

# SAFETY DATA SHEET

Creation Date 06-Aug-2010

Revision Date 18-Dec-2025

Revision Number 7

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

**Product Name** Ethylbenzene

**Cat No. :** AC118080000; AC118080010; AC118080025; AC118080250; AC118080251; AC118085000

**CAS No** 100-41-4

**Synonyms** Ethylbenzol; Phenylethane

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

#### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11

Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99

**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

Flammable liquids	Category 2
Acute Inhalation Toxicity - Vapors	Category 4
Carcinogenicity	Category 2
Specific target organ toxicity (single exposure)	Category 3
Target Organs - Respiratory system, Central nervous system (CNS).	
Specific target organ toxicity - (repeated exposure)	Category 2
Target Organs - Ears.	
Aspiration Toxicity	Category 1

### Label Elements

**Signal Word**

Danger

**Hazard Statements**

Highly flammable liquid and vapor  
May be fatal if swallowed and enters airways  
Harmful if inhaled  
May cause respiratory irritation  
May cause drowsiness or dizziness  
Suspected of causing cancer  
May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use only outdoors or in a well-ventilated area  
Do not breathe dust/fume/gas/mist/vapors/spray  
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  
Keep cool  
Wear protective gloves/protective clothing/eye protection/face protection  
Take action to prevent static discharges  
Use non-sparking tools

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

**Skin**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor

Do NOT induce vomiting

**Fire**In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish**Storage**

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

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Harmful to aquatic life with long lasting effects

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

### 3. Composition/information on Ingredients

Component	CAS No	Weight %
Ethylbenzene	100-41-4	>95

#### 4. First-aid measures

<b>General Advice</b>	If symptoms persist, call a physician.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, give oxygen. Get medical attention. Aspiration into lungs can produce severe lung damage.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Call a physician or poison control center immediately. If vomiting occurs naturally, have victim lean forward.
<b>Most important symptoms and effects</b>	Difficulty in breathing. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: May cause central nervous system depression
<b>Notes to Physician</b>	Treat symptomatically

#### 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	Water spray, carbon dioxide (CO <sub>2</sub> ), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.
<b>Unsuitable Extinguishing Media</b>	Do not use a solid water stream as it may scatter and spread fire
<b>Flash Point</b>	22 °C / 71 °F
<b>Method -</b>	No information available
<b>Autoignition Temperature</b>	432 °C / 810 °F
<b>Explosion Limits</b>	
<b>Upper</b>	6.8%
<b>Lower</b>	1.2%
<b>Sensitivity to Mechanical Impact</b>	No information available
<b>Sensitivity to Static Discharge</b>	Yes

#### Specific Hazards Arising from the Chemical

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

#### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

#### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### NFPA

**Health**  
3

**Flammability**  
3

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

<b>Personal Precautions</b>	Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
<b>Environmental Precautions</b>	Should not be released into the environment. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information. Collect spillage.
<b>Methods for Containment and Clean Up</b>	Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

## 7. Handling and Storage

<b>Handling</b>	Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Ensure adequate ventilation. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
<b>Storage.</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Incompatible Materials. Strong oxidizing agents.

## 8. Exposure controls / personal protection

### Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH	Mexico OEL (TWA)
Ethylbenzene	TWA: 20 ppm	(Vacated) TWA: 100 ppm (Vacated) TWA: 435 mg/m <sup>3</sup> (Vacated) STEL: 125 ppm (Vacated) STEL: 545 mg/m <sup>3</sup> TWA: 100 ppm TWA: 435 mg/m <sup>3</sup>	IDLH: 800 ppm REL = 100 ppm (TWA) REL = 435 mg/m <sup>3</sup> (TWA) STEL: 125 ppm STEL: 545 mg/m <sup>3</sup>	TWA: 20 ppm

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists  
 OSHA - Occupational Safety and Health Administration  
 NIOSH: NIOSH - National Institute for Occupational Safety and Health

<b>Engineering Measures</b>	Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment.
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### Personal Protective Equipment

