

MATERIAL SAFETY DATA SHEET

Naphthalene

SECTION 1 . Product and Company Identification

Product Name and Synonym: Naphthalene
Product Code: N2101
Material Uses:
Manufacturer: Science Stuff
1104 Newport Ave
Austin, TX 78753
(512) 837-6020
Entry Date : 6/12/2013
Print Date: 6/12/2013
24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

| | |
|---------------|---|
| Health: | 2 |
| Flammability: | 2 |
| Reactivity: | 0 |

Hazard Rating:
Least Slight Moderate High Extreme
0 1 2 3 4
NA=Not Applicable NE=Not Established

SECTION 2 HAZARD IDENTIFICATION

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

Physical state: Solid. [Crystals.]
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview:

WARNING!
CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
HARMFUL IF INHALED OR ABSORBED THROUGH THE SKIN OR SWALLOWED
MAY CAUSE DAMAGE TO THE FOLLOWING ORGANS:
BLOOD, KIDNEYS, LIVER, SKIN, EYES, CENTRAL NERVOUS SYSTEM
SUSPECT CANCER HAZARD - MAY CAUSE CANCER
FLAMMABLE SOLID

Toxic to aquatic organisms, may cause long-term adverse effect in the aquatic environment.

WARNING: this product contains a chemical known to the State of California to cause cancer.

Do not ingest. Do not get in eyes or on skin or clothing.
Keep away from heat, sparks and flame. Keep container closed. Keep container tightly closed and sealed until ready for use. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:

Eyes: Irritating to eyes.
Skin: Toxic in contact with skin. Irritating to skin.
Inhalation: Toxic by inhalation. Irritating to respiratory system.
Ingestion: Toxic if swallowed.
Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity: No known significant effects or critical hazards.
Teratogenicity/ Reproductive toxicity: No known significant effects or critical hazards.

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Developmental effects: No known significant effects or critical hazards.
Fertility effects: No known significant effects or critical hazards.
Target organs: May cause damage to the following organs: blood, kidneys, liver, skin, eyes, central nervous system (CNS)
Medical conditions aggravated by over-exposure:
Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product

SECTION 3 MIXTURE COMPONENTS

| SARA 313 | Component | CAS Number | Percent Comp. | Dimension | Exposure Limits |
|-------------------------------------|-------------|--------------|---------------|-----------|-----------------|
| <input checked="" type="checkbox"/> | Naphthalene | CAS# 91-20-3 | 100% | W/W | OSHA PEL 70 ppm |

SECTION 4 FIRST AID MEASURES

Keep away from heat and ignition sources. Harmful if swallowed. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.

FIRST AID: SKIN: Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Water spray, Carbon dioxide, dry chemical
Fire / Explosion Hazards: COMBUSTIBLE!! Vapor/air mixtures are EXPLOSIVE! Vapors can flow along surfaces to distant ignition sources and flash back.
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Eliminate Ignition Sources. ventilate area of leak or spill. wear protective clothing. sweep up or scoop using non sparking tools.

Personal precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personal from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up: Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

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SECTION 7 HANDLING AND STORAGE

Store in a cool dry well ventilated area. Keep away from heat and flame. Do not get in eyes, on skin, or on clothing.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: Organic Vapor Cartridge

Ventilation

Local Exhaust

Mechanical

Protective Gloves: vinyl or rubber gloves

Eye Protection: goggles

Other Protective Equipment: Use safe laboratory handling procedures.

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ACGIH TLV (United States, 1/2008).

TWA: 10 ppm 8 hour(s)

TWA: 52 mg/m³ 8 hour(s)

STEL: 15 ppm 15 minute(s)

STEL: 79 mg/m³ 15 minute(s)

OSHA PEL 1989 (United States, 3/1989)

TWA: 10 ppm 8 hour(s)

TWA: 52 mg/m³ 8 hour(s)

STEL: 15 ppm 15 minute(s)

STEL: 79 mg/m³ 15 minute(s)

NIOSH REL (United States, 6/2008)

TWA: 10 ppm 8 hour(s)

TWA: 52 mg/m³ 8 hour(s)

STEL: 15 ppm 15 minute(s)

STEL: 79 mg/m³ 15 minute(s)

OSHA PEL (United States, 11/2006)

TWA: 10 ppm 8 hour(s)

TWA: 52 mg/m³ 8 hour(s)

Consult local authorities for acceptable exposure limits.

