

Material Safety Data Sheet

Version 5.0
Revision Date 03/26/2013
Print Date 11/01/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Valproic acid

Product Number : PHR1061

Brand : Fluka

Supplier : Sigma-Aldrich
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USA

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Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Harmful by ingestion., Irritant

Target Organs

Liver, Nerves., Blood

GHS Classification

Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statement(s)

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification

Health hazard: 2
Chronic Health Hazard: *
Flammability: 1

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 1

Reactivity Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.

Skin Harmful if absorbed through skin. Causes skin irritation.

Eyes Causes eye irritation.

Ingestion Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : $C_8H_{16}O_2$

Molecular Weight : 144.21 g/mol

Component		Concentration
Valproic acid		
CAS-No.	99-66-1	-
EC-No.	202-777-3	

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

Do not let product enter drains.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form	liquid
Colour	no data available

Safety data

pH	no data available
Melting point/freezing point	no data available
Boiling point	220 °C (428 °F) at 1,013 hPa (760 mmHg)
Flash point	111 °C (232 °F) - closed cup
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	0.907 g/cm ³
Water solubility	2 g/l - slightly soluble
Partition coefficient:	log Pow: 2.75

n-octanol/water	
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available

Conditions to avoid

no data available

Materials to avoid

Bases, Oxidizing agents, Reducing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50

LD50 Oral - rat - 670 mg/kg

Remarks: Behavioral: Somnolence (general depressed activity). Diarrhoea

Inhalation LC50

Dermal LD50

no data available

Other information on acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

Reproductive toxicity - rabbit - Oral

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Specific Developmental Abnormalities: Central nervous system.

Reproductive toxicity - rat - Oral

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Testes, epididymis, sperm duct. Paternal Effects: Prostate, seminal vesicle, Cowper's gland, accessory glands.

Reproductive toxicity - rat - Oral

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Reproductive toxicity - rat - Oral

Effects on Newborn: Viability index (e.g., # alive at day 4 per # born alive). Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Reproductive toxicity - mouse - Intraperitoneal

Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetal death.

no data available

Teratogenicity

Developmental Toxicity - rabbit - Oral

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Developmental Toxicity - rabbit - Oral

Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system.

Developmental Toxicity - mouse - Subcutaneous

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Effects on Embryo or Fetus: Fetal death.

Specific Developmental Abnormalities: Central nervous system.

Developmental Toxicity - mouse - Intraperitoneal

Specific Developmental Abnormalities: Central nervous system.

Developmental Toxicity - rat - Oral

Specific Developmental Abnormalities: Central nervous system.

Developmental Toxicity - rat - Oral

Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system. Specific Developmental Abnormalities: Urogenital system.

Developmental Toxicity - Human - female - Oral

Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system.

Developmental Toxicity - Human - female - Oral

Specific Developmental Abnormalities: Central nervous system.

Developmental Toxicity - Human - female - Unreported

Specific Developmental Abnormalities: Musculoskeletal system.

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

Aspiration hazard

no data available

Potential health effects

Inhalation

May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion

Harmful if swallowed.

Skin

Harmful if absorbed through skin. Causes skin irritation.

Eyes

Causes eye irritation.

Signs and Symptoms of Exposure

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting

Synergistic effects

no data available

Additional Information

RTECS: YV7875000

12. ECOLOGICAL INFORMATION**Toxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION**OSHA Hazards**

Target Organ Effect, Harmful by ingestion., Irritant

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

CAS-No.

Revision Date

Valproic acid	99-66-1	1993-04-24
Pennsylvania Right To Know Components		
Valproic acid	CAS-No. 99-66-1	Revision Date 1993-04-24
New Jersey Right To Know Components		
Valproic acid	CAS-No. 99-66-1	Revision Date 1993-04-24
California Prop. 65 Components		
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.	CAS-No. 99-66-1	Revision Date 2007-09-28
Valproic acid		

16. OTHER INFORMATION

Further information

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