

SAFETY DATA SHEET

Preparation Date: No data available

Revision Date: 04/29/2015

Revision Number: G1

Product identifier

Product code: N1005
Product Name: NAPHTHALENE

Other means of identification

Synonyms: Albocarbon
Camphor tar
Mighty 150
Mighty RD1
Moth balls
Moth flakes
Naphthalene (ACGIH:OSHA)
Naftalen (Polish)
Naphthalin
Naphthaline
Naphthene
NCI-C52904
RCRA waste number U165
Tar camphor
White tar

CAS #: 91-20-3
RTECS # QJ0525000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Preparation of anthraquinone; manufacturing of indigo; formation of perylene; production of salicylic acid; chemical intermediate; medication; ingredient of moth repellants and deodorants; wood preservatives; fumigant; production of plastics and vulcanizates.

Uses advised against No information available

Supplier: Spectrum Chemicals and Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2B
Carcinogenicity	Category 2
Flammable solids	Category 1

Label elements

Danger

Hazard statements

Harmful if swallowed
 Causes mild skin irritation
 Causes eye irritation
 Suspected of causing cancer
 Flammable solids



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

May be harmful if inhaled
 Very toxic to aquatic life with long lasting effects
 Very toxic to aquatic life

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/ .? /equipment
 Wear eye/face protection
 Wear protective gloves

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 In case of fire: Use CO₂, dry chemical, or foam to extinguish.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Naphthalene 91-20-3	91-20-3	100	*

4. FIRST AID MEASURES**First aid measures****General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact:

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops.

Eye Contact:

Flush eye with water for 15 minutes. Get medical attention.

Inhalation:

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

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed**Symptoms**

Causes eye irritation. Mild skin irritation. Harmful if swallowed.

Indication of any immediate medical attention and special treatment needed**Notes to Physician:**

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES**Extinguishing Media****Suitable Extinguishing Media:**

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

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical**Hazardous Combustion Products:**

Carbon oxides

Specific hazards:

Flammable
May form explosive mixtures with air
May be ignited by heat, sparks or flames
Product may ignite and burn at temperatures exceeding the flash point

Special Protective Actions for Firefighters

Specific Methods:	For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Use spark-proof tools and explosion-proof equipment.
Special Protective Equipment for Firefighters:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:	Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid breathing dust. Keep combustibles (wood, paper, oil, clothing, etc.) away from spilled material. Remove all sources of ignition. Pay attention to flashback. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.
<u>Environmental precautions</u>	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment	Prevent further leakage or spillage if safe to do so. Cover with plastic sheet to prevent spreading.
Methods for cleaning up	Use appropriate tools to put the spilled solid in a suitable waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials. Remove all sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours/dust. Do not ingest. When using do not smoke. Keep away from combustible material. Keep away from heat and sources of ignition. Take precautionary measures against static discharges. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store in a segregated and approved area. Keep away from heat and sources of ignition. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Chromic anhydride. Aluminum chloride+benzoyl chloride. Dinitrogen pentaoxide.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Naphthalene - 91-20-3	10 ppm TWA 50 mg/m ³ TWA	= 50 mg/m ³ TWA	= 15 ppm STEL	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Naphthalene - 91-20-3	= 10 ppm TWA = 52 mg/m ³ TWA	= 10 ppm TWA	10 ppm TWA	10 ppm TWAEV 52 mg/m ³ TWAEV 15 ppm STEV 79 mg/m ³ STEV

Australia and Mexico

Components	Australia	Mexico
Naphthalene 91-20-3	79 mg/m ³ STEL 15 ppm STEL 10 ppm TWA 52 mg/m ³ TWA	= 10 ppm TWA = 50 mg/m ³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure:

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.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Safety glasses with side-shields.

Skin and body protection: Long sleeved clothing. apron. Gloves.

Respiratory protection: Wear respirator with dust filter..

