

Issue Date: 23-Oct-2013

Revision Date: 28-Oct-2013

Version 1

## 1. IDENTIFICATION

### Product Identifier

**Product Name** Tri-Clean 2X

### Other means of identification

**Part Number** 4372-24.

**UN/ID No** UN3266

### Recommended use of the chemical and restrictions on use

**Recommended Use** Coil cleaner/degreaser. For professional use only.

### Details of the supplier of the safety data sheet

#### **Supplier Address**

Nu-Calgon  
2008 Altom Court  
St. Louis, MO 63146  
www.nucalgon.com

### Emergency Telephone Number

**Company Phone Number** (314) 469-7000  
(800) 554-5499  
**Emergency Telephone (24 hr)** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Appearance** Clear orange liquid

**Physical State** Liquid

**Odor** Pine/Licorice

### Classification

Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1

### Signal Word

**Danger**

### Hazard Statements

Causes severe skin burns and eye damage



### Precautionary Statements - Prevention

Do not breathe dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Immediately call a poison center or doctor/physician  
 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/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a poison center or doctor/physician  
 IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
 Immediately call a poison center or doctor/physician

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Unknown Acute Toxicity**

6% of the mixture consists of ingredient(s) of unknown toxicity

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No	Weight-%
Potassium hydroxide	1310-58-3	5-15
Sodium Silicate	1344-09-8	5-10
Potassium Carbonate	584-08-7	<5

\*\*If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.\*\*

**4. FIRST-AID MEASURES**

**First Aid Measures**

- 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/physician.
- Skin Contact** IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.
- Inhalation** IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.
- Ingestion** IF SWALLOWED: rinse mouth. Do not induce vomiting. Immediately call a poison center or doctor/physician.

**Most important symptoms and effects**

**Symptoms** Causes severe skin burns and eye damage.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** Not determined.

**Specific Hazards Arising from the Chemical**

Material is corrosive.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Use personal protective equipment as required.

**Environmental Precautions** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Clean-Up** Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on Safe Handling** Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Keep out of the reach of children.

**Incompatible Materials** Acids. Oxidizing agents. Bleach. Do not mix with other chemicals or cleaners.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m <sup>3</sup>	(vacated) Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Controls** Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

**Individual protection measures, such as personal protective equipment**

- Eye/Face Protection**                      Wear approved safety goggles where a splash hazard exists.
- Skin and Body Protection**                Wear suitable protective clothing.
- Respiratory Protection**                    Ensure adequate ventilation, especially in confined areas. In case of inadequate ventilation wear respiratory protection.
- General Hygiene Considerations** Wash contaminated clothing before reuse. Wash face, hands and any exposed skin thoroughly after handling.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Odor</b>	Pine/Licorice
<b>Appearance</b>	Clear orange liquid	<b>Odor Threshold</b>	Not determined
<b>Color</b>	Orange		
<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>	
<b>pH</b>	13.6 (concentrate)		
<b>Melting Point/Freezing Point</b>	Not determined		
<b>Boiling Point/Boiling Range</b>	100 °C / 212 °F	IBP	
<b>Flash Point</b>	None to boiling	Tag Closed Cup	
<b>Evaporation Rate</b>	Equal to water		
<b>Flammability (Solid, Gas)</b>	Liquid-not applicable		
<b>Upper Flammability Limits</b>	Not determined		
<b>Lower Flammability Limit</b>	Not determined		
<b>Vapor Pressure</b>	Not determined		
<b>Vapor Density</b>	Not determined		
<b>Specific Gravity</b>	1.18		
<b>Water Solubility</b>	Soluble in water		
<b>Solubility in other solvents</b>	Not determined		
<b>Partition Coefficient</b>	Not determined		
<b>Auto-ignition Temperature</b>	Not determined		
<b>Decomposition Temperature</b>	Not determined		
<b>Kinematic Viscosity</b>	Not determined		
<b>Dynamic Viscosity</b>	60 cps		
<b>Explosive Properties</b>	Not determined		
<b>Oxidizing Properties</b>	Not determined		
<b>VOC Content (%)</b>	None		
<b>Density</b>	9.87 lb/gal		

**10. STABILITY AND REACTIVITY**

**Reactivity**

Not reactive under normal conditions.

