

SECTION 1 : Product And Company Identification**1.1. Product Identifier**

Product Name : Ethylbenzene

Product Form : Liquid

1.2. Relevant Use

Recommended Use : A Chemical Intermediate

1.3. Supplier Information

Company name of supplier : Americas Styrenics LLC

Address : 24 Waterway Avenue
Suite 1200
The Woodlands, TX 77380 USA

Telephone : General Assistance: 1-844-512-1212

Email: : productsteward@amsty.com

1.4. Emergency Telephone

Chemtrec® : +1-800-424-9300

Local Chemtrec® : +1 703-741-5970

Environmental Management : +1-800-510-8510

SECTION 2 : Hazard Identification**2.1. GHS Classification****GHS Classification**

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Flammable Liquid 2	H225
Acute Toxicity 4 (Inhalation)	H332
Skin Irritation 2	H315
Eye Irritation 2A	H319
Mutagenicity 1B	H340
Carcinogenicity 1A	H350
Reproductive Toxicity 2	H361
STOT Repeat Exposure 2	H373
Aspiration Hazard 1	H304

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2.2. GHS Label Elements

GHS-US Labelling

Hazard Pictograms (GHS-US) :



Signal Words (GHS-US) : Danger

Hazard Statements (GHS-US) :

- H225 - Highly flammable liquid and vapour.
- H304 - May be fatal if swallowed and enters airways.
- H315 - Causes skin irritation.
- H319 - Causes serious eye irritation.
- H332 - Harmful if inhaled.
- H340 - May cause genetic defects.
- H350 - May cause cancer.
- H361 - Suspected of damaging fertility or the unborn child.
- H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary Statement (GHS-US) :

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 - Keep container tightly closed.
- P240 - Ground/bond container and receiving equipment.
- P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- P242 - Use only non-sparking tools.
- P243 - Take precautionary measures against static discharge.
- P260 - Do not breathe dust or mist.
- P271 - Use only outdoors or in a well-ventilated area.
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER
- P303 + P361 + P353 - IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin with water or shower.
- P308 + P313 - IF exposed or concerned: Get medical advice/ attention.
- P312 - Call a POISON CENTER or doctor/ physician if you feel unwell.
- P331 - Do NOT induce vomiting.
- P370 + P378 - In case of fire: Use water spray for extinction.
- P314 - Get medical advice/ attention if you feel unwell.
- P403 + P235 -Store in a well-ventilated place. Keep cool.
- P405 -Store locked up.
- P501 -Dispose of contents/ container to an approved waste disposal plant.

2.3. Other Hazards

Eye Contact : Irritating to eyes.

Skin Contact : Irritating to skin.

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Inhalation : Harmful by inhalation.

Ingestion : May be fatal if swallowed and enters airways. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

2.4. Additional Physical Information

This material can accumulate static discharge by flow or agitation and can be ignited by static discharge.

SECTION 3 : Composition / Information On Ingredients

3.1. Substance

Not Applicable

3.2. Mixture

Chemical name	CAS-No.	Concentration (% w/w)
Ethylbenzene	100-41-4	>= 99.4
Toluene	108-88-3	<= 0.4
Benzene	71-43-2	<= 0.1

Section 4 : First Aid Measures

4.1. Description of Preventative and First Aid Measures

Eye Contact : 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.

Skin Contact : After contact with skin, wash immediately with plenty of soap and water. Wash contaminated clothing before reuse.

Inhalation : IF INHALED: Remove Person to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion : Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Keep respiratory tract clear.

4.2. Important Symptoms and Effects

Eye Contact : Direct contact may result in corneal injury. Causes serious eye irritation. Exposure to vapor may cause intense watering and irritation to eyes. Lacrimation.

Skin Contact : Irritating to skin. Symptoms include : irritation (itching, redness, blistering).

Inhalation : Harmful by inhalation.

Ingestion : May be fatal if swallowed and enters airways. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

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4.3. Immediate Medical Attention and Special Treatment

Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis. Maintain adequate ventilation and oxygenation of the patient. If burn is present, treat as any thermal burn, after decontamination. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis. Treat symptomatically.

Section 5: Fire-Fighting Measures

5.1. Extinguishing Media

- Extinguishing Media : In case of fire: Use dry chemical powder for extinction. Use foam for extinction. Use carbon dioxide for extinction. Use water spray for extinction.
- Unsuitable Extinguishing Media : Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

5.2. Specific Hazards

During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon dioxide. Carbon monoxide.