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state: Solid.	Appearance: Crystalline solid.	Color: White.
Odor: Aromatic.	Taste No information available	Molecular/Formula weight: 128.17 g/mol
Formula: C ₁₀ H ₈	Flash point (°C): 79°C	Flashpoint (°C/°F): 79°C/ 174°F
Flash Point Tested according to: Closed cup	Lower Explosion Limit (%): 0.9%	Upper Explosion Limit (%): 5.9%
Autoignition Temperature (°C/°F): 526°C/ 978.8°F	pH: No information available	Melting point/range(°C/°F): 80.2°C/ 176.4°F
Boiling point/range(°C/°F): 217.9°C/ 424.4°F	Decomposition temperature(°C/°F): No information available	Bulk density: No information available
Specific gravity: 1.162	Density (g/cm³): No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: <1	Vapor density: 4.42	VOC content (g/L): No information available
Odor threshold (ppm): 0.3	Partition coefficient (n-octanol/water): 3.30	Viscosity: No information available
Miscibility: No information available	Solubility: Easily soluble in diethyl ether Slightly soluble in Methanol Very slightly soluble in 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	

10. STABILITY AND REACTIVITY

Reactivity

It will react violently with chromic anhydride, aluminum chloride + benzoyl chloride. Napthalene will volatilize at room temperature and emit a mothball odor
Reactive with oxidizing agents
Reactive with dinitrogen pentaoxide
May attack some forms of rubber and plastic

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Incompatible materials. Vapours may form explosive mixture with air..

Incompatible Materials: Oxidizing agents. Chromic anhydride. Aluminum chloride+benzoyl chloride. Dinitrogen pentaoxide.

Hazardous decomposition products: Carbon oxides.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Eyes. Inhalation. Ingestion.

Acute Toxicity

Component Information

Naphthalene - 91-20-3

LD50/oral/rat = 490 mg/kg Oral LD50 Rat

LD50/oral/mouse = 316 mg/kg

LD50/dermal/rat = No information available

LD50/dermal/rabbit = 20 g/kg Dermal LD50 Rabbit

LC50/inhalation/rat = 340 mg/m³ Inhalation LC50 Rat 1 h

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = 490mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 316mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = 20000mg/kg

LD50/dermal/rat

VALUE -Acute Tox Dermal = > 2500mg/kg

LC50/inhalation/rat

VALUE-Vapor = 340

VALUE-Gas = No information availablemg/m³

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:

Causes skin irritation. It may cause dermatitis. It may be absorbed through the skin and cause systemic effects similar to those of ingestion.

Eye Contact: Causes eye irritation. May cause conjunctivitis. May cause corneal damage. May cause cataracts.

Inhalation Inhalation of vapor or dust may produce respiratory tract irritation. Causes headache, confusion, nausea, vomiting, profuse perspiration, intravascular haemolysis, haemolytic anaemia, leukocytosis, fever, haematuria, jaundice, renal and hepatic dysfunction (which is secondary to anaemia), dysuria and haemoglobinuria.

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..

Aspiration hazard No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Ingestion: Prolonged or repeated ingestion may affect the blood (hemolytic anemia), spleen (splenomegaly), 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.

Sensitization: No information available

Mutagenic Effects: May affect genetic material

Carcinogenic effects: May cause cancer based on animal test data.

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Naphthalene	A4 Not Classifiable as a Human Carcinogen	Monograph 82 [2002]	Reasonably Anticipated To Be A Human Carcinogen	Present	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: May cause adverse reproductive effects based on animal data.
Developmental Effects: No information available
Teratogenic Effects: May cause birth defects (teratogenic effects) based on animal test data

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure No information available
Target Organs: Blood. Kidneys. Liver. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

