

Section 1 - Identification of The Material and Supplier

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Chemical nature: Naphthalene is an aromatic hydrocarbon.
Trade Name: **Hovex Naphthalene**
Product Use: Moth repellent.
Creation Date: **August, 2012**
This version issued: **January, 2014** and is valid for 5 years from this date.

Section 2 - Hazards Identification

Statement of Hazardous Nature

This product is classified as: Xn, Harmful. N, Dangerous to the environment. F, Flammable. Hazardous according to the criteria of SWA.

Dangerous according to the Australian Dangerous Goods (ADG) Code.

Risk Phrases: R10, R22, R40, R50/53. Flammable. Harmful if swallowed. Limited evidence of a carcinogenic effect. Very toxic to aquatic organisms, may cause long-term adverse effects to the aquatic environment.

Safety Phrases: S2, S20, S22, S46, S60, S61, S36/37. Keep out of reach of children. When using, do not eat or drink. Do not breathe dust. If swallowed, contact a doctor or Poisons Information Centre immediately and show this MSDS or label. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/Safety Data Sheets. Wear suitable protective clothing and gloves.

SUSMP Classification: S6

ADG Classification: Class 4.1: Flammable solids.

UN Number: 1334, NAPHTHALENE, REFINED



GHS Signal word: WARNING

HAZARD STATEMENT:

- H228: Flammable solid.
- H302: Harmful if swallowed.
- H351: Suspected of causing cancer.
- H410: Very toxic to aquatic life with long lasting effects.

PREVENTION

- P210: Keep away from heat, sparks, open flames and hot surfaces. - No smoking.
- P233: Keep container tightly closed.
- P264: Wash contacted areas thoroughly after handling.
- P281: Use personal protective equipment as required.

RESPONSE

- P330: Rinse mouth.
- P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
- P308+P313: If exposed or concerned: Get medical advice.
- P370+P378: In case of fire, use carbon dioxide, dry chemical, foam, water fog. Coarse water spray is the preferred medium for large fires.

STORAGE

- P403+P235: Store in a well-ventilated place. Keep cool.

DISPOSAL

- P501: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Emergency Overview

Physical Description & Colour: White crystalline flakes.

Odour: Characteristic mothball odour.

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Major Health Hazards: Contact with naphthalene can cause skin photosensitivity on contacted areas. Subsequent exposure to UV alpha rays in sunlight can cause sunburn in affected area. Limited evidence of a carcinogenic effect, harmful if swallowed.

Potential Health Effects

Inhalation:

Short Term Exposure: Available data indicates that this product is not harmful. In addition product is unlikely to cause any discomfort or irritation.

Long Term Exposure: No data for health effects associated with long term inhalation.

Skin Contact:

Short Term Exposure: Contact with naphthalene can cause skin photosensitivity on contacted areas. Subsequent exposure to UV alpha rays in sunlight can cause sunburn in affected area.

Long Term Exposure: Prolonged and repeated contact may result in mild irritation. Potential skin sensitiser. Systemic effects may occur via skin absorption.

Eye Contact:

Short Term Exposure: This product is believed to be not irritating to eyes.

Long Term Exposure: No data for health effects associated with long term eye exposure.

Ingestion:

Short Term Exposure: Significant oral exposure is considered to be unlikely. Available data shows that this product is harmful. Ingestion may result in gastrointestinal irritation, nausea, vomiting, headache, abdominal pain and diarrhoea.

Long Term Exposure: No data for health effects associated with long term ingestion.

Carcinogen Status:

SWA: Naphthalene is classified by SWA as a Class 3 Carcinogen, possibly carcinogenic to humans.

See the SWA website for further details. A web address has not been provided as addresses frequently change.

NTP: Naphthalene is classified by NTP as reasonably anticipated to be carcinogenic to humans.

See the NTP website for further details. A web address has not been provided as addresses frequently change.

IARC: Naphthalene is classed 2b IARC - possibly carcinogenic to humans.

