

SIGMA-ALDRICH**Material Safety Data Sheet**Version 3.0
Revision Date 01/03/2009
Print Date 10/13/2010**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Melting point standard 79-81°C

Product Number : 01422
Brand : Fluka

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Naphthalene

Formula : C₁₀H₈
Molecular Weight : 128.17 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Naphthalene			
91-20-3	202-049-5	601-052-00-2	-

3. HAZARDS IDENTIFICATION**Emergency Overview****OSHA Hazards**

Flammable Solid, Carcinogen, Highly toxic by inhalation, Toxic by ingestion, Irritant

Target Organs

Eyes, Blood, Kidney, Lungs, Central nervous system, Liver, Heart

HMIS Classification

Health Hazard: 4
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 2

NFPA Rating

Health Hazard: 4
Fire: 2
Reactivity Hazard: 2

Potential Health Effects

Inhalation
Skin
Eyes
Ingestion

May be fatal if inhaled. Causes respiratory tract irritation.
May be harmful if absorbed through skin. Causes skin irritation.
Causes eye irritation.
Toxic if swallowed.

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. FIRE-FIGHTING MEASURES

Flammable properties

Flash point 80.0 °C (176.0 °F) - closed cup

Ignition temperature 526 °C (979 °F)

Suitable extinguishing media

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

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Control	Update	Basis
------------	---------	-------	---------	--------	-------

			parameters		
Naphthalene	91-20-3	TWA	10 ppm 52 mg/m3	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)
Remarks	The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Refers to Appendix A -- Carcinogens. 1996 Adoption				
		STEL	15 ppm 79 mg/m3	1996-05-18	US. American Conference of Governmental and Industrial Hygienists Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004:Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)
	The agent (mixture , or exposure circumstance) is not classifiable as to its carcinogenicity to humans . Refers to Appendix A -- Carcinogens. 1996 Adoption				
		TWA	10 ppm 50 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		STEL	15 ppm 75 mg/m3	1989-03-01	US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A
		TWA	10 ppm 50 mg/m3	1993-06-30	US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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 solid

Safety data

pH no data available

Melting point 80 - 82 °C (176 - 180 °F)
79 - 81 °C (174 - 178 °F)

Boiling point 218 °C (424 °F)

Flash point 80.0 °C (176.0 °F) - closed cup

Ignition temperature 526 °C (979 °F)

Lower explosion limit 0.9 %(V)

Upper explosion limit 5.9 %(V)

Vapour pressure 1.3 hPa (1.0 mmHg) at 53.0 °C (127.4 °F)
0.04 hPa (0.03 mmHg) at 25.0 °C (77.0 °F)

Water solubility no data available

Partition coefficient: log Pow: 3.30
n-octanol/water

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 490.0 mg/kg

LC50 Inhalation - rat - 1 h - > 340.0 mg/m³

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Lacrimation. Behavioral:Somnolence (general depressed activity).

LD50 Dermal - rabbit - 20,000 mg/kg

Irritation and corrosion

Eyes - rabbit - Mild eye irritation

Sensitisation

no data available

Chronic exposure

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

IARC: Group 2B - The agent (mixture) is possibly carcinogenic to humans.IARC Monograph (Vol. 82) (12-19 February 2002) Some Traditional Herbal Medicines, Some Mycotoxins, Naphthalene and Styrene (Naphthalene)

Group 2B - The agent (mixture) is possibly carcinogenic to humans. (Naphthalene)

NTP: Reasonably anticipated to be human carcinogens. (Naphthalene)

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.

Signs and Symptoms of Exposure

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., Naphthalene is retinotoxic and systemic absorption of its vapors above 15ppm, may result in:, cataracts, optic neuritis, corneal injury, Eye irritation, Ingestion may provoke the following symptoms:, hemolytic anemia, hemoglobinuria, Nausea, Headache, Vomiting, Gastrointestinal disturbance, Convulsions, anemia, Kidney injury may occur., Seizures., Coma.

Potential Health Effects

Inhalation	May be fatal if inhaled. Causes respiratory tract irritation.
Skin	May be harmful if absorbed through skin. Causes skin irritation.
Eyes	Causes eye irritation.
Ingestion	Toxic if swallowed.
Target Organs	Eyes, Blood, Kidney, Lungs, Central nervous system, Liver, Heart,

Additional Information

RTECS: QJ0525000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Bioaccumulation	Oncorhynchus mykiss (rainbow trout) - 28 d Bioconcentration factor (BCF): 13,000
-----------------	---

Ecotoxicity effects

Toxicity to fish	LC50 - No information available. - 0.12 mg/l - 96 h LC50 - Oncorhynchus mykiss (rainbow trout) - 0.90 - 9.80 mg/l - 96 h
------------------	---

LC50 - Pimephales promelas (fathead minnow) - 1.00 - 6.50 mg/l - 96 h

NOEC - other fish - 1.8 mg/l - 3 d

LOEC - other fish - 3.2 mg/l - 3 d

Toxicity to daphnia
and other aquatic
invertebrates.

EC50 - Daphnia magna (Water flea) - 1.00 - 3.40 mg/l - 48 h

Toxicity to algae

EC50 - No information available. - 33.00 mg/l - 24 h

Further information on ecology

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 1334 Class: 4.1

Packing group: III

Proper shipping name: Naphthalene, crude

Marine pollutant: No

Poison Inhalation Hazard: No

IMDG

UN-Number: 1334 Class: 4.1

Packing group: III

EMS-No: F-A, S-G

Proper shipping name: NAPHTHALENE, CRUDE

Marine pollutant: No

IATA

UN-Number: 1334 Class: 4.1

Packing group: III

Proper shipping name: Naphthalene, crude

15. REGULATORY INFORMATION

OSHA Hazards

Flammable Solid, Carcinogen, Highly toxic by inhalation, Toxic by ingestion, Irritant

DSL Status

All components of this product are on the Canadian DSL list.

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

Naphthalene

CAS-No.
91-20-3

Revision Date
1987-01-01

SARA 311/312 Hazards

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

Naphthalene

CAS-No.
91-20-3Revision Date
1987-01-01**Pennsylvania Right To Know Components**

Naphthalene

CAS-No.
91-20-3Revision Date
1987-01-01**New Jersey Right To Know Components**

Naphthalene

CAS-No.
91-20-3Revision Date
1987-01-01**California Prop. 65 Components**

WARNING! This product contains a chemical known in the State of California to cause cancer.
Naphthalene

CAS-No.
91-20-3Revision Date
2005-09-12**16. OTHER INFORMATION****Further information**

Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.