

## Material Safety Data Sheet

### Naphthalene Flakes

#### Section 1 - Product Identification

Product name: Naphthalene  
Product Number:  
Brand: SPECTRUM LABORATORY PRODUCTS INC.  
Supplier: SPECTRUM LABORATORY PRODUCTS INC.  
14422 S. SAN PEDRO STREET  
GARDENA, CA 90248  
In case of emergency: Call + 310 516-8000

#### Section 2 – Composition/Information on Ingredients

Synonyms : Moth Balls; Moth Flakes; Naphthalin; Naphthaline; Naphthene; Tar camphor; White tar  
Formula :  $C_{10}H_8$   
Molecular Weight 128.17 g/mol

Component	Classification	Concentration
Naphthalene		
CAS-No. 91-20-3	ORAL (LD50): Acute: 490 mg/kg [Rat]. 316 mg/kg [Mouse]. 1200 mg/kg [Guinea pig]. DERMAL (LD50): Acute: >20000 mg/kg [Rabbit]. >2500 mg/kg [Rat].	100 %

#### Section 3 – Hazards Identification

##### Potential Acute Health Effects

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion. Slightly hazardous in case of skin contact (permeator), of inhalation. Severe over-exposure can result in death.

##### Potential Chronic Health Effects

**CARCINOGENIC EFFECTS:** Classified 2B (Possible for human.) by IARC. A4 (Not classifiable for human) by ACGIH.

**MUTAGENIC EFFECTS:** Not available.

**TERATOGENIC EFFECTS:** Not available.

**DEVELOPMENTAL TOXICITY:** Not available.

The substance may be toxic to blood, kidneys, liver, skin. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

#### Section 4 – First-Aid Measures

##### Eye contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. WARM water MUST be used. Get medical attention.

**Skin contact:**

In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

**Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation.

**WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

**Ingestion:**

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion:**

Not available.

## Section 5 – Fire and Explosion Data

**Flammability of the Product:** Flammable

**Auto-Ignition Temperature:** 526°C (978.8°F)

**Flash Points:** CLOSED CUP: 79°C (174.2°F). OPEN CUP: 88°C (190.4° F).

**Flammable Limits:** LOWER: 0.9% UPPER: 5.9%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:** Flammable in presence of open flames and sparks, of heat.

**Explosion Hazards in Presence of Various Substances:** Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

**Special Remarks on Fire Hazards:** May form explosive mixtures with air. Naphthalene can accumulate static electrical charges and may ignite its own vapors.

**Special Remarks on Explosion Hazards:** Naphthalene can react explosively with dinitrogen pentaoxide and chromic anhydride. Naphthalene dust and vapors may form explosive mixtures when mixed with air due to its flammability properties

## Section 6 – Accidental Release Measures

**Small Spill**

Use appropriate tools to put the spilled solid in a convenient waste disposal container

#### **Large Spill**

Flammable solid. Stop leak if without risk. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## **Section 7 – Handling and Storage**

#### **Precautions**

Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.

#### **Storage**

Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

## **Section 8 – Exposure Controls/Personal Protection**

#### **Engineering Controls**

Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

#### **Personal Protection**

Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

#### **Personal Protection in Case of a Large Spill**

Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be enough; consult a specialist BEFORE handling this product.

#### **Exposure Limits**

TWA: 10 (ppm) from OSHA (PEL) [United States] TWA: 50 from OSHA (PEL) [United States] STEL: 15 from NIOSH STEL: 75 (mg/m<sup>3</sup>) from NIOSH TWA: 10 STEL: 15 (ppm) from ACGIH (TLV) [United States] TWA: 10 STEL: 15 (ppm) [Canada] TWA: 52 STEL: 79 (mg/m<sup>3</sup>) [Canada] TWA: 10 STEL: 15 (ppm) [United Kingdom (UK)]

Consult local authorities for acceptable exposure limits.

## **Section 9 – Physical and Chemical Properties**

**Physical state and appearance:** Solid (Crystalline solid)

**Molecular Weight:** 128.19 g/mole

**pH (1% soln/water):** Not available

**Boiling Point:** 218°C (424.4°F)

**Melting Point:** 80.2°C (176.4°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 1.162 (Water = 1)

**Vapor Pressure:** Not applicable.

**Vapor Density:** 4.42 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** 0.3 ppm

**Water/Oil Dist. Coeff.:** The product is more soluble in oil;  $\log(\text{oil/water}) = 3.3$

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, methanol, diethyl ether.

**Solubility:** Easily soluble in diethyl ether.

Partially soluble in methanol.

Very slightly soluble in cold water, hot water.

Very soluble in hydronaphthalenes, in fixed and volatile oils, 1,3-Dichloromethane.

Soluble in Ethylene Dichloride, alcohol, acetate, benzene, toluene, chloroform, carbon tetrachloride

Solubility in Water: 30 mg/ml

## Section 10 – Stability and Reactivity

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Heat, ignition sources (flames, sparks, static), incompatible materials

**Incompatibility with various substances:** Reactive with oxidizing agents.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:** It will react violently with chromic anhydride, aluminum chloride + benzoyl chloride. Naphthalene will volatilize at room temperature and emit a moth ball odor.

