



# SAFETY DATA SHEET

Revision Date 10-Feb-2015

Revision Number 1

## 1. Identification

**Product Name** 1,2-Dibromoethane  
**Cat No. :** AC112790000; AC112790010; AC112790025; AC112790100;  
AC112790250; AC112795000  
**Synonyms** EDB; Ethylene dibromide  
**Recommended Use** Laboratory chemicals.  
**Uses advised against** No Information available  
**Details of the supplier of the safety data sheet**

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

**Entity / Business Name**  
Acros Organics  
One Reagent Lane  
Fair Lawn, NJ 07410

**Emergency Telephone Number**  
For information **US** call: 001-800-ACROS-01  
/ **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 by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|  |             |
|--|-------------|
| Acute oral toxicity                              | Category 3  |
| Acute dermal toxicity                            | Category 3  |
| Skin Corrosion/Irritation                        | Category 2  |
| Serious Eye Damage/Eye Irritation                | Category 2  |
| Carcinogenicity                                  | Category 1B |
| Specific target organ toxicity (single exposure) | Category 3  |
| Target Organs - Respiratory system.              |             |

### Label Elements

**Signal Word**  
Danger

**Hazard Statements**  
Toxic if swallowed  
Toxic in contact with skin  
Causes skin irritation  
Causes serious eye irritation  
May cause respiratory irritation  
May cause cancer

**Precautionary Statements****Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Wear eye/face protection  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 Use only outdoors or in a well-ventilated area

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 Remove/Take off immediately all contaminated clothing  
 Wash contaminated clothing before reuse  
 If skin irritation occurs: Get medical advice/attention

**Eyes**

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

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Rinse mouth

**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)**

Toxic to aquatic life with long lasting effects

### 3. Composition / Information on ingredients

| Component                              | CAS-No   | Weight % |
|--|----------|----------|
| Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 99       |

### 4. First-aid measures

**Eye Contact**

Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

**Skin Contact**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Immediate medical attention is required.

**Inhalation**

Remove from exposure, lie down. Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediate medical attention is required.

**Ingestion** Call a physician immediately. Clean mouth with water.

**Most important symptoms/effects** No information available.  
**Notes to Physician** Treat symptomatically

### 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray. Carbon dioxide (CO<sub>2</sub>). Dry chemical. chemical foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** > 104 °C / > 219.2 °F  
**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Keep product and empty container away from heat and sources of ignition.

**Hazardous Combustion Products**

Carbon monoxide (CO) Carbon dioxide (CO<sub>2</sub>) Hydrogen halides

**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**  
0

**Instability**  
0

**Physical hazards**  
N/A

### 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment.

**Environmental Precautions** See Section 12 for additional ecological information. Avoid release to the environment. Collect spillage.

**Methods for Containment and Clean Up** Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

### 7. Handling and storage

**Handling** Do not breathe dust. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Use only in area provided with appropriate exhaust ventilation.

**Storage** Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from direct sunlight. Do not store in metal containers.

### 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component                                 | ACGIH TLV | OSHA PEL  | NIOSH IDLH   |
|---|-----------|---|--|
| Ethylene dibromide<br>(1,2-Dibromoethane) | Skin      | (Vacated) TWA: 20 ppm<br>Ceiling: 30 ppm<br>(Vacated) STEL: 50 ppm<br>(Vacated) Ceiling: 100 ppm<br>TWA: 20 ppm | IDLH: 100 ppm<br>TWA: 0.045 ppm<br>Ceiling: 0.13 ppm |

| Component                                 | Québec  | Mexico OEL (TWA) | Ontario TWA&V |
|---|---|------------------|---------------|
| Ethylene dibromide<br>(1,2-Dibromoethane) | TWA: 20 ppm<br>TWA: 155 mg/m <sup>3</sup><br>Skin |                  | TWA:<br>Skin  |

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

**Engineering Measures**

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

**Personal Protective Equipment****Eye/face Protection**

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.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

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.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

|  |                                 |
|--|---------------------------------|
| Physical State                         | Liquid                          |
| Appearance                             | Colorless                       |
| Odor                                   | sweet                           |
| Odor Threshold                         | No information available        |
| pH                                     | No information available        |
| Melting Point/Range                    | 9 - 10 °C / 48.2 - 50 °F        |
| Boiling Point/Range                    | 131 - 132 °C / 267.8 - 269.6 °F |
| Flash Point                            | > 104 °C / > 219.2 °F           |
| Evaporation Rate                       | No information available        |
| Flammability (solid,gas)               | No information available        |
| Flammability or explosive limits       |                                 |
| Upper                                  | No data available               |
| Lower                                  | No data available               |
| Vapor Pressure                         | 11 mmHg @ 25 °C                 |
| Vapor Density                          | 6.5 (Air = 1.0)                 |
| Relative Density                       | 2.173                           |
| Solubility                             | No information available        |
| Partition coefficient; n-octanol/water | No data available               |
| Autoignition Temperature               | No information available        |
| Decomposition Temperature              | > 340°C                         |
| Viscosity                              | No information available        |
| Molecular Formula                      | C2 H4 Br2                       |
| Molecular Weight                       | 187.86                          |

**10. Stability and reactivity****Reactive Hazard**

None known, based on information available

**Stability**

Decomposes in contact with water. heat sensitive. Light sensitive. Decomposes on exposure to light.

