



Material Safety Data Sheet

WAI-251 LC

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

1. Product and Company Identification

Material name	WAI-251 LC
Version #	13
Revision date	January-12-2012
CAS #	Mixture
Manufacturer information	WEATHERFORD® ENGINEERED CHEMISTRY® 4420 South Flores Road Elmendorf, TX 78112 United States CHEMTREC 1-800-424-9300 CHEMTREC INT'L 001-703-527-3887
Supplier information	Weatherford Fracturing Technologies 515 Post Oak Blvd Suite 1000 Houston, TX 77027 US
Supplier emergency telephone number(s)	Chemtrec 800-424-9300 Int'l 703-527-3887

2. Hazards Identification

Emergency overview	WARNING Combustible liquid and vapor. May be ignited by heat, sparks or flames. Harmful if swallowed, inhaled or absorbed through skin. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact. Suspected human reproductive toxicant. May cause harm to the unborn child. Pregnant women or women of child-bearing age should not be exposed to this product. Components of the product may be absorbed into the body by inhalation, ingestion and through the skin. Prolonged exposure may cause chronic effects. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Eye contact. Skin contact. Inhalation. Ingestion.
Eyes	Irritating to eyes. Avoid contact with eyes.
Skin	Harmful if absorbed through the skin. Irritating to skin. May cause sensitization by skin contact. Avoid contact with the skin.
Inhalation	Harmful if inhaled. Irritating to respiratory system. Excessive inhalation of this material causes headache, dizziness, nausea and incoordination. Do not breathe dust/fume/gas/mist/vapors/spray.
Ingestion	Harmful if swallowed. Irritating to mouth, throat, and stomach. May cause delayed lung damage. Components of the product may be absorbed into the body by ingestion. Do not ingest.



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Target organs	Eyes. Central nervous system. Kidney. Liver. Lungs. Respiratory system. Skin. 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged and may cause blood damage. These effects have not been observed in humans.
Chronic effects	Shortness of breath. Conjunctiva. Edema. Jaundice. Liver injury may occur. Kidney injury may occur. May cause delayed lung damage. May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Prolonged skin contact may defat the skin and produce dermatitis.
Signs and symptoms	Discomfort in the chest. Shortness of breath. Narcosis. Decrease in motor functions. Behavioral changes. Cough. Defatting of the skin. Rash. Irritation.
Potential environmental effects	Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
Ethylene Glycol	107-21-1	20 - 40
N,N-Dimethylformamide	68-12-2	10 - 20
1-Decanol	112-30-1	2.5 - 10
2-Butoxyethanol	111-76-2	2.5 - 10
Cinnamaldehyde	104-55-2	2.5 - 10
Ethoxylated Nonylphenol	68412-54-4	2.5 - 10
Tar bases, quinoline derivs, benzyl chloride-quaternized	72480-70-7	2.5 - 10
1-Octanol	111-87-5	1 - 2.5
Isopropyl alcohol	67-63-0	1 - 2.5
Triethyl Phosphate	78-40-0	1 - 2.5

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. Get medical attention immediately.
Skin contact	Immediately flush skin with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention immediately.
Ingestion	Rinse mouth. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.

Notes to physician	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
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General advice

Take off contaminated clothing and shoes immediately. In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Get medical attention if symptoms occur. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Combustible by OSHA criteria. Containers may explode when heated.

Extinguishing media

Suitable extinguishing media

Water fog. Alcohol foam. Dry chemical. Polymer foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical

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

Protective equipment and precautions for firefighters

Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions

In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Specific methods

In the event of fire and/or explosion do not breathe fumes. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions

Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep out of low areas.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

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. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

Clean up in accordance with all applicable regulations. Should not be released into the environment.

Large Spills: Dike far ahead of liquid spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean contaminated surface thoroughly.

Never return spills in original containers for re-use.





Other information Clean up in accordance with all applicable regulations.

7. Handling and Storage

Handling Do not handle or store near an open flame, heat or other sources of ignition. All equipment used when handling the product must be grounded. Use only with adequate ventilation. Wash thoroughly after handling. Avoid prolonged exposure. Do not empty into drains. Avoid release to the environment.

