Safety Data Sheet
Orange Crush

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier
Product name: Orange Crush
Product code: Orange Crush
Synonym(s): Aqueous alkaline mixture

1.2 Relevant identified uses of the substance or mixture and uses advised against
General use: General purpose citrus cleaner and degreaser; for industrial and professional use only
Uses advised against: Not for consumer use

1.3 Details of the supplier and of the safety data sheet
Manufacturer/Distributor
Ultra-Look Corp.
4860 Drane Field Rd.
Lakeland, FL 33811 USA
+1-863-607-6700

1.4 Emergency telephone number
INFOTRAC: +1-800-535-5053

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture
Product definition: Mixture

Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008
Skin Corrosion - Category 1B [H314]
Skin sensitizer - Category 1 [H317]
Single Target Organ Toxicity, Single Exposure - Category 3; STOT SE 3 [H335]

2.2 Label elements
Hazard symbol(s):

GHS05 GHS07

Signal word: **Danger**

Hazard statement(s):
H314 - Causes severe skin burns and eye damage
H317 - May cause allergic skin reaction
H335 - May cause respiratory irritation

Precautionary statements

[Prevention]
P260 - Do not breathe mist, spray, or vapor.
P264 - Wash hands and other exposed skin areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves, protective clothing, eye protection, and face protection.

[Response]
P301 + P330 + P331 + P310 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor.
P303 + P361 + P350 - IF ON SKIN: Remove immediately all contaminated clothing. Rinse skin with water or shower.
P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
P305 + P351 + P338 + P310 - 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.
P321 - Specific treatment: Contact a POISON CENTER or doctor. Refer to Section 4 of this SDS.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.
P363 - Wash contaminated clothing before reuse.

[Storage]
P405 - Store locked up in a well-ventilated place. Keep container tightly closed.

[Disposal]
P501 - Dispose of contents and containers in accordance with national and local regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS
None as defined under 29 CFR 1910.1200.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
----------	Surfactant	Proprietary	----------	----------	H302, H319, H412
----------	Glycol Ether	Proprietary	----------	----------	H227, H302, H312, H315, H319, H332
----------	Potassium hydroxide	1310-73-2	215-185-5	011-002-00-6	H290, H302, H314, H402
----------	Tetrapotassium pyrophosphate	7320-34-5	230-785-7	----------	H319
----------	EDTA sodium salt	Proprietary	----------	----------	H302, H318
----------	d-Limonene	5989-27-5	227-813-5	601-029-00-7	H226, H304, H315, H317, H410

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with the applicable provisions of paragraph (i).

There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4 - FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If symptoms persist or if the victim feels unwell, seek medical attention.

Eyes: Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses, if present and easy to do, after first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. Seek immediate medical attention for chemical burns. If irritation persists or if the victim feels unwell, seek medical attention.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. Give 2 glasses of water (maximum) if the victim is conscious, alert, able to swallow, and not experiencing respiratory difficulty. DO NOT induce vomiting unless directed to do so by medical personnel. Vomiting may occur spontaneously. To prevent aspiration of material into the lungs, lay the victim on one side with the head lower than the waist. Never give anything by mouth to an unconscious or convulsing person. Do not leave the victim unattended. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes severe burns and eye damage. Contact may cause ulceration of the conjunctiva and cornea. May cause irreversible eye injury. May cause blindness. Vapor of mist can cause severe eye irritation. Effects may be delayed.

Skin: Causes severe skin irritation and burns. Symptoms may include localized redness, itching, blistering and burns. Prolonged contact with unprotected skin may cause defatting of the skin and/or dermatitis. May cause an allergic skin reaction in susceptible individuals. May be harmful if absorbed through the skin.

Inhalation: Harmful if inhaled. Inhalation of mist or vapor may cause chemical burns to the respiratory tract. Causes severe irritation with cough, wheezing, laryngitis, breathing difficulty, headache, and nausea. This material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause inflammation and edema of the larynx and bronchi. May cause an allergic, asthma-like response in some individuals.

Ingestion: Harmful if swallowed. Causes severe burns to the lips, mouth, throat, and gastrointestinal tract with abdominal pain, vomiting, diarrhea, shock, and possible death. May cause perforation of and severe and permanent damage to the digestive tract. May cause circulatory system failure.