**Chemical Stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

- Hazardous Polymerization**                Hazardous polymerization does not occur.

**Conditions to Avoid**

Keep out of reach of children.

**Incompatible Materials**

Acids. Oxidizing agents. Bleach. Do not mix with other chemicals or cleaners.

**Hazardous Decomposition Products**

None known based on information supplied.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

**Product Information**

- Eye Contact** Causes severe eye damage.
- Skin Contact** Causes severe skin burns.
- Inhalation** Avoid breathing vapors or mists.
- Ingestion** Do not taste or swallow.

**Component Information**

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Water 7732-18-5	> 90 mL/kg ( Rat )	-	-
Potassium hydroxide 1310-58-3	= 214 mg/kg ( Rat )	-	-
Sodium Silicate 1344-09-8	= 1153 mg/kg ( Rat )	> 4640 mg/kg ( Rabbit )	-
Potassium Carbonate 584-08-7	= 1870 mg/kg ( Rat )	-	-

**Information on physical, chemical and toxicological effects**

- Symptoms** Please see section 4 of this SDS for symptoms.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

- Carcinogenicity** This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

**Numerical measures of toxicity**

Not determined

- Unknown Acute Toxicity** 6% of the mixture consists of ingredient(s) of unknown toxicity.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Component Information**

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Potassium hydroxide 1310-58-3		80: 96 h Gambusia affinis mg/L LC50 static		
Sodium Silicate 1344-09-8		301 - 478: 96 h Lepomis macrochirus mg/L LC50 3185: 96 h Brachydanio rerio mg/L LC50 semi-static		216: 96 h Daphnia magna mg/L EC50

**Persistence/Degradability**

Not determined.

**Bioaccumulation**

Not determined.

**Mobility**

Chemical Name	Partition Coefficient
Potassium hydroxide 1310-58-3	0.83

**Other Adverse Effects**

Not determined

**13. DISPOSAL CONSIDERATIONS**

**Waste Treatment Methods**

- Disposal of Wastes**                      Disposal should be in accordance with applicable regional, national and local laws and regulations.
  
- Contaminated Packaging**              Disposal should be in accordance with applicable regional, national and local laws and regulations.

**California Hazardous Waste Status**

Chemical Name	California Hazardous Waste Status
Potassium hydroxide 1310-58-3	Toxic Corrosive

**14. TRANSPORT INFORMATION**

**Note**    Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances. This material may be shipped under "Limited Quantity" exceptions when packaged in inner containers of .3 gallons (1 liter) or less.

**DOT**

- UN/ID No**    UN3266
- Proper Shipping Name**                      Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide, Sodium silicate)
- Hazard Class**    8
- Packing Group**    II

**IATA**

- UN/ID No**    UN3266
- Proper Shipping Name**                      Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide, Sodium silicate)
- Hazard Class**    8
- Packing Group**    II

**IMDG**

- UN/ID No**    UN3266
- Proper Shipping Name**                      Corrosive liquid, basic, inorganic, n.o.s. (Potassium hydroxide, Sodium silicate)
- Hazard Class**    8
- Packing Group**    II

**15. REGULATORY INFORMATION**

**International Inventories**

Not determined

**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*

**US Federal Regulations**

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
Potassium hydroxide 1310-58-3	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Potassium hydroxide 1310-58-3 ( 5-15 )	1000 lb			X

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Potassium hydroxide 1310-58-3	X	X	X

**16. OTHER INFORMATION**

<b><u>NFPA</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Instability</b>	<b>Special Hazards</b>
	3	0	0	Cor
<b><u>HMIS</u></b>	<b>Health Hazards</b>	<b>Flammability</b>	<b>Physical Hazards</b>	<b>Personal Protection</b>
	3	0	0	X

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 Revision Note: New format

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**