Storage Keep away from heat and sources of ignition (spark or flame). Keep containers tightly closed in a cool, well-ventilated place. Store in a closed container away from incompatible materials. Use care in handling/storage. Store in accordance with local/regional/national/international regulation.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2-Butoxyethanol (111-76-2)	TWA	20 ppm	
Acetaldehyde (75-07-0)	Ceiling	25 ppm	
Dioxane (123-91-1)	TWA	20 ppm	
Ethylene Glycol (107-21-1)	Ceiling	100 mg/m ³	Aerosol.
Ethylene Oxide (75-21-8)	TWA	1 ppm	
Isopropyl alcohol (67-63-0)	STEL	400 ppm	
	TWA	200 ppm	
N,N-Dimethylformamide (68-12-2)	TWA	10 ppm	

US. ACGIH. BEIs. Biological Exposure Indices

Components	Type	Value
N,N-Dimethylformamide (68-12-2)	BEI	40 mg/l
		15 mg/l

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Components	Type	Value
Ethylene Oxide (75-21-8)	STEL	5 ppm
	TWA	1 ppm

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

Components	Type	Value
2-Butoxyethanol (111-76-2)	PEL	240 mg/m ³ 50 ppm
Acetaldehyde (75-07-0)	PEL	360 mg/m ³ 200 ppm
Dioxane (123-91-1)	PEL	360 mg/m ³ 100 ppm
Isopropyl alcohol (67-63-0)	PEL	980 mg/m ³ 400 ppm
N,N-Dimethylformamide (68-12-2)	PEL	30 mg/m ³ 10 ppm





Exposure guidelines

US ACGIH Threshold Limit Values: Skin designation

N,N-Dimethylformamide (CAS 68-12-2) Can be absorbed through the skin.

US OSHA Table Z-1: Skin designation

2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

N,N-Dimethylformamide (CAS 68-12-2) Can be absorbed through the skin.

Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Personal protective equipment

Eye / face protection Safety glasses with side-shields. Wear chemical goggles.

Skin protection Wear appropriate chemical resistant gloves. Wear suitable protective clothing. Closed-toe shoes recommended.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

General hygiene considerations Avoid contact with skin, eyes and clothing. Wash hands and face before breaks and immediately after handling the product. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. Physical & Chemical Properties

Appearance	Liquid.
Physical state	Liquid.
Form	Liquid.
Color	Dark red - Purple.
Odor	Alcohol/aldehyde - aromatic.
Odor threshold	Not available.
pH	2 - 3.5
Vapor pressure	0.55 hPa estimated
Vapor density	Not available.
Boiling point	289 °F (143 °C)
Melting point/Freezing point	12.74 °F (-10.7 °C) estimated
Solubility (water)	Not available.
Specific gravity	1.04 - 1.07
Relative density	Not available.
Flash point	185 °F (85 °C)
Flammability limits in air, upper, % by volume	15.2 % estimated
Flammability limits in air, lower, % by volume	2.2 % estimated
Auto-ignition temperature	631.08 °F (332.82 °C) estimated
Other data	
Density	8.67 - 8.92 lb/gal





Flash point class Combustible IIIA

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Alkaline metals. Amines. Isocyanates. Strong oxidizing agents. Caustics.
Hazardous decomposition products	Carbon oxides. Ammonia. Nitrogen oxides (NOx). May include oxides of phosphorus.
Possibility of hazardous reactions	Will not occur under normal conditions.

11. Toxicological Information

Toxicological data

Product

WAI-251 LC (Mixture)

Test Results

Acute Dermal LD50 Mouse: 40000 mg/kg estimated
Acute Dermal LD50 Rabbit: 0.5617 mg/kg estimated
Acute Dermal LD50 Rat: 980.6323 mg/kg estimated
Acute Inhalation LC50 Mouse: 5.849 mg/l estimated
Acute Inhalation LC50 Rat: 1196.9783 mg/l/4h estimated
Acute Oral LD50 Mouse: 178.3379 mg/kg estimated
Acute Oral LD50 Mouse: 54.4 ml/kg estimated
Acute Oral LD50 Rabbit: 31692.9473 mg/kg estimated
Acute Oral LD50 Rat: 603.4669 mg/kg estimated

Components

Cinnamaldehyde (104-55-2)

