

1. Product and Company Identification

SDS REC'D by Trane March 22, 2019

Product identifier	Tri-Pow'r HD (4371-88, 4371-86, 4371-81)	CHM00426
Other means of identification	Not available	CHM00443
Recommended use	Heavy duty cleaner	CHM01482
Recommended restrictions	None known.	
Manufacturer information	Nu-Calgon 2611 Schuetz Road St. Louis, MO 63043 US Phone: 314-469-7000 / 800-554-5499 Emergency Phone: 1-800-424-9300 (CHEMTREC)	
Supplier	See above.	

2. Hazards Identification

Physical hazards	Corrosive to metals	Category 1
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
Environmental hazards	Not classified.	
WHMIS 2015 defined hazards	Not classified	
Label elements		



Signal word Danger

Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage.

Precautionary statement

Prevention Keep only in original packaging. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection and face protection.

Response Absorb spillage to prevent material-damage.
 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage Store locked up. Store in a corrosion resistant container with a resistant inner liner.

Disposal Dispose of container in accordance with local, regional, national and international regulations.

WHMIS 2015: Health Hazard(s) not otherwise classified (HHNOC) None known

WHMIS 2015: Physical Hazard(s) not otherwise classified (PHNOC) None known

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/Information on Ingredients

Mixture

Chemical name	Common name and synonyms	CAS number	%
Alkyl polyglycoside		110615-47-9	1-5*
Potassium hydroxide		1310-58-3	3-7*
Silicic acid, sodium salt		1344-09-8	3-7*
Sodium carbonate		497-19-8	1-5*

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Composition comments US GHS: The exact percentage (concentration) of composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.
*CANADA GHS: The exact percentage (concentration) of composition has been withheld as a trade secret.

4. First Aid Measures

Inhalation	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.
Skin contact	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before reuse.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Treat patient symptomatically.
General information	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. Wear rubber gloves and chemical splash goggles. Keep out of reach of children.

5. Fire Fighting Measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
Unsuitable extinguishing media	Not available.
Specific hazards arising from the chemical	Firefighters should wear a self-contained breathing apparatus.
Special protective equipment and precautions for firefighters	Firefighters should wear full protective clothing including self-contained breathing apparatus.
Fire-fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
Hazardous combustion products	May include and are not limited to: Oxides of carbon.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Stop leak if you can do so without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb spillage to prevent material damage. Absorb in vermiculite, dry sand or earth and place into containers. Never return spills to original containers for re-use. Clean surface thoroughly to remove residual contamination. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
Environmental precautions	Do not discharge into lakes, streams, ponds or public waters.

7. Handling and Storage

Precautions for safe handling	Avoid contact with eyes, skin and clothing. Do not breathe mist or vapor. Wear appropriate personal protective equipment. Use only with adequate ventilation. Avoid prolonged exposure. Use good industrial hygiene practices in handling this material. Wash thoroughly after handling.
Conditions for safe storage, including any incompatibilities	Store in a corrosion resistant container with a resistant inner liner. Store in a cool, dry place out of direct sunlight. Store locked up. Store away from incompatible materials (see Section 10 of the SDS). Keep out of the reach of children.

8. Exposure Controls/Personal Protection

Occupational exposure limits

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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US. ACGIH Threshold Limit Values

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
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Potassium hydroxide (CAS 1310-58-3)	Ceiling	2 mg/m ³
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Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

Chemicals listed in section 3 that are not listed here do not have established limit values for ACGIH or OSHA PEL.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Impervious gloves. Confirm with reputable supplier first.

Other

As required by employer code.

Respiratory protection

Where exposure guideline levels may be exceeded, use an approved NIOSH respirator. Respirator should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134), CAN/CSA-Z94.4 and ANSI's standard for respiratory protection (Z88.2).

Thermal hazards

Not applicable.

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and immediately after handling the product. When using do not eat or drink.

9. Physical and Chemical Properties

Appearance Clear

Physical state Liquid.

Form	Liquid
Color	Orange
Odor	Pine
Odor threshold	Not available.
pH	12.5 (5%) 13.3 (Concentrate)
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Pour point	Not available.
Specific gravity	Not available.
Partition coefficient (n-octanol/water)	Not available
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available
Flammability limit - upper (%)	Not available
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available
Vapor density	Not available
Relative density	Not available.
Solubility(ies)	Complete
Auto-ignition temperature	Not available
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and Reactivity

Reactivity	May react with incompatible materials.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Hazardous vapours may be produced when mixed with chlorinated detergents or sanitizers.
Incompatible materials	Oxidizing agents. Acids. Maleic anhydride.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon.

11. Toxicological Information

Routes of exposure	Eye, Skin contact, Inhalation, Ingestion.
Information on likely routes of exposure	
Ingestion	Causes digestive tract burns. May cause stomach distress, nausea or vomiting.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Information on toxicological effects	
Acute toxicity	Causes burns.