12. ECOLOGICAL INFORMATION

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

Naphthalene - 91-20-3

Freshwater Algae Data: 0.4 mg/L EC50 *Skeletonema costatum* 72 h

Freshwater Fish Species Data: 1.6 mg/L LC50 *Oncorhynchus mykiss* 96 h flow-through 1
0.91-2.82 mg/L LC50 *Oncorhynchus mykiss* 96 h static 1
5.74-6.44 mg/L LC50 *Pimephales promelas* 96 h flow-through 1
1.99 mg/L LC50 *Pimephales promelas* 96 h static 1
31.0265 mg/L LC50 *Lepomis macrochirus* 96 h static 1

Water Flea Data: 1.09 - 3.4 mg/L EC50 *Daphnia magna* 48 h
1.96 mg/L EC50 *Daphnia magna* 48 h
2.16 mg/L LC50 *Daphnia magna* 48 h

Persistence and degradability: No information available

Bioaccumulative potential: No information available

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Naphthalene	None	None	None	U165

14. TRANSPORT INFORMATION

DOT

UN-No: UN1334
Proper Shipping Name: Naphthalene, crude
Hazard Class: 4.1
Subsidiary Risk:
Packing Group: III
ERG No: 133
Marine Pollutant No data available
DOT RQ (lbs): No information available

Symbol(s): R3

TDG (Canada)

UN-No: UN1334
Proper Shipping Name: Naphthalene, crude
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III

14. TRANSPORT INFORMATION

Description: No information available

ADR

UN-No: UN1334
Proper Shipping Name: Naphthalene, crude
Hazard Class: 4.1
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN1334
Proper Shipping Name: Naphthalene, crude
Hazard Class: 4.1
Subsidiary Risk: P
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN1334
Proper Shipping Name: Naphthalene, crude
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN1334
Proper Shipping Name: Naphthalene, refined
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN1334
Proper Shipping Name: Naphthalene, refined
Hazard Class: 4.1
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 3L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Naphthalene	Present	Present KE-25545	Present	Present (4)-311	Present	Present	Present 202-049-5

U.S. Regulations

Naphthalene

Massachusetts RTK: Present
New Jersey RTK Hazardous Substance List: 1322
New Jersey (EHS) List: 1322 500 lb TPQ
New Jersey - Discharge Prevention - List of Hazardous Substances: Present
Pennsylvania RTK: Environmental hazard
Pennsylvania RTK - Environmental Hazard List Present
Pennsylvania RTK - Special Hazardous Substances Present
Minnesota - Hazardous Substance List: Present
New York Release Reporting - List of Hazardous Substances:
 = 1 lb RQ
Louisiana Reportable Quantity List for Pollutants: Listed
California Directors List of Hazardous Substances: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Naphthalene	carcinogen	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Naphthalene	= 100 lb final RQ = 45.4 kg final RQ	None	None	None	0.1 % de minimis concentration

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Naphthalene	Not Applicable	06/01/1987 06/01/1997

Canada

WHMIS hazard class:

B4 Flammable solid
 D2A Very toxic materials

Naphthalene

B4 D2A

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Naphthalene	1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Naphthalene	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Naphthalene	Not listed	Not listed

EU Classification

R-phrases

R22 - Harmful if swallowed.
R40 - Limited evidence of a carcinogenic effect
R50 - Very toxic to aquatic organisms.
R51 - Toxic to aquatic organisms.
R52 - Harmful to aquatic organisms.
R53 - May cause long-term adverse effects in the aquatic environment.

S-phrases

S2 - Keep out of the reach of children.
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.
S36/37 - Wear suitable protective clothing and gloves.

Components	Classification	Concentration Limits:	Safety Phrases
Naphthalene	Xn; R22 Carc.Cat.3; R40 N; R50-53	No information	S2 S36/37 S46 S60 S61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful.
N - Dangerous for the environment.



16. OTHER INFORMATION

16. OTHER INFORMATION

Revision Date: 04/29/2015
Prepared by: Sonia Owen

Disclaimer: All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) 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 SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. 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 SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet