash with soap and water. Obtain medical attention if irritation persists.

**Inhalation** If symptoms develop move victim to fresh air. If symptoms persist, obtain medical attention.

**Ingestion** Do not induce vomiting. Rinse mouth with water, then drink one or two glasses of water. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

**General advice**

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

---

## 5. Fire Fighting Measures

---

<b>Flammable properties</b>	Not flammable by WHMIS/OSHA criteria.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Fog. Water spray. Dry chemical. Carbon dioxide. Foam.
<b>Unsuitable extinguishing media</b>	Not available
<b>Protection of firefighters</b>	
<b>Specific hazards arising from the chemical</b>	Not available
<b>Protective equipment for firefighters</b>	Firefighters should wear full protective clothing including self contained breathing apparatus.
<b>Hazardous combustion products</b>	May include and are not limited to: Oxides of carbon.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	Not available
<b>Sensitivity to static discharge</b>	Not available

---

## 6. Accidental Release Measures

---

<b>Personal precautions</b>	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
<b>Methods for containment</b>	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas.
<b>Methods for cleaning up</b>	Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use.

---

## 7. Handling and Storage

---

<b>Handling</b>	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
<b>Storage</b>	Keep out of the reach of children. Store in a closed container away from incompatible materials.

---

## 8. Exposure Controls / Personal Protection

---

### Exposure limits

Ingredient(s)	Exposure Limits
Alkyl polyglycoside	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established
Potassium hydroxide	<b>ACGIH-TLV</b> Ceiling: 2 mg/m3 <b>OSHA-PEL</b> Not established
Silicic acid, sodium salt	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established
Sodium carbonate	<b>ACGIH-TLV</b> Not established <b>OSHA-PEL</b> Not established

### Engineering controls

General ventilation normally adequate.

### Personal protective equipment

#### Eye / face protection

Wear chemical goggles.

#### Hand protection

Rubber gloves. Confirm with a reputable supplier first.

#### Skin and body protection

As required by employer code.

#### Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Avoid breathing mists or vapors.

#### General hygiene considerations

Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

---

## 9. Physical & Chemical Properties

---

Appearance	Liquid.
Color	Orange
Form	Liquid
Odor	Fresh.
Odor threshold	Not available
Physical state	Liquid
pH	12.9 (Concentrate)
Melting point	Not available
Freezing point	0 °C (32.00 °F)
Boiling point	100 °C (212.00 °F)
Flash point	None to boiling
Evaporation rate	Same as water
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	1.13 ± 0.005
Octanol/water coefficient	Not available

<b>Solubility (H2O)</b>	Complete
<b>Auto-ignition temperature</b>	Not available
<b>VOC (Weight %)</b>	Not available
<b>Viscosity</b>	Not available
<b>Percent volatile</b>	83

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Conditions to avoid</b>	Reacts violently with acids. This product may react with oxidizing agents. Do not mix with other chemicals. Hazardous vapours may be produced when mixed with chlorinated detergents or sanitizers.
<b>Incompatible materials</b>	Acids. Oxidizing agents.
<b>Hazardous decomposition products</b>	May include and are not limited to: Oxides of carbon.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

### Component analysis - LC50

Ingredient(s)	LC50
Alkyl polyglycoside	Not available
Potassium hydroxide	Not available
Silicic acid, sodium salt	Not available
Sodium carbonate	400 mg/m3 guinea pig

### Component analysis - Oral LD50

Ingredient(s)	LD50
Alkyl polyglycoside	5000 mg/kg rat
Potassium hydroxide	214 mg/kg rat
Silicic acid, sodium salt	1153 mg/kg rat
Sodium carbonate	4090 mg/kg rat

### Effects of acute exposure

<b>Eye</b>	Causes chemical burns. May cause blindness.
<b>Skin</b>	Causes chemical burns. Harmful contact may not cause immediate pain.
<b>Inhalation</b>	May cause respiratory tract irritation or chemical burns.
<b>Ingestion</b>	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach.
<b>Sensitization</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Chronic effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Carcinogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Mutagenicity</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Reproductive effects</b>	Non-hazardous by WHMIS/OSHA criteria.
<b>Teratogenicity</b>	Non-hazardous by WHMIS/OSHA criteria.

