

Issue Date 06-Feb-2015

Revision Date: 14-Oct-2016

Version 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product Name United 411 SUPERSTEAM

Other means of identification

SDS # UNITED 411

Recommended use of the chemical and restrictions on use

Recommended Use Steam and Return Line Treatment

Uses Advised Against For industrial and institutional use only.

Details of the supplier of the safety data sheet

Supplier Address

United Laboratories, Inc.
320 37th Avenue
St. Charles, IL 60174
www.unitedlabsinc.com
www.unitedlabsinc.ca

Emergency Telephone Number

Company Phone Number 800-323-2594 (to reorder)

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Classification

Classification according to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200.

Flammable Liquid	Category 3
Metal Corrosion	Category 1
Acute toxicity, Oral Acute toxicity, Dermal	Category 4 Category 3
Eye damage/irritation	Category 1
Skin Corrosion/Irritation	Category 1B
Reproductive toxicity	Category 2
Aquatic Acute	Category 3

Label elements

Signal word DANGER

Hazard statements

Flammable liquid and vapor. May be corrosive to metals. Harmful if swallowed. Causes severe burns and eye damage. Toxic in contact with skin. Suspected of damaging fertility. Harmful to aquatic life.



Appearance Colorless liquid

Physical State Liquid

Odor Amine

Emergency Overview**Precautionary Statements**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/eye protection/face protection. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Do not breathe dust or mist. Avoid release to environment. Use explosion-proof electrical / ventilating/lighting/equipment. Do not eat, drink or smoke when using this product. Wear NIOSH-certified chemical goggles. Wear chemical resistant protective gloves.

Precautionary Statements - Response

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If on skin: Remove contaminated clothing immediately. Wash with plenty of soap and water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Rinse mouth. Do not induce vomiting.

Precautionary Statements - Storage

Keep container tightly closed that is corrosive resistant with resistant inner liner. Store locked up. Keep only in original container. Store in well-ventilated place. Keep cool. Ground/bond container and receiving equipment.

Precautionary Statements – Disposal

Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified (HNOC)

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight%
Cyclohexylamine	108-91-8	80-100

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open. Consult an eye specialist/physician.
Skin Contact	Immediately wash thoroughly with plenty of water. Apply sterile dressings; consult a skin specialist/physician.
Inhalation	Remove person to fresh air, keep patient calm. Seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.
Ingestion	Immediately rinse mouth and then drink 200-300 ml. of water. Seek medical attention.
Most important symptoms and effects, both acute and delayed	The most important known symptoms and effects are described in the labelling (see section 2) and/or section 11. Further symptoms are possible.
Indication of any immediate medical attention and special treatment needed.	Note to physician: Treat according to symptoms (decontamination, vital functions), no known specific antidote. Pulmonary edema prophylaxis. Medical monitoring for at least 24 hours.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use water spray, dry powder, foam or carbon dioxide.

Specific Hazards Arising from the Chemical

Nitrogen oxides, carbon oxides. The substances/groups of substances mentioned can be released in case of fire. Under certain conditions in case of fire other hazardous combustion products may be generated.

Hazardous Combustion Products No information available.

Protective equipment and precautions for firefighters

Wear chemical protective clothing and gear with self-contained breathing apparatus.

Fire and explosion hazards

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal Precautions** Extinguish sources of ignition nearby and downwind. Wind direction should be noted. Wear suitable personal protective clothing and equipment. Ensure adequate ventilation.
- Environmental Precautions** This product is regulated by RCRA. Do not discharge into drains/surface waters or ground water.
- Methods and materials for containment and cleaning up** Small and Large spills: Pick up with suitable appliance and dispose of.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on Safe Handling** Ensure thorough ventilation of stores and work areas. Protection against fire and explosion: Prevent electrostatic charge – sources of ignition should be kept well clear – fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Segregate from acids and acid forming substances. Suitable materials for containers: Stainless steel.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

General safety and hygiene measures

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks). Take off immediately al contaminated clothing. Wash contaminated clothing before reuse. Store work clothing separately.

Individual protection measures, such as personal protective equipment

Eye/Face Protection	Tightly fitting safety goggles (chemical goggles).
Skin and Body Protection	Chemical resistant protective gloves. Use appropriate chemically resistant gloves as determined by an evaluation of glove performance characteristics and the hazards of potential hazards identified, including but not limited to butyl, natural and synthetic rubber, nitrile, or neoprene. Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).
Respiratory Protection	Respiratory protection in case of vapor/aerosol release.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical State	Liquid	Odor	Amine
Appearance	Colorless liquid		
Color	Colorless		
Property	Values	Remarks • Method	
pH	11.00-11.5		
Melting Point/Freezing Point	0.1°F/~17.7°C		
Boiling Point/Boiling Range	134°C/274°F		
Flash Point	27°C		
Evaporation Rate	~1.00 (Water=1)		
Flammability (Solid, Gas)	Not determined		
Upper Flammability Limits	Not determined		
Lower Flammability Limit	Not determined		
Vapor Pressure	14 mm Hg		
Vapor Density	0.867 g/cm ³		
Specific Gravity	0.867 (H ₂ O=1)		
Water Solubility	Soluble		
Solubility in other solvents	Not determined		
Partition Coefficient	1.2 (23°C)(measured)		
Auto ignition Temperature	265°C		
Decomposition Temperature	Not determined		
Viscosity	2.12 mPa.s		
VOC Content	None		

10. STABILITY AND REACTIVITY**Reactivity**

Non- hazardous under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

Exothermic reaction.

Conditions to Avoid

Avoid all sources of ignition: heat, sparks, and open flame. Avoid electro-static charge.

Incompatible Materials

Acids.

Hazardous Decomposition Products

Possible thermal decomposition products: carbon dioxides, nitrogen oxides.

11. TOXICOLOGICAL INFORMATION**Product Information**

Chemical Name	LD50 Oral	Inhalation LC50	LD50 Dermal
Cyclohexylamine 108-91-8	303 mg/kg (Rat)	>32.9 mg/l 4 hr (Rat)	>631 - <1,000 mg/kg (Rabbit)

Information on likely routes of exposure

Product Information	Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.
Eye Contact	May cause eyes to burn.
Skin Contact	May be harmful if absorbed through skin. May cause skin irritation.
Inhalation	May be harmful if inhaled.
Ingestion	Harmful if swallowed.
Skin corrosion/irritation	May cause skin burns.
Serious eye damage/irritation	May cause severe eye irritation/damage.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Aspiration hazard	No information available.
Reproductive effects	Possible risk of impaired fertility. Possible risk of harm to the unborn child.

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

Carcinogenicity
No carcinogenic effect was observed.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Not determined.

Persistence/Degradability

Readily biodegradable.

Bioaccumulation

Not to be expected.

Mobility

The substance will slowly evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Other Adverse Effects

Not determined.

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods**

Disposal of Wastes Dispose of in accordance with national, state and local regulations.

