



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name LIQUID BOOT® ULTRAGRIP
Version # 02
Revision date 04-April-2012
CAS # Mixture
Manufacturer information CETCO
Remediation Technology
2870 Forbs Avenue
Hoffman Estates, IL 60192 United States
www.cetco.com
General Information (800) 527-9948
Emergency (800) 424-9300

2. Hazards Identification

Emergency overview DANGER

CONTENTS UNDER PRESSURE.
Aerosol. Pressurized container may explode when exposed to heat or flame. Will be easily ignited by heat, spark or flames.

May be fatal if absorbed through skin. May be fatal if inhaled.

Prolonged exposure may cause chronic effects. Health injuries are not known or expected under normal use.

OSHA regulatory status This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Potential health effects

Routes of exposure Inhalation. Ingestion. Skin contact. Eye contact.

Eyes Very toxic in contact with eyes. Avoid contact with eyes.

Skin Very toxic in contact with skin. Avoid contact with the skin.

Inhalation Very toxic by inhalation. Intentional misuse by concentrating and inhaling the product can be harmful or fatal. Prolonged inhalation may be harmful. Avoid breathing dust/fume/gas/mist/vapors/spray.

Ingestion Very toxic if swallowed. Exposure by ingestion of an aerosol is unlikely. Components of the product may be absorbed into the body by ingestion. Do not ingest.

Target organs Central nervous system. Eyes. Respiratory system. Skin.

Chronic effects May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion and blurred vision) and/or damage.

Signs and symptoms Narcosis. Decrease in motor functions. Behavioral changes.

3. Composition / Information on Ingredients

Components	CAS #	Percent
ACETONE	67-64-1	
Hexane	110-54-3	
Methyl acetate	79-20-9	

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.

Skin contact Remove and isolate contaminated clothing and shoes. Immediately flush skin with plenty of water. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.

Inhalation

Move to fresh air. Call a physician or Poison Control Center immediately.

Ingestion

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Never give anything by mouth to a victim who is unconscious or is having convulsions. Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Notes to physician

Symptoms may be delayed.

General advice

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Immediate medical attention is required.

5. Fire Fighting Measures

Flammable properties

Flammable by OSHA criteria. Heat may cause the containers to explode. Runoff to sewer may cause fire or explosion hazard. The product is not flammable.

Extinguishing media

Suitable extinguishing media

Water Fog. Dry chemical powder. Carbon dioxide (CO₂). Do not use water as an extinguisher. Alcohol resistant foam. Powder.

Unsuitable extinguishing media

Water.

Protection of firefighters

Specific hazards arising from the chemical

Fire may produce irritating, corrosive and/or toxic gases.

Protective equipment and precautions for firefighters

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters protective clothing will only provide limited protection.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

Specific methods

In the event of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Use standard firefighting procedures and consider the hazards of other involved materials. Move container from fire area if it can be done without risk.

6. Accidental Release Measures

Personal precautions

Keep unnecessary personnel away. Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for containment

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Prevent entry into waterways, sewers, basements or confined areas. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Methods for cleaning up

This product is miscible in water. Stop the flow of material, if this is without risk. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Isolate area until gas has dispersed. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the MSDS.

7. Handling and Storage

Handling

Pressurized container: Do not pierce or burn, even after use. Vapors may form explosive mixtures with air. Pressurized container: Do not pierce or burn, even after use. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not reuse the empty container. Ground and bond containers when transferring material. Do not use if spray button is missing or defective. Do not re-use empty containers. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get this material in contact with eyes. Do not get this material in contact with skin. Do not get this material on clothing. Wear personal protective equipment. Use only in well-ventilated areas. Avoid prolonged exposure. Handle and open container with care.

Storage

Level 1 Aerosol.

Store locked up. Contents under pressure. The pressure in sealed containers can increase under the influence of heat. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid exposure to long periods of sunlight. Refrigeration recommended. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
ACETONE (67-64-1)	STEL	750 ppm
	TWA	500 ppm
Hexane (110-54-3)	TWA	50 ppm
Methyl acetate (79-20-9)	STEL	250 ppm
	TWA	200 ppm

US. ACGIH. BEIs. Biological Exposure Indices

Components	Type	Value
ACETONE (67-64-1)	BEI	50 mg/l
Hexane (110-54-3)	BEI	0.4 mg/l

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
ACETONE (67-64-1)	PEL	2400 mg/m3 1000 ppm
Hexane (110-54-3)	PEL	1800 mg/m3 500 ppm
Methyl acetate (79-20-9)	PEL	610 mg/m3 200 ppm

Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

Hexane (CAS 110-54-3)

Can be absorbed through the skin.

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.

Personal protective equipment

Eye / face protection

Chemical goggles are recommended. Face-shield. Eye wash fountain is recommended.

Skin protection

Chemical resistant gloves. Wear chemical protective equipment that is specifically recommended by the manufacturer. It may provide little or no thermal protection.

Respiratory protection

Wear positive pressure self-contained breathing apparatus (SCBA). If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.

General hygiene considerations

When using do not smoke. Do not get in eyes. Do not get this material in contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance

Liquid.

