

# SAFETY DATA SHEET

## SECTION 1) CHEMICAL PRODUCT AND MANUFACTURER'S IDENTIFICATION

**Product ID:** 254415  
**Product Name:** Orange Lightning  
**Revision Date:** Sep 26, 2022  
**Version:** 1.0  
**Manufacturer's Name:** ZENEX International  
**Address:** 1 Zenex Circle Cleveland, OH, US, 44146  
**Emergency Phone:** 1-800-535-5053  
**Information Phone Number:** (440)232-4155  
**Fax:**  
**Product/Recommended Uses:** Film-Free Cleaner Degreaser

**Date Printed:** Sep 26, 2022  
**Supersedes Date:** N.A.

## SECTION 2) HAZARDS IDENTIFICATION

### Classification

Corrosive to Metals - Category 1  
Serious Eye Damage - Category 1  
Skin Corrosion - Category 1  
Skin Sensitizer - Category 1

### Pictograms



### Signal Word

Danger

### Hazardous Statements - Physical

H290 - May be corrosive to metals.

### Hazardous Statements - Health

H314 - Causes severe skin burns and eye damage.  
H317 - May cause an allergic skin reaction.

### Precautionary Statements - General

P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read label before use.

### Precautionary Statements - Prevention

P234 - Keep only in original packaging.  
P280 - Wear protective gloves, protective clothing, eye protection and face protection.  
P260 - Do not breathe mist, vapors or spray.

P264 - Wash hands thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace.

### Precautionary Statements - Response

P390 - Absorb spillage to prevent material damage.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a POISON CENTER or doctor.

P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P363 - Wash contaminated clothing before reuse.

P333 + P313 - If skin irritation or a rash occurs: Get medical attention.

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310 - Immediately call a POISON CENTER or doctor.

### Precautionary Statements - Storage

P406 - Store in a corrosive resistant container with a resistant inner liner.

P405 - Store locked up.

### Precautionary Statements - Disposal

P501 - Dispose of contents and container in accordance with local, regional, national and international regulations.

## SECTION 3) COMPOSITION, INFORMATION ON INGREDIENTS

CAS	Chemical Name	% By Weight
0000112-34-5	DIETHYLENE GLYCOL MONOBUTYL ETHER	5% - 10%
0068439-46-3	C9-11 ETHOXYLATED ALCOHOLS	1% - 5%
0000141-43-5	ETHANOLAMINE	1% - 5%
0000064-02-8	EDTA TETRASODIUM SALT	1% - 5%
0005989-27-5	D-LIMONENE	0.1% - 1%

Specific chemical identity and/or exact percentage (concentration) of the composition has been withheld to protect confidentiality.

## SECTION 4) FIRST-AID MEASURES

### Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the POISON CENTER/doctor. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). If you feel unwell/If concerned: Get medical advice/attention.

### Eye Contact

Rinse eyes cautiously with lukewarm, gently flowing water for 15 minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

### Skin Contact

Wipe off with a towel. Wash with soap and water. Get medical attention if irritation persists.

### Ingestion

Rinse mouth. Give two glasses of water. If you feel unwell or if concerned: Get medical attention. Do NOT induce vomiting unless under the advice of doctor or POISON CENTER. Note: Never give anything by mouth to an unconscious or convulsing victim. Keep person warm and quiet.

### Most Important Symptoms/Effects, Acute and Delayed

No data available.

### Indication of Immediate Medical Attention and Special Treatment Needed

No data available.

## SECTION 5) FIRE-FIGHTING MEASURES

### Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide, water spray or fog is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

### Unsuitable Extinguishing Media

None.

### Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel.

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

### Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

## SECTION 6) ACCIDENTAL RELEASE MEASURES

### Emergency Procedure

Do not touch or walk through spilled material. Isolate hazard area and keep unnecessary people away. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

### Recommended Equipment

Wear chemical protective clothing and positive pressure self-contained breathing apparatus (SCBA).