Test Results

Acute Dermal LD50 Rabbit: 2000.0001 mg/kg
Acute Dermal LD50 Rabbit: 0.59 mg/kg
Acute Dermal LD50 Rat: 2000.0001 mg/kg
Acute Dermal LD50 Rat: > 1200 mg/kg
Acute Oral LD50 Guinea pig: 1600 mg/kg
Acute Oral LD50 Mouse: 200 mg/kg
Acute Oral LD50 Rat: 2200 mg/kg
Acute Other LD50 Mouse: 75 mg/kg
Acute Dermal LD50 Rabbit: 9530 mg/kg

Ethylene Glycol (107-21-1)

Acute Oral LD50 Mouse: 14.6 g/kg
Acute Oral LD50 Rat: 4000 mg/kg
Acute Dermal LD50 Rabbit: 435 mg/kg
Acute Dermal LD50 Rabbit: 400 mg/kg
Acute Dermal LD50 Rat: 2000 mg/kg
Acute Inhalation LC50 Mouse: 700 mg/l 7 Hours
Acute Inhalation LC50 Rat: 700 mg/l/4h
Acute Inhalation LC50 Rat: 450 mg/l 4 Hours
Acute Oral LD50 Guinea pig: 1.2 g/kg
Acute Oral LD50 Mouse: 1519 mg/kg
Acute Oral LD50 Mouse: 1.2 g/kg
Acute Oral LD50 Rabbit: 0.32 g/kg

2-Butoxyethanol (111-76-2)



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Components

Test Results

1-Octanol (111-87-5)

Acute Oral LD50 Rat: 1746 mg/kg
 Acute Oral LD50 Rat: 560 mg/kg
 Acute Oral LD50 Rat: 1.48 g/kg
 Acute Other LD50 Mouse: 1130 mg/kg
 Acute Other LD50 Rabbit: 280 mg/kg
 Acute Other LD50 Rat: 340 mg/kg
 Acute Dermal LD50 Guinea pig: > 500 mg/kg
 Acute Dermal LD50 Rabbit: 5000.0001 mg/kg
 Acute Dermal LD50 Rabbit: > 5 g/kg
 Acute Oral LD50 Mouse: 1800 mg/kg
 Acute Oral LD50 Rat: 3200.0001 mg/kg
 Acute Oral LD50 Rat: > 5 g/kg
 Acute Other LD50 Mouse: 69 mg/kg
 Acute Dermal LD50 Rabbit: 3560 mg/kg

1-Decanol (112-30-1)

Acute Inhalation LC50 Mouse: 4 mg/l 2 Hours
 Acute Oral LD50 Rat: 4720 mg/kg
 Acute Dermal LD50 Rabbit: 12870 mg/kg

Isopropyl alcohol (67-63-0)

Acute Dermal LD50 Rabbit: 12800 mg/kg
 Acute Dermal LD50 Rat: 12870 mg/kg
 Acute Inhalation LC50 Rat: 72.6 mg/l/4h
 Acute Oral LD50 Dog: 4797 mg/kg
 Acute Oral LD50 Mouse: 3600 mg/kg
 Acute Oral LD50 Mouse: 4.5 g/kg
 Acute Oral LD50 Rabbit: 6410 mg/kg
 Acute Oral LD50 Rabbit: 5.03 g/kg
 Acute Oral LD50 Rat: 4396 mg/kg
 Acute Oral LD50 Rat: 4.7 g/kg
 Acute Other LD50 Mouse: 1509 mg/kg
 Acute Other LD50 Rat: 1099 mg/kg
 Acute Dermal LD50 Mouse: > 5000 mg/kg

N,N-Dimethylformamide (68-12-2)

Acute Dermal LD50 Rabbit: 4720 mg/kg
 Acute Dermal LD50 Rat: 3200.1 mg/kg
 Acute Inhalation LC50 Mouse: 9.4 mg/l 2 Hours
 Acute Oral LD50 Gerbil: 3929 mg/kg
 Acute Oral LD50 Mouse: 3750 mg/kg
 Acute Oral LD50 Mouse: 6.8 ml/kg
 Acute Oral LD50 Rabbit: > 5000 mg/kg
 Acute Oral LD50 Rat: 200 mg/kg
 Acute Oral LD50 Rat: 3 g/kg
 Acute Other LD50 Cat: 500 mg/kg
 Acute Other LD50 Dog: 470 mg/kg
 Acute Other LD50 Guinea pig: 1030 mg/kg
 Acute Other LD50 Mouse: 650 mg/kg