5.3. Advice for Firefighters

- Special Fire Fighting Procedures : Keep people away. Isolate fire and deny unnecessary entry. Soak thoroughly with water to cool and prevent re-ignition. If material is molten, do not apply direct water stream. Use fine water spray or foam. Cool surroundings with water to localize fire zone. Hand held dry chemical or carbon dioxide extinguishers may be used for small fires. May form flammable vapor-air mixture.
- Protective Equipment for Firefighters : Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance.
- Unusual Fire & Explosion Hazards : May form flammable vapor-air mixture.

Section 6: Accidental Release Measures

6.1. Personal Precautions and Emergency Procedures

- General Measures : Keep upwind. Keep out of low areas. Avoid inhalation of vapour and spray mist. Use ventilation/water spray/fog to disperse vapours. Avoid static electricity discharges. Ground/bond container and receiving equipment. Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking. Flammable mixtures may

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exist within the vapor space of containers at room temperature. At or above flash point, vapours present may burn in open or explode if confined when mixed with air and exposed to ignition source. Wear respiratory protection.

6.1.1 For Non-Emergency Personnel

Emergency Procedures : Do not breathe mist. Do not breathe vapors. Eliminate all ignition sources if safe to do so. In case of fire: Evacuate area. Avoid contact with skin and eyes.

6.1.2 For Emergency Responders

Protective Equipment : Wear suitable protective clothing, gloves and eye/face protection. In case of insufficient ventilation, wear suitable respiratory equipment.

Emergency Procedures : Ventilate area. This product is flammable.

6.2. Environmental Precautions

Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

6.3. Methods for Clean Up

Spill Cleanup Methods : Contain spilled material if possible. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Collect in suitable and properly labeled containers.

6.4. Reference to Other Sections

Refer to Section 8, Exposure Controls.
Refer to Section 12, Ecological Information
Refer to Section 13, Disposal Considerations.

Section 7 : Handling and Storage

7.1. Precautions for Safe Handling

Precautions for Safe Handling : Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Never use air pressure for transferring product. Keep away from heat/sparks/open flames. No smoking. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Do not get in eyes, on skin, or on clothing. Avoid breathing vapors. Wash thoroughly after handling. Use only in well-ventilated areas. Keep container tightly closed. Ground/bond container and receiving equipment.

Hygiene Measures : Refer to Section 8, Exposure Controls.

7.2. Conditions for Safe Storage

Technical Measures : Ground/bond container and receiving equipment. Take precautionary measures against static discharge.

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Storage Conditions	:	Store in a well-ventilated place. Store in a dry place.'20 Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature. Store in accordance with good manufacturing practices (GMP).
Incompatible Materials	:	Strong Acids.Strong Bases. Oxidizing Agents.
Storage Area	:	Keep container tightly closed in a cool, well-ventilated place.
Special Packaging Rules	:	Store with proper labeling.

Section 8: Exposure Controls

8.1. Control Parameters

Component	List	Control Parameters	Value
Ethylbenzene(100-41-4)	ACGIH	Time Weighted Average (TWA):	20 ppm, BEI
	OSHA Z1	PEL:	100 ppm
Toluene(108-88-3)	ACGIH	Time Weighted Average (TWA):	20 ppm, BEI
	OSHA Z2	Time Weighted Average (TWA):	200 ppm
	OSHA Z2	Ceiling Limit Value:	300 ppm
	OSHA Z2	Maximum concentration:	500 ppm, 10 minutes
Benzene(71-43-2)	ACGIH	Time Weighted Average (TWA):	0.5 ppm, SKIN, BEI
	ACGIH	Short Term Exposure Limit (STEL):	2.5 ppm, SKIN, BEI
	OSHA Z2	Time Weighted Average (TWA):	10 ppm
	OSHA Z2	Ceiling Limit Value:	25 ppm
	OSHA Z2	Maximum concentration:	50 ppm, 10 minutes
	OSHA Z1	Short Term Exposure Limit (STEL):	5 ppm
	OSHA Z1	Time Weighted Average (TWA):	1 ppm

A BEI notation following the exposure guideline refers to a guidance value for assessing biological monitoring results as an indicator of the uptake of a substance from all routes of exposures.

A "skin" notation following the inhalation exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

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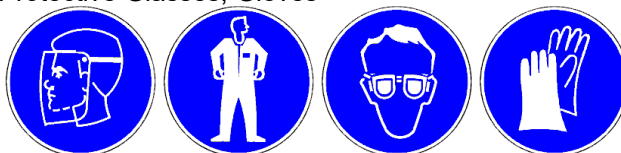
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A D-SEN notation following the exposure guideline refers to the potential to produce dermal sensitization, as confirmed by human or animal data.

8.2. Exposure Controls

Appropriate Engineering Controls : Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Avoid all unnecessary exposure.