### Personal Precautions

Avoid breathing vapor. Avoid contact with skin, eye or clothing. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

### Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

### Methods and Materials for Containment and Cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

## SECTION 7) HANDLING AND STORAGE

### General

Wash hands after use.  
Do not get in eyes, on skin or on clothing.  
Do not breathe vapors or mists.  
Use good personal hygiene practices.  
Eating, drinking and smoking in work areas is prohibited.  
Remove contaminated clothing and protective equipment before entering eating areas.

### Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

### Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Containers that have been opened must be carefully resealed to prevent leakage. Store at temperatures under 120°F.

FOR INDUSTRIAL AND INSTITUTIONAL USE ONLY. FOR USE BY TRAINED PERSONNEL ONLY. KEEP FROM FREEZING.

## SECTION 8) EXPOSURE CONTROLS/PERSONAL PROTECTION

### Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

### Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

## Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter.

## Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (mg/m3)	OSHA TWA (ppm)	OSHA STEL (mg/m3)	OSHA STEL (ppm)	OSHA Carcinogen	OSHA Skin designation	OSHA Tables (Z1, Z2, Z3)	ACGIH TWA (mg/m3)
ETHANOLAMINE	6	3					1	

Chemical Name	ACGIH TWA (ppm)	ACGIH STEL (mg/m3)	ACGIH STEL (ppm)	ACGIH Carcinogen	ACGIH TLV Basis	ACGIH Notations	NIOSH TWA (mg/m3)	NIOSH TWA (ppm)
ETHANOLAMINE	3		6		Eye & skin irr		8	3

Chemical Name	NIOSH STEL (mg/m3)	NIOSH STEL (ppm)	NIOSH Carcinogen
ETHANOLAMINE	15	6	

(C) - Ceiling limit, (IFV) - Inhalable fraction and vapor, A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, A4 - Not Classifiable as a Human Carcinogen, BEI - Substances for which there is a Biological Exposure Index or Indices, dam - Damage, DSEN - Dermal sensitization, eff - Effects, irr - Irritation, URT - Upper respiratory tract

## SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Density	8.47 lb/gal
Density VOC	0.13 lb/gal
% VOC	1.50%
Appearance	Orange Liquid
Odor Threshold	N.A.
Odor Description	Orange
pH	12.25
Water Solubility	N.A.
Flammability	N/A
Flash Point	Will not burn
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Melting Point	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Decomposition Pt	N.A.
Auto Ignition Temp	N.A.

Evaporation Rate	N.A.
VOC Composite Partial Pressure	N.A.

## SECTION 10) STABILITY AND REACTIVITY

### Stability

The product is stable under normal storage conditions.

### Conditions to Avoid

None.

### Incompatible Materials

None known.

### Hazardous Reactions/Polymerization

Will not occur.

### Hazardous Decomposition Products

None known.

## SECTION 11) TOXICOLOGICAL INFORMATION

### Skin Corrosion/Irritation

Causes severe skin burns and eye damage.

### Likely Route of Exposure

Inhalation, ingestion, skin absorption.

### Serious Eye Damage/Irritation

Causes serious eye damage.

### Carcinogenicity

Based on available data, the classification criteria are not met.

### Germ Cell Mutagenicity

Based on available data, the classification criteria are not met.

### Reproductive Toxicity

Based on available data, the classification criteria are not met.

### Respiratory/Skin Sensitization

May cause an allergic skin reaction.

### Specific Target Organ Toxicity - Single Exposure

Based on available data, the classification criteria are not met.

### Specific Target Organ Toxicity - Repeated Exposure

Based on available data, the classification criteria are not met.

### Aspiration Hazard

Based on available data, the classification criteria are not met.

### Acute Toxicity

Based on available data, the classification criteria are not met.

### Miscellaneous Health Effects

0000141-43-5 ETHANOLAMINE

The substance is corrosive to the respiratory tract, skin and eyes. Corrosive on ingestion. The vapour is irritating to the eyes, skin and respiratory tract. The substance may cause effects on the central nervous system. Exposure could cause lowering of consciousness. Repeated or prolonged contact may cause skin sensitization.

### Potential Health Effects - Miscellaneous

0000111-76-2 ETHYLENE GLYCOL MONOBUTYL ETHER

Can be absorbed through the skin in harmful amounts. May cause injury to the kidneys, liver, blood and/or bone marrow. Repeated

overexposure may result in damage to the blood. Eye contact may cause corneal injury. Has been toxic to the fetus in laboratory animals at doses that are toxic to the mother.

0000141-43-5 ETHANOLAMINE

LD50 (oral, rat): 1720 mg/kg (10); 2100 mg/kg (3); 2740 mg/kg (3,8)

LD50 (oral, mouse): 700 mg/kg (10)

LD50 (oral, guinea pig): 620 mg/kg (10)

LD50 (oral, rabbit): 1000 mg/kg (10)

LD50 (dermal, rabbit): 1018 mg/kg (cited as 1 mL/kg) (10)

0000111-76-2 ETHYLENE GLYCOL MONOBUTYL ETHER

LC50 (female rat): 450 ppm (4-hour exposure) (2)

LC50 (male rat): 486 ppm (4-hour exposure) (2)

LD50 (oral, male weanling rat): 3000 mg/kg (1)

LD50 (oral, 6-week old male rat): 2400 mg/kg (1)

LD50 (oral, yearling male rat): 560 mg/kg (1)

LD50 (oral, female rat): 530 mg/kg; 2500 mg/kg (1)LD50 (oral, male mouse): 1230 mg/kg (1)

LD50 (oral, rabbit): 320 mg/kg (1)

LD50 (dermal, male rabbit): 406 mg/kg (cited as 0.45 mL/kg) (1)

## SECTION 12) ECOLOGICAL INFORMATION

### Toxicity

Based on available data, the classification criteria are not met.

### Persistence and Degradability

No data available.

### Bioaccumulative Potential

No data available.

### Mobility in Soil

No data available.

### Other Adverse Effects

No data available.

## SECTION 13) DISPOSAL CONSIDERATIONS

### Waste Disposal

Under RCRA, it is the responsibility of the user of the product, to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state, and local laws.

Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

## SECTION 14) TRANSPORT INFORMATION

	U.S. DOT Information	IMDG Information	IATA Information
UN number:	UN1760	UN1760	UN1760
Proper shipping name:	Corrosive liquids, n.o.s. (ethanolamine)	Corrosive liquids, n.o.s. (ethanolamine)	Corrosive liquids, n.o.s. (ethanolamine)
Hazard class:	8	8	8
Packaging group:	III	III	III
Hazardous substance (RQ):	No Data Available		
Marine Pollutant:	No Data Available	No Data Available	
Note / Special Provision:	No Data Available	No Data Available	No Data Available
Toxic-Inhalation Hazard:	No Data Available		

## SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000112-34-5	DIETHYLENE GLYCOL MONOBUTYL ETHER	5% - 10%	SARA313, CERCLA, HAPS, SARA312, VHAPS, VOC, TSCA, ACGIH
0068439-46-3	C9-11 ETHOXYLATED ALCOHOLS	1% - 5%	SARA312, TSCA
0000141-43-5	ETHANOLAMINE	1% - 5%	SARA312, VOC, TSCA, ACGIH, OSHA
0000064-02-8	EDTA TETRASODIUM SALT	1% - 5%	SARA312, TSCA
0005989-27-5	D-LIMONENE	0.1% - 1%	SARA312, VOC, TSCA
0000111-42-2	DIETHANOLAMINE	Trace	SARA313, CERCLA, HAPS, SARA312, VHAPS, VOC, TSCA, ACGIH, California Prop 65 Cancer

## SECTION 16) OTHER INFORMATION

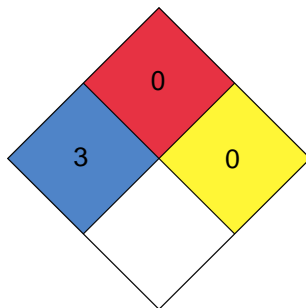
### Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ- Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA- Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

### HMIS

Health	/ 3
FLAMMABILITY	0
Physical Hazard	0
Personal Protection	D

### NFPA



(\*) - Chronic effects

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks

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