See the IARC website for further details. A web address has not been provided as addresses frequently change.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m ³)	STEL (mg/m ³)
Naphthalene	91-20-3	>60	52	79

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation: First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Skin Contact: Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed. After drying, apply a broad spectrum UV blackout cream. Keep out of direct sunlight for the next 2-3 days to avoid sunburn to potentially photosensitised skin areas.

Eye Contact: Quickly and gently brush particles from eyes. No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a Poisons Information Centre, or call a doctor.

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Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. There is little risk of an explosion from this product if commercial quantities are involved in a fire. This product will probably cause the fire to intensify as contents ignite. Violent steam generation or eruption may occur upon application of direct water stream on hot liquids. This product, if scattered, may form flammable or explosive dust clouds in air.

Fire decomposition products from this product may be toxic if inhaled. Take appropriate protective measures.

Extinguishing Media: Suitable extinguishing media are carbon dioxide, dry chemical, foam, water fog. Coarse water spray is the preferred medium for large fires. Try to contain spills, minimise spillage entering drains or water courses.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. There is little danger of a violent reaction or explosion if significant quantities of this product are involved in a fire. Recommended personal protective equipment is full fire kit and breathing apparatus. Cool closed, undamaged containers exposed to fire with water spray. Do not scatter spilled material with high pressure water jets.

Flash point: 87°C, Closed cup

Upper Flammability Limit: 5.9%

Lower Flammability Limit: 0.9%

Autoignition temperature: 526°C

Flammability Class: Flammable solid.

Section 6 - Accidental Release Measures

Accidental release: This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. For minor spills, clean up, rinsing to sewer and put empty container in garbage. Although no special protective clothing is normally necessary because of occasional minor contact with this product, it is good practice to wear impermeable gloves when handling chemical products. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10.

Storage: This product is a Scheduled Poison. Observe all relevant regulations regarding sale, transport and storage of this schedule of poison. Store in a cool, well ventilated area, and make sure that surrounding electrical devices and switches are suitable. Check containers periodically for leaks. Containers should be kept closed in order to minimise contamination. Make sure that the product does not come into contact with substances listed under "Incompatibilities" in Section 10. If you keep more than 10000kg or L of Dangerous Goods of Packaging Group III, you may be required to license the premises or notify your Dangerous Goods authority. If you have any doubts, we suggest you contact your Dangerous Goods authority in order to clarify your obligations. Check packaging - there may be further storage instructions on the label.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: AS/NZS 4501 set 2008, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

SWA Exposure Limits**TWA (mg/m³)****STEL (mg/m³)**

Naphthalene

52

79

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: This product should only be used in a well ventilated area. If natural ventilation is inadequate, use of a fan is suggested.

Eye Protection: Eye protection is not normally necessary when this product is being used. However, if in doubt, wear suitable protective glasses or goggles.

Skin Protection: You should avoid contact even with mild skin irritants. Therefore you should wear suitable impervious elbow-length gloves and facial protection when handling this product. See below for suitable material types.

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Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.

Respirator: If there is a significant chance that dusts are likely to build up in the area where this product is being used, we recommend that you use a suitable Dust Mask.

Safety deluge showers should, if practical, be provided near to where this product is being handled commercially.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	White crystalline flakes.
Odour:	Characteristic mothball odour.
Boiling Point:	280°C at 100kPa
Freezing/Melting Point:	80°C
Volatiles:	Slowly sublimates at room temperatures.
Vapour Pressure:	No data.
Vapour Density:	Not applicable.
Specific Gravity:	1.487
Water Solubility:	30mg/L
pH:	No data.
Volatility:	No data.
Odour Threshold:	No data.
Evaporation Rate:	Not applicable.
Coeff Oil/water Distribution:	No data
Viscosity:	Not applicable.
Autoignition temp:	526°C

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: This product should be kept in a cool place, preferably below 30°C. Keep containers tightly closed. Containers should be kept dry. Keep containers and surrounding areas well ventilated. Keep away from heat, flames and sparks.

Incompatibilities: water, oxidising agents.

Fire Decomposition: Combustion forms carbon dioxide, and if incomplete, carbon monoxide and possibly smoke. Water is also formed. Carbon monoxide poisoning produces headache, weakness, nausea, dizziness, confusion, dimness of vision, disturbance of judgment, and unconsciousness followed by coma and death.