Engineering measures: Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended:

safety glasses with side-shields,

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended:

lab coat and gloves

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is

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necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental exposure controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------|-------------------------------|-----------------------------|---------------------------|
| Melting Point: | 80°C | Percent Volatile by Volume: | information not available |
| Boiling Point: | 218°C | Evaporation Rate | information not available |
| Vapor Pressure: | 1 | Evaporation Standard | not available |
| Vapor Density: | 4.4(air=1) | Auto Ignition Temp | 526°C |
| Solubility in Water: | insoluble | Lower Flamm. Limit in Air | 0.9 |
| Appearance /Odors: | whit crystals,moth ball odor. | Upper Flamm. Limit in Air | 5.9 |
| Flash Point: | 80°C | | |
| Specific Gravity: | 1.2 | | |

SECTION 10 STABILITY AND REACTIVITY INFORMATION

| | |
|-----------------------------------|--|
| Stability: | Stable |
| Conditions to Avoid: | Avoid contact with heat, sparks, flames, or other sources of ignition. |
| Materials to Avoid: | Strong oxidizing agents, alkalis,acids |
| Hazardous Decomposition Products: | Carbon dioxide, carbon monoxide |
| Hazardous polymerization: | Will Not Occur |
| Conditions to Avoid: | None known |

SECTION 11 Toxicological Information

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LD50 Dermal Rabbit >20 g/kg
LD50 Dermal Rat >2500 mg/kg
LD50 Oral Rat 490 mg/kg
LD50 Oral Mouse 316 mg/kg
LD50 Guinea pig 1200 mg/kg
LD50 Unreported Rat 1250 mg/kg
LDLo Oral Child 100 mg/kg

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LDLo Oral Dog 400 mg/kg
TDLo Intraperitoneal Rat 100 mg/kg
LC50 Inhalation Vapor Rat 340 mg/m3

Carcinogenic effects: May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenic effects: No known significant effects or critical hazards

Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

SECTION 12 Ecological Information

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Acute EC50 2.55 mg/L Daphnia 48 hours
Acute EC50 2.194 mg/L Daphnia 48 hours
Acute EC50 1.96 mg/L Fresh water Daphnia - Water flea - Daphnia magna - <24 hours
Acute EC50 1.6 mg/L Daphnia 48 hours
Acute EC50 2550 to 3400 ug/L Fresh water Daphnia - Water flea - Daphnia magna - Neonate - <=24 hours 48 hours
Acute EC50 2194 to 2459 ug/L Fresh water Daphnia - Water flea - Daphnia magna - <24 hours 48 hours
Acute EC50 1600 to 3400 ug/L Fresh water Daphnia - Water flea - Daphnia magna - Neonate - <=24 hours
Acute EC50 6470 to 9140 ug/L Fresh water Crustaceans - Brine shrimp - Artemia sp. - Nauplii 48 hours
Acute EC50 5960 to 9190 ug/L Fresh water Crustaceans - Brine shrimp - Artemia sp. - Nauplii 48 hours
Acute EC50 4663 ug/L Fresh water Daphnia - Water flea - Daphnia pulex - Neonate - <24 hours 48 hours
Acute EC50 4660 ug/L Fresh water Daphnia - Water flea - Daphnia pulex 48 hours
Acute LC50 2920 to 3890 ug/L Fresh water Daphnia - Water flea - Daphnia pulex - Neonate 48 hours
Acute LC50 1.8 mg/L Fish 96 hours
Acute LC50 2350 ug/L Marine water Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio 48 hours
Acute LC50 1.6 mg/L Fish 96 hours
Acute LC50 2160 to 2560 ug/L Fresh water Daphnia - Water flea - Daphnia magna - Juvenile (Fledgling, Hatchling, Weanling) - 24 hours 48 hours
Acute LC50 2000 to 4000 ug/L Fresh water Crustaceans - Shrimp - Macrobrachium kistnensis 48 hours
Acute LC50 1 mg/L Daphnia 96 hours
Acute LC50 640 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 553 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 520 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 470 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 438 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 372 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 315 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 313 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 213 ug/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - 1 days 96 hours
Acute LC50 4000 ug/L Fresh water Crustaceans - Shrimp - Macrobrachium kistnensis - Intermolt - 40 mm 48 hours
Acute LC50 12500 to 20500 ug/L Fresh water Crustaceans - Brine shrimp - Artemia sp. - Nauplii 48 hours
Acute LC50 9820 to 13100 ug/L Fresh water Crustaceans - Brine shrimp - Artemia sp. - Nauplii 48 hours
Acute LC50 0.51 mg/L Fresh water Fish - Crimson -spotted rainbowfish - Melanotaenia fluviatilis - LARVAE - <=1 days 96 hours
Acute LC50 2.6 to 2.89 ppm Marine water Crustaceans - Daggerblade grass shrimp - Palaemonetes pugio - Adult 48 hours
Acute LC50 4000 to 6000 ug/L Fresh water Crustaceans - Shrimp - Macrobrachium kistnensis - Intermolt - 40 mm 48 hours
Acute LC50 3400 ug/L Fresh water Daphnia - Water flea - Daphnia magna - 24 hours 48 hours
Acute LC50 4100 ug/L Fresh water Daphnia - Water flea - Daphnia magna - 24 hours 48 hours

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Environmental effects : No known significant effects or critical hazards.
Other adverse effects : No known significant effects or critical hazards.

SECTION 13 Disposal Considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14 Transport Information

DOT Classification: Naphthalene Refined, 4.1, UN1334, PG III

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States

HCS Classification:

Toxic material

Irritating material

Carcinogen

U.S. Federal regulations:

United States inventory (TSCA 8b): listed

TSCA (Toxic Substance Control Act): This product is listed on the TSCA Inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notifications: No products were found.

SARA 302/304/311/312 hazardous chemicals: Naphthalene

SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Naphthalene

Fire Hazard:, Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Water Act (CWA) 307: No products were found

Clean Water Act (CWA) 311: No products were found

Clean Air Act (CAA) 112 accidental release prevention: No products were found

Clean Air Act (CAA) 112 regulated flammable substance: No products were found

Clean Air Act (CAA) 112 regulated toxic substance: No products were found.

DEA List I Chemicals : not listed

(Precursor Chemicals)

DEA List II Chemicals : not listed

(essential Chemicals)

SARA 313

Form R – Reporting Requirements: Naphthalene

CAS number : 91-20-3 Concentration : 100

Supplier notification : Naphthalene

CAS number : 91-20-3 Concentration : 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

Massachusetts Substance : This material is listed.

New Jersey Hazardous Substances : This material is listed.

New York Acutely Hazardous Substances : This material is listed.

Pennsylvania RTK Hazardous Substances : This material is listed.

California Prop. 65

WARNING: this product contains a chemical known to the State of California to cause cancer.

Ingredient name: Naphthalene

Cancer: Yes Reproductive: No No significant risk level: Yes Maximum acceptable

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dosage level: No

Canada
WHMIS (Canada) :

Class B-4: Flammable solid.
Class D-2B: Material causing other toxic effects (Toxic)

Canadian lists :
CEPA Toxic Substance: This material is not listed.
Canadian ARET: This material is not listed.
Canadian NPRI: This material is listed.
Alberta Designated Substances: This material is not listed.
Ontario Designated Substances: This material is not listed.
Quebec Designated Substances: This material is not listed.

CEPA DSL/ CEPA NDSL : CEPA DSL:
This material is listed or exempted.
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

SECTION 16 Additional Information

Flammability

Health

Reactivity

Revisions

NFPA

0.1

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.