



SAFETY DATA SHEET

Revision Date 01-May-2012

Revision Number 4

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description: 1,2-Dibromoethane
Cat No. 112790000; 112790010; 112790025; 112790100; 112790250; 112795000
Synonyms EDB; Ethylene dibromide

Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
Janssen Pharmaceuticaalaa 3a
2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01
For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99

Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300

CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Acute oral toxicity	Category 3
Acute dermal toxicity	Category 3
Acute Inhalation Toxicity - Vapors	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
Chronic aquatic toxicity	Category 2

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s)

T - Toxic

R-phrases(s)

N - Dangerous for the environment

Risk Combination Phrases

R45 - May cause cancer

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

SECTION 2. HAZARDS IDENTIFICATION**Label Elements****Signal Word****Danger****Hazard Statements**

H319 - Causes serious eye irritation
 H315 - Causes skin irritation
 H350 - May cause cancer
 H411 - Toxic to aquatic life with long lasting effects
 H311 - Toxic in contact with skin
 H331 - Toxic if inhaled
 H335 - May cause respiratory irritation
 H301 - Toxic if swallowed

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
 P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water
 P308 + P313 - IF exposed or concerned: Get medical advice/ attention
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
 P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
 P273 - Avoid release to the environment
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	Weight %	CAS-No	DSD Classification - 67/548/EEC	CLP Classification - Regulation (EC) No 1272/2008	REACH No.
Ethylene dibromide (1,2-Dibromoethane) 106-93-4	EEC No. 203-444-5	99	106-93-4	T; R23/24/25 Xi; R36/37/38 Carc.Cat.2; R45 N; R51-53	Acute Tox. 3 (H301) Acute Tox. 3 (H311) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Carc. 1B (H350) STOT SE 3 (H335) Aquatic Chronic 2 (H411)	-

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES**Description of 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.

Ingestion

Call a physician immediately. Clean mouth with water.

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.

Notes to Physician

Treat symptomatically

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO₂). Dry chemical. chemical foam.

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors

Advice for fire-fighters

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

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Environmental precautions

Prevent further leakage or spillage if safe to do so

Methods and material for containment and cleaning up

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

SECTION 7. HANDLING AND STORAGE**Precautions for Safe 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.

Conditions for safe storage, including any incompatibilities

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

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Component

Ethylene dibromide
(1,2-Dibromoethane)

European Union	The United Kingdom	France	Belgium	Spain
	STEL: 1.5 ppm 15 min STEL: 11.7 mg/m ³ 15 min TWA: 0.5 ppm 8 hr TWA: 3.9 mg/m ³ 8 hr Skin		Huid	TWA / VLA-ED: 0.5 ppm (8 horas) TWA / VLA-ED: 3.9 mg/m ³ (8 horas) Piel

Component

Ethylene dibromide
(1,2-Dibromoethane)

Italy	Germany	Portugal	The Netherlands	Finland
	Haut	Pele	TWA: 0.002 mg/m ³ 8 uren	TWA: 0.1 ppm 8 tunteina TWA: 0.78 mg/m ³ 8 tunteina Skin

Component

Ethylene dibromide
(1,2-Dibromoethane)

Austria	Denmark	Switzerland	Poland	Norway
STEL: 0.4 ppm 15 Minuten STEL: 3.2 mg/m ³ 15 Minuten Skin	TWA: 0.1 ppm 8 timer TWA: 1 mg/m ³ 8 timer Skin	Skin MAK: 0.1 ppm 8 Stunden MAK: 0.8 mg/m ³ 8 Stunden	TWA: 0.5 mg/m ³ 8 godzinach Skóra	TWA: 0.1 ppm 8 timer TWA: 1 mg/m ³ 8 timer STEL: 0.3 ppm 15 minutter. STEL: 3 mg/m ³ 15 minutter.

Component

Ethylene dibromide
(1,2-Dibromoethane)

Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
	Skin Notation TWA: 0.5 ppm 8 satima. TWA: 3.9 mg/m ³ 8 satima.	TWA: 0.5 ppm 8 hr. TWA: 4 mg/m ³ 8 hr. Skin		TWA: 1 mg/m ³ 8 hodinách. Potential for cutaneous absorption Ceiling: 2 mg/m ³

Component

Ethylene dibromide
(1,2-Dibromoethane)

Estonia	Gibraltar	Greece	Hungary	Iceland
		skin - potential for cutaneous absorption TWA: 0.5 ppm TWA: 4 mg/m ³	potential for cutaneous absorption Ceiling: 0.8 mg/m ³	TWA: 0.1 ppm 8 klukkustundum. TWA: 1 mg/m ³ 8 klukkustundum. Skin notation Ceiling: 0.2 ppm Ceiling: 2 mg/m ³