Chronic: Individuals with pre-existing skin conditions and respiratory disorders may be more susceptible to the effects of this product. Prolonged or repeated skin contact may cause drying and cracking of the skin, dermatitis, or aggravate existing skin conditions. May cause an allergic skin reaction with subsequent sensitization. Chronic eye contact may cause conjunctivitis and permanent eye damage. Chronic exposure may cause damage to the liver and kidneys. The proprietary glycol ether is a known animal carcinogen. Refer to Section 11.2.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Treat symptomatically and supportively. Treat as for strong alkalis.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use extinguishing media suitable for the surrounding fire.
Unsuitable methods of extinction: No limitations of extinguishing agents are given for this material.

5.2 Special hazards arising from the substance or mixture

Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: This product is not an explosion hazard.

5.3 Advice to firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff water to prevent environmental contamination..

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. Clean up spills immediately. Spill creates a slip hazard.

6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers, or waterways.

6.3 Methods and materials for containment and cleaning up

Approach spill from upwind direction. DO NOT flush spills down the drain. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of contents and containers via a licensed waste disposal contractor.

6.4 Reference to other sections

For indications about waste treatment, see Section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist or vapor. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Wash contaminated clothing and shoes thoroughly before reuse.

Advice on protection against fire and explosion
This product is not a fire or explosion hazard.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated areas away from incompatible materials (see Section 10.5), food, and drink. Keep away from strong acids. Keep from freezing. Transfer only to approved containers having correct labeling. Keep containers tightly closed when not in use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Containers are hazardous when empty as they contain product residue. Use appropriate containment to avoid environmental contamination. Ventilate closed areas. Keep locked up and out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
----------	Glycol ether	50 ppm; 240 mg/m^3 TWA	20 ppm; 97 mg/m^3 TWA; skin	50 ppm; 24 mg/m^3 TWA 700 ppm IDLH; skin
1310-58-3	Potassium hydroxide	----------	2 mg/m^3, ceiling	2 mg/m^3, ceiling

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material, including eyes and mucous membranes, either by direct contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposure should be considered.

8.2 Exposure controls

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking, or using the lavatory.

Eye/face protection: Wear safety glasses with unperforated side shields or protective splash goggles during use.

Hand protection: Wear gloves recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Skin protection: Wear protective clothing. Wear protective boots if the situation requires.

Respiratory protection: Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Environmental exposure controls: Do not empty into drains.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean, fit, and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, orange liquid
Odor	Citrus
Odor Threshold	No data available
Molecular Weight	No data available
Chemical Formula	No data available
pH	13 - 14
Freezing/Melting Point	No data available
Initial Boiling Point	100 °C (212 °F)
Evaporation Rate	No data available
Flammability (solid, gas)	Not applicable
Flash Point	Not applicable
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Density	0.985 - 1.045 g/ml (8.23 - 8.72 lb/gal)
Viscosity	No data available
Solubility in Water	Dispersible
Partition Coefficient (n-octanol/water)	No data available
Oxidizing Properties	Not applicable
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	90.05%
VOC (wt. %)	5.44% (54.4 g/ml; 0.454 lb/gal)

9.2 Other Data

No data available

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

No special reactivity has been reported during normal conditions of handling and use.

10.2 Chemical Stability

This material is stable under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid
Avoid temperature extremes and contact with incompatible materials.

10.5 Incompatible materials
Strong oxidizing agents, acids, bases, strong reducing agents

10.6 Hazardous decomposition products
Thermal decomposition products may include oxides of carbon, nitrogen oxides (NO_x), and potassium oxide fumes.

SECTION 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute oral toxicity
No data available

Acute inhalation toxicity
No data available

Acute dermal toxicity
No data available

Skin irritation
Causes severe skin burns.

Eye irritation
Causes serious eye damage.

Sensitization
May cause an allergic skin reaction.

Carcinogenicity
No data available

Germ cell mutagenicity
No data available

Reproductive toxicity
No data available

Specific organ toxicity - single exposure
May cause respiratory irritation.

Specific organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

11.2 Further information
Glycol ether (proprietary): IARC Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*. Not listed as a carcinogen by ACGIH, NTP or OSHA. In long-term animal studies, small but statistically significant increases in tumors were observed in mice but not rats. The effects are not believed to be relevant to humans.