<b>Eye/face Protection</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
<b>Skin and body protection</b>	Wear appropriate protective gloves and clothing to prevent skin exposure.
<b>Respiratory Protection</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
<b>Recommended Filter type:</b>	Organic gases and vapours filter. Type A. Brown. conforming to EN14387.
<b>Hygiene Measures</b>	Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Appearance</b>			
<b>Physical State</b>	Liquid		
<b>Color</b>	Colorless		
<b>Odor</b>	aromatic		
<b>Odor Threshold</b>	No information available		
<b>Property</b>	<b>Values</b>	<b>Remarks</b>	<b>• Method</b>
<b>Melting Point/Range</b>	-95 °C / -139 °F		
<b>Softening Point</b>	No data available		
<b>Boiling Point/Range</b>	136 °C / 276.8 °F		
<b>Flash Point</b>	22 °C / 71 °F		
<b>Flammability (liquid)</b>	Highly flammable		<b>Method -</b> No information available
<b>Flammability (solid,gas)</b>	Not applicable		On basis of test data
<b>Explosion Limits</b>	<b>Lower</b> 1 vol%		Liquid
	<b>Upper</b> 7.8 vol%		
<b>Autoignition Temperature</b>	432 °C / 810 °F		
<b>Decomposition Temperature</b>	No data available		
<b>pH</b>	No information available		
<b>Viscosity</b>	No data available		
<b>Water Solubility</b>	0.2 g/L (20°C)		practically insoluble
<b>Solubility in other solvents</b>	No information available		
<b>Partition Coefficient (n-octanol/water)</b>			
<b>Component</b>	<b>log Pow</b>		
Ethylbenzene	3.6		
<b>Vapor Pressure</b>	No data available		
<b>Density / Specific Gravity</b>	0.860		
<b>Bulk Density</b>	Not applicable		Liquid
<b>Vapor Density</b>	No data available		(Air = 1.0)
<b>Particle characteristics</b>	Not applicable (liquid)		
<b>Other Information</b>			
<b>Molecular Formula</b>	C8 H10		
<b>Molecular Weight</b>	106.17		
<b>Explosive Properties</b>	Vapors may form explosive mixtures with air		

## 10. Stability and reactivity

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

Information on expected route of exposure

<b>Inhalation</b>	Harmful by inhalation. Aspiration into lungs can produce severe lung damage. May cause irritation of respiratory tract. INHALATION MAY CAUSE CENTRAL NERVOUS SYSTEM EFFECTS.
<b>Ingestion</b>	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. Potential for aspiration if swallowed.
<b>Eyes</b>	May cause irritation.
<b>Skin</b>	May be harmful in contact with skin. May cause irritation.

**Toxicology data for the components**

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethylbenzene	3500 mg/kg ( Rat )	15400 mg/kg ( Rabbit )	17.2 mg/L ( Rat ) 4 h

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Based on available data, the classification criteria are not met

**(c) serious eye damage/irritation;** Based on available data, the classification criteria are not met

**(d) respiratory or skin sensitization;**  
**Respiratory** Based on available data, the classification criteria are not met  
**Skin** Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;** Based on available data, the classification criteria are not met

**(f) carcinogenicity;** Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Ethylbenzene	100-41-4	Group 2B	Not listed	A3	X	A3

*IARC (International Agency for Research on Cancer)*

*Group 2B - Possibly Carcinogenic to Humans*  
*IARC (International Agency for Research on Cancer)*

*Group 1 - Carcinogenic to Humans*  
*Group 2A - Probably Carcinogenic to Humans*  
*A1 - Known Human Carcinogen*  
*A2 - Suspected Human Carcinogen*  
*A3 - Animal Carcinogen*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

**(g) reproductive toxicity;** Based on available data, the classification criteria are not met

**(h) STOT-single exposure;** Based on available data, the classification criteria are not met

**(i) STOT-repeated exposure;** Category 2

**Target Organs** Ears.

**(j) aspiration hazard;** Category 1

**Other Adverse Effects** See actual entry in RTECS for complete information

**Symptoms / effects, both acute and delayed** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. May cause central nervous system depression.