Physical state	Gas Aerosol.
Form	Aerosol.
Color	Grey.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Vapor pressure	50 psi @ 75F
Vapor density	Not available.
Boiling point	-44 - 302 °F (-42.22 - 150 °C)
Melting point/Freezing point	-140.8 °F (-96.008333333 °C) estimated
Solubility (water)	Not available.
Specific gravity	0.801
Relative density	Not available.
Flash point	5.50 °F (-14.72 °C) estimated
Flammability limits in air, upper, % by volume	6 %
Flammability limits in air, lower, % by volume	1 %
Auto-ignition temperature	789.08 °F (420.6 °C) estimated
VOC	< 55 % estimated
Percent volatile	< 55 % estimated
Other data	
Density	0.80 g/cm3
Flammability (Heat of combustion)	754.5299 kJ/mol estimated
Flammability class	Flammable IA estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Risk of ignition.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point.
Incompatible materials	Strong oxidizing agents. Acids. None known. Nitrates.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological Information

Toxicological data

Components	Species	Test Results
ACETONE (67-64-1)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	20 mg/kg
<i>Inhalation</i>		
LC50	Rat	50.1 mg/l, 8 Hours
<i>Oral</i>		
LD50	Mouse	3000 mg/kg
	Rabbit	5.2 g/kg
	Rabbit	5340 mg/kg
	Rat	5800 mg/kg
<i>Other</i>		
LD50	Mouse	1297 mg/kg
	Rat	5500 mg/kg

Components	Species	Test Results
Hexane (110-54-3)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	3000 mg/kg
<i>Inhalation</i>		
LC50	Mouse	48000 mg/l, 4 Hours
	Rat	48000 mg/l/4h
<i>Oral</i>		
LD50	Rat	25000 mg/kg
		24 mg/kg
	Wistar rat	49 mg/kg
Methyl acetate (79-20-9)		
Acute		
<i>Dermal</i>		
LD50	Rabbit	5000.0001 mg/kg
	Rat	2000.0001 mg/kg
<i>Inhalation</i>		
LC50	Rat	16000 mg/l/4h
<i>Oral</i>		
LD50	Rabbit	3.7 g/kg
	Rat	5000.0001 mg/kg

* Estimates for product may be based on additional component data not shown.

Local effects	Very toxic by inhalation, in contact with skin and if swallowed.
Chronic effects	Hazardous by OSHA criteria. Prolonged inhalation may be harmful. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged exposure may cause chronic effects.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
ACGIH Carcinogens	
ACETONE (CAS 67-64-1)	A4 Not classifiable as a human carcinogen.
Neurological effects	Hazardous by OSHA criteria.
Further information	Symptoms may be delayed. This product has no known adverse effect on human health.

12. Ecological Information

Ecotoxicological data

Components	Species	Test Results	
ACETONE (67-64-1)			
Crustacea	EC50	Daphnia	12600 mg/L, 48 Hours
Fish	LC50	Fish	5540 mg/L, 96 Hours
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
Hexane (110-54-3)			
Fish	LC50	Fish	4.14 mg/L, 96 Hours
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
Methyl acetate (79-20-9)			
Algae	IC50	Algae	120.0001 mg/L, 72 Hours

Components		Species	Test Results
Crustacea	EC50	Daphnia	1026.7 mg/L, 48 Hours
Fish	LC50	Fish	320 mg/L, 96 Hours
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	295 - 348 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Ecotoxicity Components of this product have been identified as having potential environmental concerns.
Environmental effects An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability Not available.
Bioaccumulation / Accumulation

Bioaccumulative potential

Octanol/water partition coefficient log Kow

Methyl acetate	0.18
ACETONE	-0.24
Hexane	3.9

Mobility in environmental media This product is miscible in water.

13. Disposal Considerations

Waste codes D001: Waste Flammable material with a flash point <140 F

US RCRA Hazardous Waste U List: Reference

ACETONE (CAS 67-64-1) U002

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Incinerate the material under controlled conditions in an approved incinerator. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose in accordance with all applicable regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

14. Transport Information

DOT

Basic shipping requirements:

Proper shipping name Consumer commodity

Hazard class 9

Additional information:

Packaging exceptions 156, 306

Packaging non bulk 156, 306

Packaging bulk None

DOT

Packages less than 83 lbs

Basic shipping requirements:

UN number UN1950

Proper shipping name Aerosols, corrosive, Packing Group II or III

Hazard class 2.2

Subsidiary hazard class 8

Additional information:

Special provisions A34

Packaging exceptions 306

Packaging non bulk None

Packaging bulk None

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.



DOT



DOT

Packages less than 83
lbs

15. Regulatory Information**US federal regulations**

CERCLA/SARA Hazardous Substances - Not applicable.
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))

ACETONE (CAS 67-64-1)	150 KG_W 50 GALLONS_V
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DEA Essential Chemical Code Number

ACETONE (CAS 67-64-1)	6532
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Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

ACETONE (CAS 67-64-1)	35 %WV
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DEA Exempt Chemical Mixtures Code Number

ACETONE (CAS 67-64-1)	6532
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US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Hexane (CAS 110-54-3)	1.0 %
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US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Hexane (CAS 110-54-3)	Listed.
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CERCLA (Superfund) reportable quantity

ACETONE: 5000.0000
Hexane: 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
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Section 302 extremely hazardous substance	No
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Section 311 hazardous chemical	No
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Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US - New Jersey RTK - Substances: Listed substance

ACETONE (CAS 67-64-1)	Listed.
Hexane (CAS 110-54-3)	Listed.
Methyl acetate (CAS 79-20-9)	Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

ACETONE (CAS 67-64-1)	Listed.
Hexane (CAS 110-54-3)	Listed.
Methyl acetate (CAS 79-20-9)	Listed.

16. Other Information

Further information

HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 1*
Flammability: 3
Physical hazard: 0

NFPA ratings

Health: 1
Flammability: 3
Instability: 0

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. The information in the sheet was written based on the best knowledge and experience currently available.

Issue date

06-December-2011

This data sheet contains changes from the previous version in section(s):

Product and Company Identification: Product and Company Identification
Transport Information: Proper Shipping Name/Packing Group