Inhalation exposure in laboratory animals has been found to reduce body weight gain and food consumption in addition to hemolysis. After exposure was discontinued, these effects in animals disappeared. Adverse reproductive or birth effects were not reported in animals except when exposures were high enough to cause significant maternal toxicity. In animals, hemolysis (red blood cell breakage) and secondary effects to the kidneys and liver have been reported. Human red blood cells have been shown to be significantly less sensitive to hemolysis than those of rodents and rabbits.

d-Limonene (CAS #5989-27-5): IARC, Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*. Not listed as a carcinogen by ACGIH, NTP or OSHA.

No data is available regarding the mutagenicity or teratogenicity of this product, nor is there any available data that indicates that it causes adverse developmental or fertility effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity
Large spills or discharges of this product may be harmful to aquatic life. Large discharges to the environment may increase the pH of aquatic systems to a value > 11, which can be fatal to aquatic life and soil micro-organisms.

12.2 Persistence and degradability
Organic components in this product are biodegradable. Inorganic substances are not biodegradable. Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulation potential
Terpene hydrocarbons have the potential to bioaccumulate.

12.4 Mobility in soil
Terpene hydrocarbons absorb to soil and have low mobility.

12.5 Results of PBT and vPvB assessment
No data available

12.6 Other effects
Additional ecological information
Do not allow material to run into surface waters, wastewater, or soil.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products in accordance with national, state and local regulations. Disposal of this product, solutions, and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains, and sewers.

RCRA F-Series: No listings above the reportable threshold (de minimis)
RCRA U-Series: No listings above the reportable threshold (de minimis)

SECTION 14 - TRANSPORT INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG, and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials, and methods of shipping.

Limited quantity for corrosive liquids in Packing Group III when inner packagings are not over 5.0 liters (1.3 gallons) net capacity each, packed in a strong outer packaging.

USA DOT (Ground Transportation)	
Proper Shipping Name	Corrosive liquids, n.o.s. (Potassium hydroxide)
Hazard Class	8
UN	UN1760
Packing Group	III
NAERG	Guide #154
Packaging Authorization	Non-Bulk: 49 CFR 173.203; Bulk: 173.241
Packaging Exceptions	49 CFR 173.154
IMO/IMDG (Water Transportation)	
Proper Shipping Name	Corrosive liquids, n.o.s. (Potassium hydroxide)
Hazard Class	8
UN	UN1760
Packing Group	III
Marine Pollutant	No
EMS Number	F-A, S-B
ICAO/IATA (Air Transportation)	
Proper Shipping Name	Corrosive liquids, n.o.s. (Potassium hydroxide)
Hazard Class	8
UN	UN1760
Packing Group	III
Quantity Limitations	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 60 l; Passenger Aircraft: 5 l
RID/ADR (Rail Transportation)	
Proper Shipping Name	Corrosive liquids, n.o.s. (Potassium hydroxide)
Hazard Class	8
UN	UN1760
Packing Group	III

Placard(s)

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture
U. S. Federal Regulations
OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910.1200.

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

OSHA Process Safety Management Standard: This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f)(2)) and Chemical Code Number
No listings

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: No listings

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals: No listings

Superfund Amendments and Reauthorization Act (SARA)
SARA Section 311/312 Hazard Categories
Causes severe skin burns and eye damage May cause an allergic skin reaction May cause respiratory irritation

SARA 313 Information: Glycol Ethers (SARA code N230) are subject to the reporting levels established by Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the components of this product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains the following CERCLA reportable substances: Potassium Hydroxide (CAS #1310-58-3): RQ = 454 kg (1,000 lb)

Glycol Ethers - There is no RQ assigned to this broad class, although the class is a CERCLA hazardous substances. Refer to 50 Federal Register 13456 (April 4, 1985).

Clean Air Act (CAA)
This product does not contain Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).
This product does not contain Class 1 ozone depletors.
This product does not contain Class 2 ozone depletors.

Clean Water Act (CWA)
Glycol Ethers (EDF-109) and Potassium Hydroxide are Hazardous Substances.
This product does not contain any Priority Pollutants.
This product does not contain any Toxic Pollutants.