**Other Adverse Effects** See actual entry in RTECS for complete information.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains. The product contains following substances which are hazardous for the environment. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethylbenzene	EC50: 2.6 - 11.3 mg/L, 72h static (Pseudokirchneriella subcapitata) EC50: 1.7 - 7.6 mg/L, 96h static (Pseudokirchneriella subcapitata) EC50: > 438 mg/L, 96h (Pseudokirchneriella subcapitata) EC50: = 4.6 mg/L, 72h (Pseudokirchneriella subcapitata)	LC50: 9.1 - 15.6 mg/L, 96h static (Pimephales promelas) LC50: 11.0 - 18.0 mg/L, 96h static (Oncorhynchus mykiss) LC50: = 4.2 mg/L, 96h semi-static (Oncorhynchus mykiss) LC50: 7.55 - 11 mg/L, 96h flow-through (Pimephales promelas) LC50: = 32 mg/L, 96h static (Lepomis macrochirus) LC50: = 9.6 mg/L, 96h static (Poecilia reticulata)	EC50 = 9.68 mg/L 30 min EC50 = 96 mg/L 24 h	EC50: 1.8 - 2.4 mg/L, 48h (Daphnia magna)

**Persistence and Degradability** Insoluble in water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** . Is not likely mobile in the environment due its low water solubility. Will likely be mobile in the environment due to its volatility.

Component	log Pow
Ethylbenzene	3.6

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

### DOT

UN-No UN1175  
 Proper Shipping Name ETHYLBENZENE  
 Hazard Class 3  
 Packing Group II

### TDG

UN-No UN1175  
 Proper Shipping Name ETHYLBENZENE  
 Hazard Class 3  
 Packing Group II

### IATA

UN-No UN1175  
 Proper Shipping Name ETHYLBENZENE  
 Hazard Class 3  
 Packing Group II

### IMDG/IMO

UN-No UN1175  
 Proper Shipping Name ETHYLBENZENE  
 Hazard Class 3  
 Packing Group II

## 15. Regulatory Information

### United States of America Inventory

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Ethylbenzene	100-41-4	X	ACTIVE	-

#### Legend:

**TSCA** US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b)** - Notices of Export Not applicable

### International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Ethylbenzene	100-41-4	X	-	202-849-4	X	X	X	X	X	KE-13532

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Component	CAS No	Weight %	SARA 313 - Threshold Values %	SARA 313 - Reporting thresholds
Ethylbenzene	100-41-4	>95	0.1 %	-

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

#### CWA (Clean Water Act)

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Ethylbenzene	X	1000 lb	X	X

#### Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Ethylbenzene	X		-

**OSHA** - Occupational Safety and Health Administration Not applicable

#### CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive



Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

Component	Hazardous Substances RQs	CERCLA Extremely Hazardous Substances RQs	SARA Reportable Quantity (RQ)
Ethylbenzene	1000 lb	-	1000 lb 454 kg

**California Proposition 65** This product contains the following Proposition 65 chemicals.

Component	CAS No	California Prop. 65	Prop 65 NSRL	Category
Ethylbenzene	100-41-4	Carcinogen	54 µg/day 41 µg/day	Carcinogen

#### U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethylbenzene	X	X	X	X	X

#### U.S. Department of Transportation

Reportable Quantity (RQ): Y  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

#### Other International Regulations

**Mexico - Grade** Serious risk, Grade 3

**Authorisation/Restrictions according to EU REACH** Not applicable

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Ethylbenzene	100-41-4	-	-	-

#### Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Ethylbenzene	100-41-4	Listed	Not applicable	Not applicable	Not applicable

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

#### Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)

Ethylbenzene	100-41-4	Not applicable	Not applicable	Not applicable	Not applicable
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## 16. Other Information

Prepared By	Product stewardship (Regulatory Affairs) Thermo Fisher Scientific email - begel.sdsdesk@thermofisher.com
Creation Date	06-Aug-2010
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Print Date	18-Dec-2025
Revision Summary	Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**