Personal Protective Equipment (PPE) : Recommended PPE includes: Face Shields, Protective Clothing, Protective Glasses, Gloves



Hand Protection : Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Styrene/butadiene rubber. Viton. Examples of acceptable glove barrier materials include; Butyl rubber. Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Eye Protection : Use chemical goggles.

Skin Protection : When prolonged or frequently repeated contact could occur, use protective clothing chemically resistant to this material. Selection of specific items such as faceshield, boots, apron, or full-body suit will depend on the task.

Respiratory Protection : Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply. The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Environmental Exposure Controls : Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

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Other Information : Wash hands before smoking or eating Do not eat, drink or smoke when using this product.

Section 9 : Physical and Chemical Properties

9.1. Physical and Chemical Properties

Physical State	: Liquid
Color	: Colorless
Odor	: Aromatic
Odor Threshold	: No test data available
pH	: Not available
Freezing Point	: -95 °C (Literature)
Melting Point	: -95 °C(Literature)
Boiling Point (760 mmHg) and Boiling Range	: 136 °C (Literature)
Flash Point	: 18 °C (Literature)
Evaporation Rate	: No test data available
Flammability (solid, gas)	: Not applicable to liquids
Flammability Limit - Upper (%)	: 6.7 %(V)
Flammability Limit - Lower (%)	: 1 %(V)
Vapor Pressure	: 1.12 kPa
Relative Vapor Density (air=1)	: 3.7 (Literature)
Relative Density (H2O=1)	: 0.87 (Literature)
Solubility in Water	: 0.14 g/l (Literature)
Partition coefficient: n-octanol/water	: 3.15
Autoignition Temperature	: 432.2 °C (Literature)
Decomposition Temperature	: No data available.
Viscosity	: 0.5 mm ² /s
Molecular Weight	: No test data available
Henry's Law Constant (H)	: No Additional Information.

Section 10 : Stability and Reactivity

10.1. Reactivity

Stable under recommended storage conditions. See Storage, Section 7.

10.2. Stability

Highly flammable liquid and vapor. May form flammable air/vapor mixture.

10.3. Possibility of Hazardous Reactions

Hazardous polymerization will not occur

10.4. Conditions to Avoid

Avoid direct sunlight, extremely high or low temperatures, open flames, overheating, heat, sparks, static discharge. Avoid contact with oxidizing materials. Avoid contact with: Acids. Caustic potash. Caustic soda. Metal halides. Avoid contact with absorbent materials such as; Cellulose. Clay-based absorbents. Sawdust. Avoid unintended contact with peroxides.

10.5. Incompatible Materials

Avoid contact with oxidizing materials, strong acids, and strong bases.

10.6. Hazardous Decomposition Products

Fumes. Carbon monoxide. Carbon dioxide. May release flammable gases. On combustion, may form: toxic gases.

Section 11 : Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity

Ingestion	:	LD50rat 3,500 mg/kg
Skin	:	LD50Rabbit 15,400 mg/kg
Inhalation	:	LC50rat 17.2 mg/l/4000 ppm

Serious Eye Damage/Eye Irritation

May cause moderate eye irritation. May cause moderate corneal injury. Vapor may cause eye irritation experienced as mild discomfort and redness. Vapor may cause lacrimation (tears).

Skin Corrosion/Irritation

Brief contact may cause skin irritation with local redness. Prolonged contact may cause skin burns. Symptoms may include pain, severe local redness, swelling, and tissue damage. May cause drying and flaking of the skin.

Repeated Dose Toxicity

May cause damage to organs through prolonged or repeated exposure.

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Chronic Toxicity

Germ Cell Mutagenicity:

Genotoxicity in Vitro : May cause genetic defects.

Genotoxicity in Vivo : May cause genetic defects.

Carcinogenicity

May cause cancer.

Component	List	Classification
Ethylbenzene(100-41-4)	IARC	Possibly carcinogenic to humans. ;2B
Benzene(71-43-2)	NTP CARC	Known carcinogen.
	IARC	Carcinogenic to humans. ;1

Developmental Toxicity

Suspected of damaging fertility or the unborn child.

Reproductive Toxicity

Suspected of damaging fertility or the unborn child.

Target Organ Toxicity

Specific Target Organ Toxicity (Single Exposure) : Not Classified.

Specific Target Organ Toxicity (Repeated Exposure) : Auditory system May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard : Aspiration into the lungs may occur during ingestion or vomiting, causing lung damage or even death due to chemical pneumonitis.

Potential Adverse Human Health Effects : May cause cancer. Causes damage to organs through prolonged or repeated exposure: hearing organs.