U.S. State Regulations
California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986
This product contains no chemical(s) known to the state of California to cause cancer birth defects or reproductive harm in concentrations that exceed the threshold (de minimis) reporting levels established under Proposition 65.

Other U.S. State Inventories
The proprietary glycol ether is listed on the following State Hazardous Substance Inventories, Right-to-Know lists, and/or Air Quality/Air Pollutants lists: CA, MN, PA, RI, WI.

Potassium Hydroxide (CAS #1310-58-3) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists, and/or Air Quality/Air Pollutants lists: CA, DE, ID, MA, NJ, PA, RI, WA, WI.

Canada
WHMIS Hazard Classification
Causes severe skin burns and eye damage May cause an allergic skin reaction

Canadian National Pollutant Release Inventory (NPRI): The proprietary glycol ether and terpenes (all isomers) are listed on the NPRI.

European Economic Community
WGK, Germany (Water danger/protection): 1 (slightly hazardous to water)

Global Chemical Inventory Lists

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*Yes - All components of this product comply with the inventory requirements administered by the governing country.
No - One or more components of this product are not on the inventory or are exempt from listing.

15.2 Chemical safety assessment

A chemical safety assessment was not carried out for this product.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

C = safety glasses, gloves, & apron

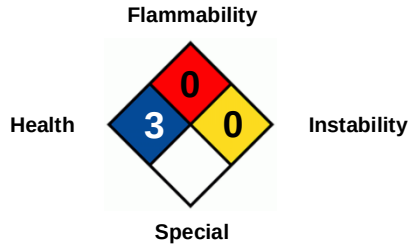
HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate
3 = Serious 4 = Severe
* = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate
3 = High 4 = Extreme

National Fire Protection Association (NFPA)



Full Text of GHS Hazard Phrases Referenced in Section 3 (not covered in Section 2)

H227 - Combustible liquid
H290 - May be corrosive to metals
H302 - Harmful if swallowed
H312 - Harmful in contact with skin
H315 - Causes skin irritation
H318 - Causes serious eye damage
H319 - Causes serious eye irritation
H332 - Harmful if inhaled
H402 - Harmful to aquatic life
H410 - Very toxic to aquatic life with long lasting effects
H412 - Harmful to aquatic life with long lasting effects

Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists	**LD_{Lo}**	Lowest Lethal Dose
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	**mppcf**	Millions of Particles Per Cubic Foot
CAS	Chemical Abstract Services	**NA**	North America
CFR	Code of Federal Regulations	**NAERG**	North American Emergency Response Guide Book
COC	Cleveland Open Cup	**NIOSH**	National Institute for Occupational Safety & Health
DOT	Department of Transportation	**NTP**	National Toxicology Program
EC_{50}	Half maximal effective concentration	**OSHA**	Occupational Safety and Health Administration
EMS	Emergency Response Procedures for Ships Carrying	**PBT**	Persistent, Bioaccumulating and Toxic
EPA	Environmental Protection Agency	**PEL**	Permissible exposure limit
ErC_{50}	Reduction of Growth Rate	**PMCC**	Pensky-Martens Closed Cup
ERG	Emergency Response Guide Book	**ppm**	Parts Per Million
FDA	Food and Drug Administration	**RCRA**	Resource Conservation and Recovery Act
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	**RID**	Dangerous Goods by Rail
HCS	Hazard Communication Standard	**RQ**	Reportable Quantity
IARC	International Agency for Research on Cancer	**TCC/Tag**	Tagliabue Closed Cup
IATA	International Air Transport Association	**TLV**	Threshold Limit Value
IC_{50}	Half Maximal Inhibitory Concentration	**TSCA**	Toxic Substance Control Act
ICAO	International Civil Aviation Organization	**TWA**	Time-weighted Average
IDLH	Immediately Dangerous to Life and Health	**UN**	United Nations
IMDG	International Maritime Dangerous Goods	**VOC**	Volatile Organic Compounds
IMO	International Maritime Organization	**vPvB**	Very Persistent and Very Bioaccumulating
LC_{50}	50% Lethal Concentration	**WHMIS**	Workplace Hazardous Materials Information System
LD_{50}	50% Lethal Dose		

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented, and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

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