**Special Remarks on Corrosivity:** Special Remarks on Corrosivity

**Polymerization:** Will not occur.

## Section 11 – Toxicological Information

**Routes of Entry:** Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

**Toxicity to Animals:** WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 316 mg/kg [Mouse]. Acute dermal toxicity (LD50): >2500 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 340 1 hours [Rat]

**Chronic Effects on Humans:** CARCINOGENIC EFFECTS: Classified 2B (Possible for human.) by IARC. A4 (Not classifiable for human) by ACGIH. May cause damage to the following organs: blood, kidneys, liver, skin.

**Other Toxic Effects on Humans:** Hazardous in case of skin contact (irritant), of ingestion. Slightly hazardous in case of skin contact (permeator), of inhalation.

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** May affect genetic material (mutagenic). May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data. May cause cancer based on animal test data.

**Special Remarks on other Toxic Effects on Humans:** Acute Potential Health Effects: Skin: Causes skin irritation. It can be absorbed through the skin and cause systemic effects Eyes: Causes eye irritation. Direct contact may cause conjunctivitis,

corneal damage. Inhalation: Inhalation of vapor or dust may produce respiratory tract irritation and signs and symptoms similar due to ingestion or dermal absorption. Ingestion: Harmful if swallowed. It can cause flushing, nausea, abdominal cramps, vomiting, diarrhea, malaise. It can affect the blood (anemia, hemolysis), liver (hepatomegaly, hepatic necrosis, liver damage), kidneys (dysuria, albuminuria, oliguria, hemoglobinuria, hematuria, acute renal failure, kidney damage), behavior/central nervous system (CNS depression, headache, lethargy, somnolence, restlessness, convulsions, coma), cardiovascular system(hypotension, tachycardia). It can induce methemoglobinemia. It may cause hyperkalemia, metabolic acidosis, visual changes, skin tingling. Chronic Potential Health Effects: Ingestion: Prolonged or repeated ingestion may affect the blood (hemolytic anemia), spleen (spleenomegaly), liver (jaundice, liver damage), behavior/central nervous system (tremors, restlessness, hallucinations, extreme apprehension and cause cataracts. Skin: Prolonged or repeated contact may cause skin allergy.

## Section 12 – Ecological Information

**Ecotoxicity:** Ecotoxicity in water (LC50): 1.6 mg/l 96 hours [Trout].

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13 – Disposal Considerations

**Waste Disposal:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## Section 14 – Transport Information

**DOT Classification:** CLASS 4.1: Flammable solid.

**Identification:** : Naphthalene, refined UNNA: 1334 PG: III

**Special Provisions for Transport:** Not available

## Section 15 – Other Regulatory Information

**Federal and State Regulations:** California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Naphthalene California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Naphthalene Connecticut hazardous material survey.: Naphthalene New York release reporting list: Naphthalene Pennsylvania RTK: Naphthalene Minnesota: Naphthalene Massachusetts RTK: Naphthalene Massachusetts spill list: Naphthalene New Jersey: Naphthalene New Jersey spill list: Naphthalene Louisiana spill reporting: Naphthalene California Director's List of Hazardous Substances: Naphthalene TSCA 8(b) inventory: Naphthalene TSCA 4(a) proposed test rules: Naphthalene TSCA 8(a) PAIR: Naphthalene TSCA 8(d) H and S data reporting: Naphthalene: Effective date: 06/01/87; Sunset date:



06/01/97 SARA 313 toxic chemical notification and release reporting: Naphthalene CERCLA: Hazardous substances.:  
Naphthalene: 100 lbs. (45.36 kg)

**California Proposition 65 Warnings :** California Proposition 65 Warnings California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Naphthalene California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances (EINECS No. 202-049-5). Canada: Listed on Canadian Domestic Substance List (DSL). China: Listed on National Inventory. Japan: Listed on National Inventory (ENCS). Korea: Listed on National Inventory (KECI). Philippines: Listed on National Inventory (PICCS). Australia: Listed on AICS.

**Other Classification:**

**WHMIS (Canada):** CLASS B-4: Flammable solid. CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):** R22- Harmful if swallowed. R40- Limited evidence of a carcinogenic effect. R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label. S60- This material and its container must be disposed of as hazardous waste. S61- Avoid release to the environment. Refer to special instructions/Safety data sheets.

## Section 16 : Other Information

**MSDS Code:** N3045

**References:** Not available.

**Other Special Considerations:** Major Uses: in the manufacture of phthalic and anthranilic acids, naphthols, naphthylamines, sulfonic acid, synthetic resins, celluloid lampblack, smokeless powder, hydronaphthalenes, anthraquinone; ingredient of some moth repellants and toilet bowl deodorants; wood preservative; intestinal vermifuge.

**Validated by Sonia Owen on 7/18/2012.**

**Verified by Sonia Owen. Printed 7/18/2012.**

**CALL (310) 516-8000**

**Notice to Reader**

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.