Components

Test Results

Triethyl Phosphate (78-40-0)

Acute Other LD50 Mouse: 1.23 g/kg 9 Days
 Acute Other LD50 Rabbit: 945 mg/kg
 Acute Other LD50 Rat: 1400 mg/kg
 Acute Other LD50 Rat: 2.5 g/kg
 Acute Dermal LD50 Guinea pig: > 21.4 g/kg
 Acute Dermal LD50 Rabbit: > 20 g/kg
 Acute Inhalation LC50 Rat: > 8.817 mg/l 4 Hours
 Acute Oral LD50 Mouse: > 1.5 g/kg
 Acute Oral LD50 Rabbit: 1.6 g/kg
 Acute Oral LD50 Rat: 1165 mg/kg
 Acute Oral LD50 Rat: 1.6 g/kg
 Acute Other LD50 Mouse: 0.485 g/kg
 Acute Other LD50 Rabbit: 0.8 g/kg
 Acute Other LD50 Rat: 0.8 g/kg

Sensitization

May cause sensitization by skin contact.

Local effects

Harmful if swallowed. Harmful if inhaled or absorbed through the skin. Irritating to eyes, respiratory system and skin. May cause sensitization by skin contact.

Chronic effects

Hazardous by OSHA criteria. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood. Prolonged or repeated exposure may cause lung injury. Prolonged exposure may cause chronic effects.

2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

Subchronic effects

Liver and kidney injuries may occur.

Carcinogenicity

Not expected to be hazardous by OSHA criteria.

ACGIH Carcinogens

2-Butoxyethanol (CAS 111-76-2)

A3 Confirmed animal carcinogen with unknown relevance to humans.

Ethylene Glycol (CAS 107-21-1)

A4 Not classifiable as a human carcinogen.

Isopropyl alcohol (CAS 67-63-0)

A4 Not classifiable as a human carcinogen.

N,N-Dimethylformamide (CAS 68-12-2)

A4 Not classifiable as a human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

2-Butoxyethanol (CAS 111-76-2)

3 Not classifiable as to carcinogenicity to humans.

N,N-Dimethylformamide (CAS 68-12-2)

3 Not classifiable as to carcinogenicity to humans.

Skin corrosion/irritation

Irritating to skin.

Epidemiology

Hazardous by OSHA criteria.

Neurological effects

Hazardous by OSHA criteria.

Reproductive effects

Potential embryo-fetal toxicity and teratogenicity.

Teratogenicity

Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. Avoid exposure to women during early pregnancy.

Further information

Symptoms may be delayed.





12. Ecological Information

Ecotoxicological data

Product

WAI-251 LC (Mixture)

Test Results

EC50 Daphnia: 99.8179 mg/L 48 Hours

IC50 Algae: 47619 mg/L 72 Hours

LC50 Fish: 71.0527 mg/L 96 Hours

Components

Test Results

Ethylene Glycol (107-21-1)

LC50 Fathead minnow (*Pimephales promelas*): 8050 mg/l 96 hours

2-Butoxyethanol (111-76-2)

LC50 Fish: 1490 mg/L 96 Hours

LC50 Inland silverside (*Menidia beryllina*): 1250 mg/l 96 hours

1-Octanol (111-87-5)

LC50 Fathead minnow (*Pimephales promelas*): 11.4 - 12.9 mg/l 96 hours

LC50 Fish: 13.1 mg/L 96 Hours

1-Decanol (112-30-1)

EC50 Daphnia: 3 mg/L 48 Hours

LC50 Fathead minnow (*Pimephales promelas*): 2.2 - 2.5 mg/l 96 hours

LC50 Fish: 2.4 mg/L 96 Hours

Isopropyl alcohol (67-63-0)

EC50 Daphnia: 13299 mg/L 48 Hours

IC50 Algae: 1000.0001 mg/L 72 Hours

LC50 Bluegill (*Lepomis macrochirus*): > 1400 mg/l 96 hours

LC50 Fish: 9640 mg/L 96 Hours

N,N-Dimethylformamide (68-12-2)

EC50 Daphnia: 7500 mg/L 48 Hours

EC50 Water flea (*Daphnia magna*): 12.5 - 14.4 mg/l 48 hours

LC50 Fathead minnow (*Pimephales promelas*): 5714 - 18967 mg/l 96 hours

LC50 Fish: 6300 mg/L 96 Hours

Triethyl Phosphate (78-40-0)

LC50 Fathead minnow (*Pimephales promelas*): > 100 mg/l 96 hours

Ecotoxicity

Components of this product have been identified as having potential environmental concerns.