Symptoms/Injuries After Inhalation : May cause respiratory irritation.

Symptoms/Injuries After Skin Contact : Irritating to skin. Symptoms include : irritation (itching, redness, blistering).

Symptoms/Injuries After Eye Contact : Direct contact may result in corneal injury. Causes serious eye irritation. Exposure to vapor may cause intense watering and irritation to eyes. Lacrimation.

Symptoms/Injuries After Ingestion : May be fatal if swallowed and enters airways. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

Section 12 : Ecological Information

12.1. Toxicity

Data for Component: Ethylbenzene (100-41-4)

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the

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most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 h, 4.2 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (Water flea), static, immobilization, 1 d, 2.2 mg/l

Aquatic Plant Toxicity

EC50, *Pseudokirchneriella subcapitata* (green algae), , Growth inhibition (cell density reduction), 72 h, 3.6 - 4.6 mg/l

Toxicity to Micro-organisms

EC50, , Bacteria, , , 16 h, > 12 mg/l

Toxicity to Soil Dwelling Organisms

LC50, *Eisenia fetida* (earthworms), 2 d,

Data for Component: Toluene (108-88-3)

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 h, 5.8 mg/l

LC50, fish, flow-through test, 96 h, 5.5 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (Water flea), static test, immobilization, 24 h, 7 mg/l

LC50, water flea *Ceriodaphnia dubia*, semi-static test, mortality, 48 h, 3.78 mg/l

Aquatic Plant Toxicity

EbC50, *Pseudokirchneriella subcapitata* (green algae), , biomass growth inhibition, 72 h, 12.5 mg/l

Toxicity to Micro-organisms

IC50, , Bacteria, , , 16 h, 29 mg/l

Fish Chronic Toxicity Value (ChV)

Fishflow-through test40 dgrowth1.4 mg/l

Aquatic Invertebrates Chronic Toxicity Value

Ceriodaphnia Dubia (water flea)7 dnumber of offspring0.74 mg/l

Daphnia magna (Water flea)21 dnumber of offspring2 mg/l

Toxicity to Soil Dwelling Organisms

LC50, *Eisenia fetida* (earthworms), , 150 - 280 mg/kg

Data for Component: Benzene (71-43-2)

Material is moderately toxic to aquatic organisms on an acute basis (LC50/EC50 between 1 and 10 mg/L in the most sensitive species tested).

Fish Acute & Prolonged Toxicity

LC50, *Oncorhynchus mykiss* (rainbow trout), semi-static test, 96 h, 5.9 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (Water flea), static test, immobilization, 24 h, 18 mg/l

Aquatic Plant Toxicity

EC50, *Pseudokirchneriella subcapitata* (green algae), , biomass growth inhibition, 72 h, 29 mg/l

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Fish Chronic Toxicity Value (ChV)

fathead minnow (Pimephales promelas) flow-through test 32 d lethality

Aquatic Invertebrates Chronic Toxicity Value

Ceriodaphnia Dubia (water flea) semi-static test 7 d 2.968 mg/l

12.2. Persistence and Degradability

Data for Component: Ethylbenzene(100-41-4)

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
100 %	6 d	OECD 301E Test	pass

Indirect Photodegradation with OH Radicals:

Rate Constant	Atmospheric Half-life	Method
7.1E-12 cm ³ /s	55 h	Estimated.

Chemical Oxygen Demand: 2.62 mg/g

Theoretical Oxygen Demand: 3.17 mg/g

Data for Component: Toluene(108-88-3)

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
100 %	14 d	OECD 301C Test	Not applicable

Indirect Photodegradation with OH Radicals:

Rate Constant	Atmospheric Half-life	Method
5.23E-12 cm ³ /s	2 d	Estimated.

Theoretical Oxygen Demand: 3.13 mg/g

Data for Component: Benzene(71-43-2)

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
100 %	14 d	OECD 301C Test	Not applicable

Indirect Photodegradation with OH Radicals:

Rate Constant	Atmospheric Half-life	Method
1.95E-12 cm ³ /s	5.5 d	Estimated.

Biological oxygen demand (BOD):

BOD 5	BOD 10	BOD 20	BOD 28
46 %	49 %	80 %	

Theoretical Oxygen Demand: 3.08 mg/g

12.3. Bioaccumulative Potential

Partition coefficient: n-octanol/water (log/P_{ow}): 3.15 Measured

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12.4. Mobility

Henry's Law Constant (H): No Additional Information.

12.5. Other Adverse Effects

No Additional Information.