Components	Species	Test Results
Alkyl polyglycoside (CAS 110615-47-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg, ECHA > 2000 mg/kg, ECHA
Potassium hydroxide (CAS 1310-58-3)		
Acute		
<i>Dermal</i>		
LD50	Not available	
<i>Inhalation</i>		
LC50	Not available	
<i>Oral</i>		
LD50	Rat	388 mg/kg, ECHA 365 mg/kg, ECHA 333 mg/kg, ECHA 273 mg/kg
Silicic acid, sodium salt (CAS 1344-09-8)		
Acute		
<i>Dermal</i>		
LD50	Rat	> 5000 mg/kg, 24 Hours, ECHA
<i>Inhalation</i>		
LC50	Rat	> 2.1 mg/L, 4 Hours, ECHA
<i>Oral</i>		
LD50	Mouse	1100 mg/kg, Toxic and Hazardous Industrial Chemicals Safety Manual. Tokyo, Japan
	Rat	5150 mg/kg, ECHA 3400 mg/kg, ECHA 1.1 g/kg, HSDB
Sodium carbonate (CAS 497-19-8)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg, ECHA
	Rat	> 2000 mg/kg, ECHA
<i>Inhalation</i>		
LC50	Guinea pig	800 mg/m3, 2 Hours, ECHA 0.8 mg/L, 2 Hours
	Mouse	1200 mg/m3, 2 Hours, ECHA 1.2 mg/L, 2 Hours
	Rat	2300 mg/m3, 2 Hours, ECHA 2.3 mg/L, 2 Hours
<i>Oral</i>		
LD50	Rat	4090 mg/kg, RTECS 2800 mg/kg, ECHA, HSDB
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Exposure minutes	Not available.	
Erythema value	Not available.	
Oedema value	Not available.	

Serious eye damage/eye irritation	Causes serious eye damage.
Corneal opacity value	Not available.
Iris lesion value	Not available.
Conjunctival reddening value	Not available.
Conjunctival oedema value	Not available.
Recover days	Not available.
Respiratory or skin sensitization	
Canada - Alberta OELs: Irritant	
Potassium hydroxide (CAS 1310-58-3)	Irritant
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Mutagenicity	Not classified.
Carcinogenicity	Not classified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not listed.	
Reproductive toxicity	Not classified.
Teratogenicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological Information

Ecotoxicity	See below		
Ecotoxicological data			
Components		Species	Test Results
Potassium hydroxide (CAS 1310-58-3)			
Aquatic			
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	80 mg/L, 96 hours
Silicic acid, sodium salt (CAS 1344-09-8)			
Aquatic			
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>)	0.28 - 0.57 mg/L, 48 hours
Fish	LC50	Western mosquitofish (<i>Gambusia affinis</i>)	1800 mg/L, 96 hours
Sodium carbonate (CAS 497-19-8)			
Crustacea	EC50	Daphnia	265 mg/L, 48 Hours
Aquatic			
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>)	156.6 - 298.9 mg/L, 48 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	300 mg/L, 96 hours
Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential	No data available.		
Mobility in soil	No data available.		
Mobility in general	Not available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

13. Disposal Considerations

Disposal instructions	Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

Transport of Dangerous Goods (TDG) Proof of Classification Classification Method: Classified as per Part 2, Sections 2.1 – 2.8 of the Transportation of Dangerous Goods Regulations. If applicable, the technical name and the classification of the product will appear below.

U.S. Department of Transportation (DOT)**Basic shipping requirements:**

UN number UN3266
Proper shipping name Corrosive liquid, basic, inorganic, n.o.s.
Technical name POTASSIUM HYDROXIDE
Hazard class 8
Packing group II
Special provisions 386, B2, IB2, T11, TP2, TP27
Packaging exceptions <0.3 gallons - Limited Quantity

Transportation of Dangerous Goods (TDG - Canada)**Basic shipping requirements:**

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

DOT**TDG**

15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

WHMIS 2015 Exemptions Not applicable

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

All chemicals used are on the TSCA inventory.

CERCLA Hazardous Substance List (40 CFR 302.4)

Potassium hydroxide (CAS 1310-58-3) Listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

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

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)
 Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Clean Water Act (CWA) Section 112(r) (40 CFR 68.130) Hazardous substance

US state regulations See below**US - California Hazardous Substances (Director's): Listed substance**

Potassium hydroxide (CAS 1310-58-3) Listed.

US - Illinois Chemical Safety Act: Listed substance

Potassium hydroxide (CAS 1310-58-3)

US - Louisiana Spill Reporting: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - Minnesota Haz Subs: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

US - New Jersey RTK - Substances: Listed substance

Potassium hydroxide (CAS 1310-58-3)

US - Texas Effects Screening Levels: Listed substance

Potassium hydroxide (CAS 1310-58-3) Listed.

Silicic acid, sodium salt (CAS 1344-09-8) Listed.

Sodium carbonate (CAS 497-19-8) Listed.

US. Massachusetts RTK - Substance List

Potassium hydroxide (CAS 1310-58-3)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Pennsylvania Worker and Community Right-to-Know Law

Potassium hydroxide (CAS 1310-58-3)

US. Rhode Island RTK

Potassium hydroxide (CAS 1310-58-3)

US. California Proposition 65

Not Listed.

Inventory status

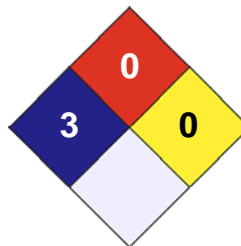
Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

16. Other Information

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 3
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X

**Disclaimer**

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.

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Prepared by

Nu-Calgon Technical Service Phone: (314) 469-7000

Other information

For an updated SDS, please contact the supplier/manufacturer listed on the first page of the document.