Environmental effects

Harmful to aquatic life.

Aquatic toxicity

May cause long-term adverse effects in the aquatic environment.

Persistence and degradability

Not available.

13. Disposal Considerations

Disposal instructions

This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.20-24). 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. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.



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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

Department of Transportation (DOT) Requirements

Non-Bulk

Not regulated as dangerous goods.

Department of Transportation (DOT) Requirements

Bulk

Basic shipping requirements:

Proper shipping name	Combustible Liquid, N.O.S. (N,N-Dimethylformamide ; Isopropyl alcohol)
Hazard class	Comb liq.
UN number	NA1993
Packing group	III
Additional information:	
ERG number	128

TDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.



DOT
Bulk

15. Regulatory Information

US federal regulations

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))

Not regulated

DEA Essential Chemical Code Number

Not regulated

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated



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**DEA Exempt Chemical Mixtures Code Number**

Not regulated

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

Ethylene Glycol (CAS 107-21-1) 1.0 %

N,N-Dimethylformamide (CAS 68-12-2) 1.0 %

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethylene Glycol (CAS 107-21-1) Listed.

N,N-Dimethylformamide (CAS 68-12-2) Listed.

CERCLA (Superfund) reportable quantity

Ethylene Glycol: 5000.0000

N,N-Dimethylformamide: 100.0000

Acetaldehyde: 1000.0000

Dioxane: 100.0000

Ethylene Oxide: 10.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance
No

Section 311 hazardous chemical
No

Inventory status

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

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Acetaldehyde (CAS 75-07-0) Listed: April 1, 1988 Carcinogenic.

Dioxane (CAS 123-91-1) Listed: January 1, 1988 Carcinogenic.



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Ethylene Oxide (CAS 75-21-8)

Listed: July 1, 1987 Carcinogenic.

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Ethylene Oxide (CAS 75-21-8)

Listed: August 7, 2009 Developmental toxin.

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Ethylene Oxide (CAS 75-21-8)

Listed: February 27, 1987 Female reproductive toxin.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Ethylene Oxide (CAS 75-21-8)

Listed: August 7, 2009 Male reproductive toxin.

US - New Jersey RTK - Substances: Listed substance

2-Butoxyethanol (CAS 111-76-2)

Listed.

Ethylene Glycol (CAS 107-21-1)

Listed.

Isopropyl alcohol (CAS 67-63-0)

Listed.

N,N-Dimethylformamide (CAS 68-12-2)

Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

1-Decanol (CAS 112-30-1)

Listed.

1-Octanol (CAS 111-87-5)

Listed.

2-Butoxyethanol (CAS 111-76-2)

Listed.

Ethylene Glycol (CAS 107-21-1)

Listed.

Isopropyl alcohol (CAS 67-63-0)

Listed.

N,N-Dimethylformamide (CAS 68-12-2)

Listed.

16. Other Information

HMIS® ratings

Health: 2
Flammability: 1
Physical hazard: 0
Personal protection: B

NFPA ratings

Health: 4
Flammability: 1
Instability: 0

Disclaimer

THIS PRODUCT'S HEALTH AND SAFETY INFORMATION IS PROVIDED TO ASSIST OUR CUSTOMERS IN ASSESSING COMPLIANCE WITH HEALTH, SAFETY AND ENVIRONMENTAL REGULATIONS. THE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US, AND IS BELIEVED TO BE ACCURATE, ALTHOUGH NO GUARANTEE OR WARRANTY IS PROVIDED OR IMPLIED BY THE COMPANY IN THIS RESPECT. SINCE THE USE OF THIS PRODUCT IS WITHIN THE EXCLUSIVE CONTROL OF THE USER, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE CONDITIONS OF SAFE USE. SUCH CONDITIONS MUST COMPLY WITH ALL GOVERNMENTAL REGULATIONS.

Issue date

January-06-2009

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

Product and Company Identification: Alternate Trade Names
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
Toxicological Information: Skin corrosion/irritation
Disposal Considerations: Disposal instructions
Transport Information: Material Transportation Information
Regulatory Information: Risk Phrases - Labeling



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