



EUCLID CHEMICAL

Version: 2.0
Revision Date: 12/02/2016

This is a kit that contains the following components:
EUCOTHANE CLEAR PART A
EUCOTHANE CLEAR PART B



SAFETY DATA SHEET

1. Identification

Product identifier: EUCOTHANE CLEAR PART A
Product Code: CUSK G034 000

Recommended use and restriction on use

Recommended use: Coatings
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person: EH&S Department
Telephone: 216-531-9222
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 3

Health Hazards

Serious Eye Damage/Eye Irritation Category 2A
Carcinogenicity Category 2

Unknown toxicity - Health

Acute toxicity, oral	0.3 %
Acute toxicity, dermal	0.6 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment	74.4 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement: Flammable liquid and vapor.
Causes serious eye irritation.
Suspected of causing cancer.

Precautionary Statements

Prevention: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If exposed or concerned: Get medical advice/attention. In case of fire: Use ... to extinguish.

Storage: Store in well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Methyl n-amyl ketone	110-43-0	25 - <50%
Ethylbenzene	100-41-4	0.1 - <1%
Diisobutyl ketone	108-83-8	0.1 - <1%
Xylene	1330-20-7	0.1 - <1%



Dibutyl tin dilaurate	77-58-7	0.1 - <1%
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* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- Ingestion:** Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
- Inhalation:** Move to fresh air.
- Skin Contact:** Take off immediately all contaminated clothing. Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

- Symptoms:** No data available.
- Hazards:** No data available.

Indication of immediate medical attention and special treatment needed

- Treatment:** No data available.

5. Fire-fighting measures

- General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media:** Use fire-extinguishing media appropriate for surrounding materials.
- Unsuitable extinguishing media:** Avoid water in straight hose stream; will scatter and spread fire.

- Specific hazards arising from the chemical:** Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

Special protective equipment and precautions for firefighters

- Special fire fighting procedures:** No data available.
- Special protective equipment for fire-fighters:** Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

Personal precautions, protective equipment and emergency procedures:	Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:	Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Avoid contact with eyes. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges.
Conditions for safe storage, including any incompatibilities:	Store locked up. Store in a well-ventilated place. Store in a cool place.

8. Exposure controls/personal protection**Control Parameters****Occupational Exposure Limits**

Chemical Identity	type	Exposure Limit Values	Source
Methyl n-amyl ketone	TWA	50 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm 465 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Ethylbenzene	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Chemical Identity	type	Exposure Limit Values	Source
Methyl n-amyl ketone	TWA	50 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm 465 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Ethylbenzene	TWA	20 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Diisobutyl ketone	TWA	25 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	50 ppm 290 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Xylene	STEL	150 ppm	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
		655 mg/m3	



	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm	655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm	655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm	655 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	435 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	150 ppm	655 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL		350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	ST ESL		80 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	AN ESL		42 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	AN ESL		180 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	STEL	150 ppm	655 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	Ceiling	300 ppm		US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA PEL	100 ppm	435 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA	100 ppm		US. ACGIH Threshold Limit Values (2011)
	STEL	150 ppm		US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Dibutyl tin dilaurate - as Sn	STEL		0.2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	TWA		0.1 mg/m3	US. ACGIH Threshold Limit Values (2011)
	PEL		0.1 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	type	Exposure Limit Values	Source
Methyl n-amyl ketone	TWA	50 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Methyl n-amyl ketone	TWA	25 ppm 115 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Methyl n-amyl ketone	TWA	50 ppm 233 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
1-Methoxy-2-propanol acetate	TWA	50 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	75 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation



				296/97, as amended) (07 2007)
1-Methoxy-2-propanol acetate	TWA	50 ppm	270 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Ethyl 3-ethoxypropionate	TWA	50 ppm	300 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Ethylbenzene	TWA	20 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (09 2011)
Ethylbenzene	TWA	20 ppm		Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Ethylbenzene	TWA	100 ppm	434 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	STEL	125 ppm	543 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)	0.15 g/g (Creatinine in urine)	ACGIH BEI (02 2014)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Ethylbenzene (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)	0.15 g/g (Creatinine in urine)	ACGIH BEI (02 2014)
Xylene (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/g (Creatinine in urine)	ACGIH BEI (03 2013)

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Provide easy access to water supply and eye wash facilities. 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. Use explosion-proof ventilation equipment.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.



Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Avoid contact with eyes. When using do not smoke.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	No data available.
Odor:	Mild petroleum/solvent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	38 °C 100 °F
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.2
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.



Conditions to avoid:	Heat, sparks, flames.
Incompatible Materials:	Alcohols. Amines. Strong acids. Strong bases. Water, moisture.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation.
Eye contact:	Causes serious eye irritation.
Ingestion:	May be harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	ATEmix: 4,813.01 mg/kg
Dermal Product:	ATEmix: 5,902.78 mg/kg
Inhalation Product:	

Repeated dose toxicity

Product: No data available.

Skin Corrosion/Irritation

Product: No data available.

Serious Eye Damage/Eye Irritation

Product: No data available.



Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: Suspected of causing cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Ethylbenzene Overall evaluation: Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

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

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product: No data available.

**Aquatic Invertebrates****Product:** No data available.**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative Potential****Bioconcentration Factor (BCF)****Product:** No data available.**Partition Coefficient n-octanol / water (log Kow)****Product:** No data available.**Mobility in Soil:**

No data available.

Other Adverse Effects:

No data available.

13. Disposal considerations**Disposal instructions:**

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging:

No data available.

14. Transport information**TDG:**

UN1993, FLAMMABLE LIQUID, N.O.S. (Xylene), 3, PG III

CFR / DOT:

UN1993, Flammable liquids, n.o.s. (Xylene), 3, PG III

IMDG:



UN1993, FLAMMABLE LIQUID, N.O.S. (Xylene), 3, PG III

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

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

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Ethylbenzene	1000 lbs.
Xylene	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Fire Hazard
- Immediate (Acute) Health Hazards
- Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Ethylbenzene	1000 lbs.
Xylene	100 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Methyl n-amyl ketone	10000 lbs
Ethylbenzene	10000 lbs
Diisobutyl ketone	10000 lbs
Xylene	10000 lbs
Dibutyl tin dilaurate	10000 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
Ethylbenzene

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Xylene	Reportable quantity: lbs.



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Further Information: No data available.

Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.



SAFETY DATA SHEET

1. Identification

Product identifier: EUCOTHANE CLEAR PART B
Product Code: CUSK G034 000

Recommended use and restriction on use

Recommended use: Coatings
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person: EH&S Department
Telephone: 216-531-9222
Emergency telephone number: 1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 3

Health Hazards

Acute toxicity (Inhalation - dust and mist) Category 4
Serious Eye Damage/Eye Irritation Category 2B
Respiratory sensitizer Category 1
Skin sensitizer Category 1

Unknown toxicity - Health

Acute toxicity, oral	0 %
Acute toxicity, dermal	0 %
Acute toxicity, inhalation, vapor	99.7 %
Acute toxicity, inhalation, dust or mist	22.3 %
Acute hazards to the aquatic environment	78 %
Chronic hazards to the aquatic environment	100 %



Label Elements

Hazard Symbol:



Signal Word:

Danger

Hazard Statement:

Flammable liquid and vapor.
Causes eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
Harmful if inhaled.

Precautionary Statements

Prevention:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground and bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust or mists. Use only outdoors or in a well-ventilated area. [In case of inadequate ventilation] wear respiratory protection. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace.

Response:

IF INHALED: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment is urgent (see this label). Wash contaminated clothing before reuse. In case of fire: Use ... to extinguish.

Storage:

Store in well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Disposal:

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC):

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.



3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Homopolymer of HDI	28182-81-2	50 - <100%
Xylene	1330-20-7	10 - <20%
Butyl acetate	123-86-4	10 - <25%
Hexamethylene diisocyanate (HDI)	822-06-0	0.1 - <1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- Ingestion:** Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.
- Inhalation:** Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. Move to fresh air. If breathing is difficult, give oxygen.
- Skin Contact:** Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.
- Eye contact:** Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

- General Fire Hazards:** Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.



Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire.

Specific hazards arising from the chemical: Vapors may travel considerable distance to a source of ignition and flash back. Vapors may cause a flash fire or ignite explosively. Prevent buildup of vapors or gases to explosive concentrations.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind. Evacuate area. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes. Wash hands thoroughly after handling. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Take precautionary measures against static discharges. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.



Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Store in a cool place.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Xylene	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm 435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm 435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
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	TWA	100 ppm 435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm 435 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	150 ppm 655 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL	350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	ST ESL	80 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	AN ESL	42 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	AN ESL	180 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	STEL	150 ppm 655 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	Ceiling	300 ppm	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA PEL	100 ppm 435 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA	100 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	150 ppm	US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Butyl acetate	PEL	150 ppm 710 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	50 ppm	US. ACGIH Threshold Limit Values (03 2016)
	STEL	150 ppm	US. ACGIH Threshold Limit Values (03 2016)
Chemical Identity	type	Exposure Limit Values	Source
Xylene	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)



	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm	655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm	655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	STEL	150 ppm	655 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	435 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	STEL	150 ppm	655 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
	ST ESL		350 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	ST ESL		80 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	AN ESL		42 ppb	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	AN ESL		180 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (07 2011)
	STEL	150 ppm	655 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	Ceiling	300 ppm		US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA PEL	100 ppm	435 mg/m3	US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants (08 2010)
	TWA	100 ppm		US. ACGIH Threshold Limit Values (2011)
	STEL	150 ppm		US. ACGIH Threshold Limit Values (2011)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Butyl acetate	PEL	150 ppm	710 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	50 ppm		US. ACGIH Threshold Limit Values (03 2016)
	STEL	150 ppm		US. ACGIH Threshold Limit Values (03 2016)
Hexamethylene diisocyanate (HDI)	TWA	0.005 ppm		US. ACGIH Threshold Limit Values (2011)

Chemical name	type	Exposure Limit Values		Source
Xylene	TWA	100 ppm	434 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	STEL	150 ppm	651 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Xylene	TWA	100 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	150 ppm		Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)



Xylene	TWA	100 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	STEL	150 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Xylene	TWA	100 ppm 434 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	STEL	150 ppm 651 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Butyl acetate	TWA	20 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Butyl acetate	STEL	200 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	TWA	150 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Butyl acetate	STEL	200 ppm 950 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
	TWA	150 ppm 713 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Hexamethylene diisocyanate (HDI)	CEILING	0.01 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	0.005 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Hexamethylene diisocyanate (HDI)	TWA	0.005 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
	CEV	0.02 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Hexamethylene diisocyanate (HDI)	TWA	0.005 ppm 0.034 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Xylene (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/g (Creatinine in urine)	ACGIH BEI (03 2013)

Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
Xylene (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/g (Creatinine in urine)	ACGIH BEI (03 2013)
Hexamethylene diisocyanate (HDI) (Hexamethylenediamine (with hydrolysis): Sampling time: End of shift.)	15 µg/g (Creatinine in urine)	ACGIH BEI (03 2015)

Appropriate Engineering Controls

Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

**Individual protection measures, such as personal protective equipment**

General information:	Use explosion-proof ventilation equipment. 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.
Eye/face protection:	Wear goggles/face shield.
Skin Protection	
Hand Protection:	Use suitable protective gloves if risk of skin contact.
Other:	Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.
Respiratory Protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.
Hygiene measures:	When using do not smoke. Observe good industrial hygiene practices. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties**Appearance**

Physical state:	liquid
Form:	liquid
Color:	No data available.
Odor:	Mild petroleum/solvent
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	32.5 °C 90.5 °F
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.



Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.100
Solubility(ies)	
Solubility in water:	Practically Insoluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Heat, sparks, flames.
Incompatible Materials:	Strong acids. Avoid contact with oxidizing agents (e.g. nitric acid, peroxides and chromates). Strong bases.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes mild skin irritation. May cause an allergic skin reaction.
Eye contact:	Causes eye irritation.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

**Information on toxicological effects****Acute toxicity (list all possible routes of exposure)****Oral****Product:** ATEmix: 29,358.33 mg/kg**Dermal****Product:** Not classified for acute toxicity based on available data.**Inhalation****Product:** ATEmix: 0.14 mg/l**Repeated dose toxicity****Product:** No data available.**Skin Corrosion/Irritation****Product:** No data available.**Serious Eye Damage/Eye Irritation****Product:** No data available.**Respiratory or Skin Sensitization****Product:** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause sensitization by inhalation.**Carcinogenicity****Product:** No data available.**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

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

No carcinogenic components identified

Germ Cell Mutagenicity**In vitro****Product:** No data available.**In vivo****Product:** No data available.**Reproductive toxicity****Product:** No data available.**Specific Target Organ Toxicity - Single Exposure****Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure****Product:** No data available.**Aspiration Hazard****Product:** No data available.**Other effects:** No data available.**12. Ecological information****Ecotoxicity:****Acute hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Chronic hazards to the aquatic environment:****Fish****Product:** No data available.**Aquatic Invertebrates****Product:** No data available.**Toxicity to Aquatic Plants****Product:** No data available.**Persistence and Degradability****Biodegradation****Product:** No data available.**BOD/COD Ratio****Product:** No data available.**Bioaccumulative Potential****Bioconcentration Factor (BCF)****Product:** No data available.**Partition Coefficient n-octanol / water (log K_{ow})****Product:** No data available.**Mobility in Soil:** No data available.



Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

UN1993, FLAMMABLE LIQUID, N.O.S. (Xylene, Butyl Acetate), 3, PG III

CFR / DOT:

UN1993, Flammable liquids, n.o.s. (Xylene, Butyl Acetate), 3, PG III

IMDG:

UN1993, FLAMMABLE LIQUID, N.O.S. (Xylene, Butyl Acetate), 3, PG III

Further Information:

The above shipping description may not be accurate for all container sizes and all modes of transportation. Please refer to Bill of Lading.

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Xylene	100 lbs.
Butyl acetate	5000 lbs.
Hexamethylene diisocyanate (HDI)	100 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

- Fire Hazard
- Immediate (Acute) Health Hazards
- Delayed (Chronic) Health Hazard

**SARA 302 Extremely Hazardous Substance**

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Xylene	100 lbs.
Butyl acetate	5000 lbs.
Hexamethylene diisocyanate (HDI)	100 lbs.

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Homopolymer of HDI	10000 lbs
Xylene	10000 lbs
Butyl acetate	10000 lbs
Hexamethylene diisocyanate (HDI)	10000 lbs

SARA 313 (TRI Reporting)

<u>Chemical Identity</u>
Xylene

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Xylene	Reportable quantity: lbs.

US State Regulations**US. California Proposition 65**

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

<u>Chemical Identity</u>
Xylene
Butyl acetate

US. Massachusetts RTK - Substance List

<u>Chemical Identity</u>
Xylene
Butyl acetate

US. Pennsylvania RTK - Hazardous Substances

<u>Chemical Identity</u>
Xylene
Butyl acetate

US. Rhode Island RTK

<u>Chemical Identity</u>
Xylene
Butyl acetate



International regulations

Montreal protocol

not applicable

Stockholm convention

not applicable

Rotterdam convention

not applicable

Kyoto protocol

not applicable

VOC: When appropriately mixed with the other part, product has a VOC less water and exempt solvent of:
253 g/l

Regulatory VOC (less water and exempt solvent) : 135 g/l

VOC Method 310 : 12.30 %

**Inventory Status:**

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	All components in this product are listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16. Other information, including date of preparation or last revision

Revision Date:	12/02/2016
Version #:	2.0
Further Information:	No data available.



Disclaimer:

For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.