Component

Ethylene dibromide
(1,2-Dibromoethane)

Latvia	Lithuania	Luxembourg	Malta	Romania
				Skin notation TWA: 0.1 ppm 8 ore TWA: 0.80 mg/m ³ 8 ore STEL: 0.3 ppm 15 minute STEL: 2 mg/m ³ 15 minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Ethylene dibromide (1,2-Dibromoethane)		TWA: 0.1 ppm 8 hodinách TWA: 0.8 mg/m ³ 8 hodinách Potential for cutaneous absorption STEL: 0.5 ppm 15 minútach STEL: 4 mg/m ³ 15 minútach	TWA: 0.1 ppm 8 urah TWA: 0.8 mg/m ³ 8 urah Potential for cutaneous absorption STEL: 0.4 ppm 15 minutah STEL: 3.2 mg/m ³ 15 minutah		

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL)

No information available.

Predicted No Effect Concentration (PNEC)

No information available.

Exposure controls**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 Protection**

Goggles

Hand Protection

Protective gloves

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

Environmental exposure controls

No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**Physical State**

Liquid

Appearance

Colorless

Odor

sweet

pH

No information available.

Vapor Pressure

11 mmHg @ 25 °C

Vapor Density

(Air = 1.0)

Boiling Point/Range

131 - 132°C / 267.8 - 269.6°F

Melting Point/Range

9 - 10°C / 48.2 - 50°F

Decomposition temperature

> 340°C

Flash Point

> 104°C / > 219.2°F

Autoignition Temperature

No information available.

Water Solubility

4 g/L (20°C)

Specific Gravity

2.173

Molecular Formula

C₂ H₄ Br₂

Molecular Weight

187.86

SECTION 10. STABILITY AND REACTIVITY**Reactivity****Chemical Stability**

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

Possibility of Hazardous Reactions

Hazardous Polymerization No information available.
Hazardous Reactions No information available.

Conditions to Avoid

Exposure to light, Incompatible products, Exposure to moisture.

Incompatible Materials

Strong bases, Ammonia, Metals.

Hazardous Decomposition Products

Carbon monoxide (CO). Carbon dioxide (CO₂). Hydrogen halides.

SECTION 11. TOXICOLOGICAL INFORMATION**Information on Toxicological Effects****Acute Toxicity**

Product Information No acute toxicity information is available for this product

Component Information**Component**

Ethylene dibromide (1,2-Dibromoethane)

LD50 Oral	LD50 Dermal	LC50 Inhalation
108 mg/kg (Rat)	300 mg/kg (Rat)	

Chronic Toxicity**Carcinogenicity****Component**

Ethylene dibromide (1,2-Dibromoethane)

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

IARC	UK
Group 2A	

Sensitization**Mutagenic Effects****Reproductive Effects****Developmental Effects****Target Organs****Other Adverse Effects****Endocrine Disruptor Information**

No information available.

No information available.

No information available.

No information available.

No information available.

See actual entry in RTECS for complete information

Component

Ethylene dibromide (1,2-Dibromoethane)

EU - Endocrine Disruptors Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
Group III Chemical		

SECTION 12. ECOLOGICAL INFORMATION**Toxicity****Ecotoxicity effects**

SECTION 12. ECOLOGICAL INFORMATION

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethylene dibromide (1,2-Dibromoethane)		27.6-37.4 mg/L LC50 96 h 18 mg/L LC50 48 h	EC50 = 735 mg/L 5 min	

Persistence and degradability

Not readily biodegradable

Bioaccumulative potential

No information available.

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

Mobility in soil**Results of PBT and vPvB assessment****Other adverse effects**

No information available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods**Waste from Residues / Unused Products**

Dispose of in accordance with local regulations

Contaminated Packaging

Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO

UN-No	1605
Hazard Class	6.1
Packing Group	I
Proper Shipping Name	ETHYLENE DIBROMIDE

ADR

UN-No	1605
Hazard Class	6.1
Packing Group	I
Proper Shipping Name	ETHYLENE DIBROMIDE

IATA

UN-No	1605
Hazard Class	6.1
Packing Group	I
Proper Shipping Name	ETHYLENE DIBROMIDE, FORBIDDEN FOR IATA TRANSPORT

SECTION 15. REGULATORY INFORMATION

SECTION 15. REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****International Inventories**

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

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Existing and Evaluated Chemical Substances

Chemical Safety Assessment**SECTION 16. OTHER INFORMATION****Full text of R-phrases referred to under sections 2 and 3**

R45 - May cause cancer

R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed

R36/37/38 - Irritating to eyes, respiratory system and skin

R51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Revision Date 01-May-2012

Revision Summary

Reason for revision (M)SDS sections updated, 14.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

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 Safety Data Sheet