Section 13 : Disposal Considerations

Sewage Disposal Recommendation	:	Do not empty into drains. Do not dump into sewers, on the ground, or into any body of water.
Waste Disposal Recommendation	:	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.
Additional Information	:	Contaminated product, soil, container residue, and spill clean-up materials may be considered hazardous material.
Ecology - waste materials	:	FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Recycler. Reclaimer. Incinerator or other thermal destruction device.

Section 14 : Transportation Information

14.1. UN Number

CFR	:	1175
IMDG	:	1175
IATA	:	1175

14.2. Proper Shipping Name

CFR	:	ETHYLBENZENE
IMDG	:	ETHYLBENZENE
IATA	:	ETHYLBENZENE

14.3. Additional Information

CFR

Class	:	3
Packing Group	:	II
Labels	:	3
EMR No.	:	130
Environmentally Hazardous	:	No

IMDG

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Class : 3
Packing Group : II
Labels : 3
EMR No. : F-E
EMR No.. : S-D
Marine Pollutant : No

IATA_C

Class : 3
Packing Group : II
Labels : 3
Packing Instruction (Cargo Aircraft) : 364
Environmentally Hazardous : No

Section 15 : Regulatory Information

15.1. US Federal Regulations

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

Immediate (Acute) Health Hazard : Yes
Fire Hazard : Yes
Delayed (Chronic) Health Hazard : Yes
Reactive Hazard : No
Sudden Release of Pressure : No
Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Component	CAS #	Amount
Ethylbenzene	100-41-4	>= 99.4
Toluene	108-88-3	<= 0.4
Benzene	71-43-2	<= 0.1

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15.2. International Regulations

Notification Status

Toxic Substances Control Act (TSCA) : All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CEPA - Domestic Substances List (DSL) : All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

15.3. US State Regulations

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause cancer.

Component	CAS #	Amount
Ethylbenzene	100-41-4	>= 99.4 %
Benzene	71-43-2	<= 0.1 %

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

WARNING: This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

Component	CAS #	Amount
Toluene	108-88-3	<= 0.4 %
Benzene	71-43-2	<= 0.1 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Ethylbenzene	100-41-4	>= 99.4 %
Toluene	108-88-3	<= 0.4 %
Benzene	71-43-2	<= 0.1 %

Pennsylvania (Worker and Community Right-To-Know Act): Pennsylvania Special Hazardous Substances List:

The following product components are cited in the Pennsylvania Special Hazardous Substance List, and are present at levels which require reporting.

Component	CAS #	Amount
Benzene	71-43-2	<= 0.1 %

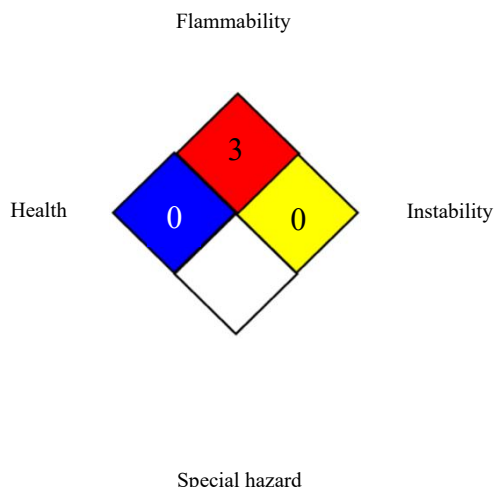
Section 16 : Other Information

Further information

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NFPA 704:



HMIS® IV:

HEALTH	/	0
FLAMMABILITY		3
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
NIOSH REL	: USA. NIOSH Recommended Exposure Limits
OSHA CARC	: OSHA Specifically Regulated Chemicals/Carcinogens
OSHA P0	: USA. Table Z-1-A Limits for Air Contaminants (1989 vacated values)
OSHA Z-1	: USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-2	: USA. Occupational Exposure Limits (OSHA) - Table Z-2
ACGIH / TWA	: 8-hour, time-weighted average
ACGIH / STEL	: Short-term exposure limit
NIOSH REL / TWA	: Time-weighted average concentration for up to a 10-hour workday during a 40-hour workweek
NIOSH REL / ST	: STEL - 15-minute TWA exposure that should not be exceeded at any time during a workday
OSHA CARC / PEL	: Permissible exposure limit (PEL)
OSHA CARC / STEL	: Excursion limit
OSHA P0 / TWA	: 8-hour time weighted average
OSHA P0 / STEL	: Short-term exposure limit
OSHA Z-1 / TWA	: 8-hour time weighted average
OSHA Z-2 / TWA	: 8-hour time weighted average
OSHA Z-2 / CEIL	: Acceptable ceiling concentration
OSHA Z-2 / Peak	: Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift

Ethylbenzene

Safety Data Sheet

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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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.

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