|   |   |
|---|---|
| <b>Conditions to Avoid</b>              | Exposure to light. Incompatible products. Exposure to moisture.           |
| <b>Incompatible Materials</b>           | Strong bases, Ammonia, Metals   |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Hydrogen halides |
| <b>Hazardous Polymerization</b>         | No information available.   |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Acute Toxicity

**Product Information** No acute toxicity information is available for this product

### **Component Information**

| Component                                 | LD50 Oral         | LD50 Dermal          | LC50 Inhalation |
|---|-------------------|----------------------|-----------------|
| Ethylene dibromide<br>(1,2-Dibromoethane) | 117 mg/kg ( Rat ) | 300 mg/kg ( Rabbit ) | Not listed      |

**Toxicologically Synergistic Products** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** No information available

**Sensitization** No information available

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

| Component                                 | CAS-No   | IARC     | NTP                       | ACGIH | OSHA | Mexico |
|---|----------|----------|---------------------------|-------|------|--------|
| Ethylene dibromide<br>(1,2-Dibromoethane) | 106-93-4 | Group 2A | Reasonably<br>Anticipated | A3    | X    | A3     |

**Mutagenic Effects** No information available

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** Respiratory system

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** No information available

### **Endocrine Disruptor Information**

| Component                              | EU - Endocrine Disruptors<br>Candidate List | EU - Endocrine Disruptors -<br>Evaluated Substances | Japan - Endocrine Disruptor<br>Information |
|--|---|---|--|
| Ethylene dibromide (1,2-Dibromoethane) | Group III Chemical                          | Not applicable                                      | Not applicable                             |

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

## 12. Ecological information

### Ecotoxicity

| Component                                 | Freshwater Algae | Freshwater Fish                                 | Microtox              | Water Flea |
|---|------------------|---|-----------------------|------------|
| Ethylene dibromide<br>(1,2-Dibromoethane) | Not listed       | 18 mg/L LC50 48 h 27.6 -<br>37.4 mg/L LC50 96 h | EC50 = 735 mg/L 5 min | Not listed |

**Persistence and Degradability** No information available  
**Bioaccumulation/ Accumulation** No information available.

**Mobility**

| Component                              | log Pow |
|--|---------|
| Ethylene dibromide (1,2-Dibromoethane) | 1.93    |

**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.

| Component   | RCRA - U Series Wastes | RCRA - P Series Wastes |
|---|------------------------|------------------------|
| Ethylene dibromide (1,2-Dibromoethane) - 106-93-4 | U067                   | -                      |

**14. Transport information**

**DOT** Not regulated  
**TDG** Not regulated  
**IATA**  
**UN-No** 1605  
**Proper Shipping Name** ETHYLENE DIBROMIDE, FORBIDDEN FOR IATA TRANSPORT  
**Hazard Class** 6.1  
**Packing Group** I  
**IMDG/IMO**  
**UN-No** 1605  
**Proper Shipping Name** ETHYLENE DIBROMIDE  
**Hazard Class** 6.1  
**Packing Group** I

**15. Regulatory information**

**International Inventories**

| Component                              | TSCA | DSL | NDSL | EINECS    | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|--|------|-----|------|-----------|--------|-----|-------|------|------|-------|------|
| Ethylene dibromide (1,2-Dibromoethane) | X    | X   | -    | 203-444-5 | -      |     | X     | X    | X    | X     | X    |

**Legend:**

- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

**U.S. Federal Regulations**

**TSCA 12(b)** Not applicable

**SARA 313**

| Component                              | CAS-No   | Weight % | SARA 313 - Threshold Values % |
|--|----------|----------|-------------------------------|
| Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 99       | 0.1                           |

**SARA 311/312 Hazardous Categorization**

|                                   |     |
|-----------------------------------|-----|
| Acute Health Hazard               | Yes |
| Chronic Health Hazard             | Yes |
| Fire Hazard                       | No  |
| Sudden Release of Pressure Hazard | No  |
| Reactive Hazard                   | No  |

**Clean Water Act**

| Component                              | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|--|----------------------------|-----------------------------|------------------------|---------------------------|
| Ethylene dibromide (1,2-Dibromoethane) | X                          | 1 lb                        | -                      | -                         |

**Clean Air Act**

| Component                              | HAPS Data | Class 1 Ozone Depletors | Class 2 Ozone Depletors |
|--|-----------|-------------------------|-------------------------|
| Ethylene dibromide (1,2-Dibromoethane) | 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)

| Component                              | Hazardous Substances RQs | CERCLA EHS RQs |
|--|--------------------------|----------------|
| Ethylene dibromide (1,2-Dibromoethane) | 1 lb                     | -              |

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

| Component                              | CAS-No   | California Prop. 65                              | Prop 65 NSRL           | Category                    |
|--|----------|--|------------------------|-----------------------------|
| Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | Carcinogen<br>Developmental<br>Male Reproductive | 0.2 µg/day<br>3 µg/day | Developmental<br>Carcinogen |

**State Right-to-Know**

| Component                              | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--|---------------|------------|--------------|----------|--------------|
| Ethylene dibromide (1,2-Dibromoethane) | X             | X          | X            | X        | X            |

**U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| 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** No information available

**Canada**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

**WHMIS Hazard Class** D1A Very toxic materials  
D2A Very toxic materials

**16. Other information**

**Prepared By** Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

**Revision Date** 10-Feb-2015  
**Print Date** 10-Feb-2015  
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

**Disclaimer**

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

**End of SDS**