Polymerisation: Polymerisation reactions are unlikely; they are not expected to occur.

Section 11 - Toxicological Information

Toxicity: Naphthalene did not cause birth defects when administered orally to rabbits, rats and mice during pregnancy, but slightly reduced litter size in mice at dose levels that were lethal to the pregnant females. Naphthalene has been reported to cross the human placenta.

Genetic toxicology. Naphthalene cause chromosome aberrations in Chinese hamster ovary cells but was not a mutagen in several other in-vitro tests.

Carcinogenicity: In a study conducted by the National Toxicology program (NTP), mice exposed to 10-30ppm naphthalene by inhalation for two years had increased incidences of metaplasia in the nose and the lungs as well as chronic inflammation of both the nose and lungs. The incidence of benign lung tumours (alveolar/bronchiolar adenomas) was significantly increased in the high dose female group but not in the male groups. The significance of this study to humans has not been established. No carcinogenic effect was reported in a 2-year feeding study in rats receiving naphthalene at 41mg/kg/day. Exposure to naphthalene has been reported to caused methaemoglobinemia and/or haemolytic anaemia, especially in humans deficient in the enzyme glucose-6-phosphate dehydrogenase. Laboratory animals given repeated oral doses of naphthalene have developed cataracts. There is no data to hand indicating any particular target organs.

Classification of Hazardous Ingredients

Ingredient	Risk Phrases
Naphthalene	Conc>=25%: Xn; R40; R22
Naphthalene: LD ₅₀ Oral, Rat 490mg/kg LC ₅₀ Inhalation, rat: > 340 mg/m ³ /1hr	LD ₅₀ Dermal, Rat = >2500mg/kg

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Section 12 - Ecological Information

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

SOIL: Naphthalene is adsorbed moderately to soil and undergoes biodegradation.

WATER: When released into water, naphthalene will evaporate into the atmosphere with a half-life of a couple of days to a few months. Biodegradation is also common from water and bioconcentration occurs to a moderate extent.

ATMOSPHERE: When released into the atmosphere, naphthalene rapidly photodegrades (half-life 3-8 hours).

No environmental data available for Naphthalene.

Section 13 - Disposal Considerations

Disposal: Dispose of small quantities and empty containers by wrapping with paper and putting in garbage. For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service.

Section 14 - Transport Information

ADG Code: 1334, NAPHTHALENE, REFINED

Hazchem Code: 1Z

Special Provisions: None allocated

Limited quantities: ADG 7 specifies a Limited Quantity value of 5 kg for this class of product.

Dangerous Goods Class: Class 4.1: Flammable solids.

Packaging Group: III

Packaging Method: P002, IBC08, LP02

Class 4.1 Flammable Solids shall not be loaded in the same vehicle or packed in the same freight container with Classes 1 (Explosives), 2.1 (Flammable Gases), 4.2 (Spontaneously Combustible Substances), 5.1 (Oxidising Agents), 5.2 (Organic Peroxides), or 7 (Radioactive Substances). They may however be loaded in the same vehicle or packed in the same freight container with Classes 2.2 (Non-Flammable, Non-Toxic Gases), 2.3 (Toxic Gases), 3 (Flammable liquids), 4.3 (Dangerous When Wet Substances), 6 (Toxic Substances), 8 (Corrosive Substances) 9 (Miscellaneous Dangerous Goods) , Foodstuffs and foodstuff empties.

Section 15 - Regulatory Information

AICS: This product is compliant with NICNAS regulations.

The following ingredient: Naphthalene, is mentioned in the SUSMP.

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th edition)
AICS	Australian Inventory of Chemical Substances
SWA	Safe Work Australia, formerly ASCC and NOHSC
CAS number	Chemical Abstracts Service Registry Number
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program (USA)
SUSMP	Standard for the Uniform Scheduling of Medicines & Poisons
UN Number	United Nations Number

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD STATEMENT: INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This MSDS is prepared in accord with the SWA document "Preparation of Safety Data Sheets for Hazardous Chemicals - Code of Practice" (December 2011)

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SAFETY DATA SHEET