## 12. Ecological Information

**Ecotoxicity** Components of this product have been identified as having potential environmental concerns.

### Ecotoxicity - Freshwater Algae Data

Sodium carbonate 497-19-8 120 Hr EC50 Nitzschia: 242 mg/L

### Ecotoxicity - Freshwater Fish Species Data

Potassium hydroxide 1310-58-3 24 Hr LC50 Gambusia affinis: 80.0 mg/L  
 Silicic acid, sodium salt 1344-09-8 96 Hr LC50 Lepomis macrochirus: 301-478 mg/L; 96 Hr LC50 Brachydanio rerio: 3185 mg/L [semi-static]  
 Sodium carbonate 497-19-8 96 Hr LC50 Lepomis macrochirus: 300 mg/L [static]

### Ecotoxicity - Water Flea Data

Silicic acid, sodium salt 1344-09-8 96 Hr EC50 Daphnia magna: 216 mg/L  
 Sodium carbonate 497-19-8 48 Hr EC50 Daphnia magna: 265 mg/L

Environmental effects	Not available
Aquatic toxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available
Other adverse effects	Not available

### 13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

### 14. Transport Information

#### U.S. Department of Transportation (DOT)

**Basic shipping requirements:**

Proper shipping name	Corrosive liquid, basic, inorganic, n.o.s. (POTASSIUM HYDROXIDE)
Hazard class	8
UN number	UN3266
Packing group	II
Additional information:	
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	<0.3 Gallons - Limited Quantity
ERG number	154



#### Transportation of Dangerous Goods (TDG - Canada)

**Basic shipping requirements:**

Proper shipping name	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE)
Hazard class	8
UN number	UN3266
Packing group	II
Additional information:	
Special provisions	16
Packaging exceptions	<1L - Limited Quantity



### 15. Regulatory Information

**Canadian federal regulations** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Canada - WHMIS - Ingredient Disclosure List**

Potassium hydroxide	1310-58-3	1 %
Sodium carbonate	497-19-8	1 %

**US Federal regulations**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.  
All components are on the U.S. EPA TSCA Inventory List.

**U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities**

Potassium hydroxide 1310-58-3 1000 Lb final RQ; 454 kg final RQ

**U.S. - CWA (Clean Water Act) - Hazardous Substances**

Potassium hydroxide 1310-58-3 Present

**Occupational Safety and Health Administration (OSHA)**

**29 CFR 1910.1200 hazardous chemical** Yes

**CERCLA (Superfund) reportable quantity**

Potassium hydroxide: 1000.0000

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories**  
Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Clean Air Act (CAA)** Not available

**Clean Water Act (CWA)** Hazardous substance

**Safe Drinking Water Act (SDWA)** Not available

**Drug Enforcement Agency (DEA)** Not available

**Food and Drug Administration (FDA)** Not available

**WHMIS status** Controlled

**WHMIS classification** Class E - Corrosive Material

**WHMIS labeling****State regulations**

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances**

Potassium hydroxide 1310-58-3 Present

**U.S. - Louisiana - Reportable Quantity List for Pollutants**

Potassium hydroxide 1310-58-3 1000 Lb final RQ; 454 kg final RQ

**U.S. - Massachusetts - Right To Know List**

Potassium hydroxide 1310-58-3 Present

**U.S. - Minnesota - Hazardous Substance List**

Potassium hydroxide 1310-58-3 Present

**U.S. - New Jersey - Right to Know Hazardous Substance List**

Potassium hydroxide 1310-58-3 sn 1571

**U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances**

Potassium hydroxide 1310-58-3 1000 Lb RQ (air); 100 lb RQ (land/water)

**U.S. - Pennsylvania - RTK (Right to Know) List**

Potassium hydroxide 1310-58-3 Environmental hazard

**U.S. - Rhode Island - Hazardous Substance List**

Potassium hydroxide 1310-58-3 Toxic; Flammable

**Inventory name**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

---

## 16. Other Information

---

<b>Disclaimer</b>	Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.
<b>Issue date</b>	10-Feb-2009
<b>Effective date</b>	15-Feb-2009
<b>Expiry date</b>	15-Feb-2012
<b>Prepared by</b>	Nu-Calgon Technical Service (314) 469-7000