

MATERIAL SAFETY DATA SHEET INFORMATION

For further information: Please refer to the Material Safety Data Sheet following

Issue: August 08

PRODUCT: MINERAL TURPENTINE

Other Names: Turpentine, Turps, Petropine

Uses: Industrial solvent, paint formulations, thinners and reducers, laboratory reagent

| | |
|-------------------------------|------|
| UN No.: | 1300 |
| Dangerous Goods Class: | 3 |
| Subsidiary Risk: | None |
| Packing Group: | III |
| Hazchem Code: | 3Y |
| Poisons Schedule: | 5 |

| | |
|----------------------------|---|
| Hazardous Nature: | This product is classified as hazardous according to Australian Safety and Compensation Council criteria. |
| Exposure Standards: | TWA: 480mg/m ³ ; STEL: None specified; Peak Limitation (if any): None; Skin Sensitiser (if any): none. Refer to Section 8 for further information and definitions. |

| Physical Characteristics (Typical) | | Section 9 of the MSDS |
|---|--|------------------------------|
| Appearance | Clear, colourless (or straw), mobile liquid | |
| Boiling Point/Range (°C): | 149 - 191 | |
| Flash Point (°C): | 31 | |
| Specific Gravity/Density (g/ml @ 15°C): | 0.812 | |
| pH: | No data available | |
| Chemical Stability: | Stable at room temperature and pressure | |
| Reactivity: | Excessive heat, mineral acids, strong oxidisers, halogenated compounds | |

| Product Ingredients | | | Section 3 of the MSDS |
|----------------------------|-------------------|-------------------|------------------------------|
| <u>Ingredient</u> | <u>CAS Number</u> | <u>Proportion</u> | |
| Mineral Turpentine | 9005-90-7 | 100 | |
| Contains: Kerosene | various | > 60 | |
| 1,2,4-Trimethylbenzene | 95-63-6 | < 20 | |

For further ingredients information, please refer to the full MSDS

| Risk Phrases | Section 2 of the MSDS |
|---|------------------------------|
| R 65: Harmful: May cause lung damage if swallowed | |
| R 38: Irritating to skin | |

DEFINITIONS

| | |
|----------------------|--|
| Dangerous Goods | Products that are regulated for transport by Road and Rail under the national guide are Dangerous Goods. Products can be classed as Dangerous Goods if they have a flash point below 60.5°C, a pH below 3 or above 11, are explosives or toxic. These goods will be allocated a UN No., Packing Group, Hazchem Code, and possibly a subsidiary risk. |
| Hazardous Substances | Hazardous Substances are those products that are intrinsically hazardous by nature, rather than by misuse. These include mutagens, teratogens, carcinogens, products that are toxic (but not sufficiently toxic to be classed as Dangerous Goods or carry a subsidiary risk), and products that pose environmental risks. |
| Poisons | Poisons are products that are regulated by the dose or exposure, often having physical and chemical effects at certain concentrations particular to the nature of the product. For example, in small doses, some products are harmless, but with increased concentration or exposure these products can be extremely harmful. The classification indicates First Aid, etc. |

1. IDENTIFICATION

Product Name: MINERAL TURPENTINE
Other Names: Turpentine, Turps, Petropine
Chemical Family: Aliphatic/ aromatic hydrocarbon solvent
Molecular Formula: Not available
Recommended Use: Industrial solvent, paint formulations, thinners and reducers, laboratory reagent
Supplier: Univar Australia Pty Ltd
ABN: 99 114 669 091
Address: 14 Williamson Road, Ingleburn NSW 2565
Telephone: +61 2 9618 1588
Fax: +61 2 9618 1505
Emergency Phone: **CHEMCALL: 1800 127 406**
All other inquiries: (02) 9618 1588

2. HAZARDS IDENTIFICATION

Hazard Classification

This product is classified as hazardous according to Australian Safety and Compensation Council criteria.

Hazard Category

Xn: Harmful; Xi: Irritant

Risk Phrases

R 65: Harmful: May cause lung damage if swallowed

R 38: Irritating to skin

Safety Phrases

S 9: Keep container in a well-ventilated place

S 16: Keep away from sources of ignition

S 23: Do not breath vapour/mist/spray

S 24: Avoid contact with skin

S 29: Do not empty into drains

Dangerous Goods Classification 3

Poisons Schedule 5

3. COMPOSITION: Information on Ingredients

| Chemical Ingredient | CAS Number | Proportion (% v/v) |
|---|------------|--------------------|
| Mineral Turpentine | 9005-90-7 | 100 |
| Contains: Kerosene | various | > 60 |
| 1,2,4-Trimethylbenzene | 95-63-6 | < 20 |
| Propylbenzene and Isopropylbenzene (Cumene) | 98-82-8 | < 10 |
| Mesitylene | 108-67-8 | < 10 |
| Xylene, mixed isomers | 1330-20-7 | < 5 |

4. FIRST AID MEASURES

For advice, contact Poisons Information Centre (Phone Australia: 13 1126) or a doctor.

Ingestion

If swallowed, DO NOT induce vomiting. Keep at rest. Seek immediate medical attention.

Eye Contact

Flush eyes with large amounts of water until irritation subsides. Seek immediate medical attention.

Skin Contact

Flush area with large amounts of water and wash area with soap if available. Remove contaminated clothing, including shoes, and launder before reuse. Seek medical attention for skin irritations.

Inhalation

Using proper respiratory protection, immediately remove the affective victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Seek immediate medical attention.

First Aid Facilities

Provide eye baths and safety showers.

Medical Attention

Treat according to symptoms. Avoid gastric lavage - aspiration of product to the lungs may result in chemical pneumonitis.

5. FIRE FIGHTING MEASURES

Shut off product that may 'fuel' a fire if safe to do so. Allow trained personnel to attend a fire in progress providing fire fighters with this Material Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable Extinguishing Media

Dry chemical or foam

Hazards from combustion products

Carbon dioxide and carbon monoxide

Precautions for fire fighters and special protective equipment

Full protective clothing and self-contained breathing apparatus

Hazchem Code

3Y

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures

Prevent product from escaping to drains and waterways. Contain leaking packaging in a containment drum. Prevent vapours or dusts from building up in confined areas. Ensure that drain valves are closed at all times. Clean up and report spills immediately.

Methods and materials for containment

Major Land Spill

- Eliminate sources of ignition.
- Warn occupants of downwind areas of possible fire and explosion hazard, where present.
- Prevent product from entering sewers, watercourses, or low-lying areas.
- Keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.
- Advise authorities if substance has entered a watercourse or sewer or has contaminated soil or vegetation.
- Take measures to minimise the effect on the ground water.
- Contain the spilled product using the resources in the spill kit.
- Recover by pumping – use explosion proof pump or hand pump – or with a suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See "First Aid Measures" and "Stability and Reactivity"

Major Water Spill

- Eliminate any sources of ignition.
- Warn occupants and shipping in downwind areas of possible fire and explosion hazard, where present.
- Notify the port or relevant authority and keep the public away from the area.
- Shut off the source of the spill if possible and safe to do so.

- Confine the spill if possible.
- Remove the product from the surface by skimming or with suitable absorbent material.
- Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.
- See “First Aid Measures” and “Stability and Reactivity”.

7. HANDLING AND STORAGE

Precautions for Safe Handling

This product is flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Use grounding leads to avoid discharge (electrical

Conditions for Safe Storage

Store in a cool, dry place away from direct sunlight. Do not pressurise, cut, heat or weld containers - residual vapours are flammable. This product is flammable and will fuel a fire in progress.

Incompatible Materials

Natural Rubber, Butyl Rubber, EPDM, Polystyrene

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

National Exposure Standards

The time weighted average concentration (TWA) for this product is: 480mg/m³, which means the highest allowable exposure concentration in an eight-hour day for a five-day working week. The short term exposure limit (STEL) is: None specified, which is the maximum allowable exposure concentration at any time. Replacing a TWA or STEL value for some products is a Peak Limitation value (Peak): None applies in this case. In addition to the exposure concentrations may be a subsidiary caution in such cases where the product is a skin sensitiser, represented as (Sk), where none applies in this case.

Biological Limit Values (BLV)

None specified

Engineering Controls: Ventilation

The use of local exhaust ventilation is recommended to control process emissions near the source. Laboratory samples should be handled in a fume hood. Provide mechanical ventilation of confined spaces. Use explosion proof equipment.

Personal Protective Equipment

Respiratory Protection: Where concentrations in air may approach or exceed the limits described in the National Exposure Standards, it is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type ‘A’ filter material is considered suitable for this product.

Eye Protection: Always use safety glasses or a face shield when handling this product.

Skin/Body Protection: Always wear long sleeves, long trousers, or coveralls, and enclosed footwear or safety boots when handling this product. It is recommended that chemical resistant gloves be worn when handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Unit of measurement | Typical Value |
|--------------------------|----------------------------|---|
| Appearance | None | Clear, colourless (or straw), mobile liquid |
| Boiling Point/Range | °C | 149 – 191 |
| Flash Point | °C | 31 |
| SG/Density (@ 15°C) | g/ml; kgm ⁻³ | 0.812 |
| Vapour Pressure @ 20°C | kPa | 0.429 |
| Vapour Density @ 20°C | g/ml; kgm ⁻³ | No data available |
| Autoignition Temperature | °C | > 200 |

MATERIAL SAFETY DATA SHEET

MINERAL TURPENTINE

| Property | Unit of measurement | Typical Value |
|--------------------------|---------------------|----------------------|
| Explosive Limits in Air | % vol/vol | 0.6 - 7.0 |
| Viscosity @ 20 °C | cPs, mPas | Not available |
| Percent volatiles | % vol/vol | 100 |
| Acidity/alkalinity as pH | None | No data available |
| Solubility in Water | g/l | 57 mg/L |
| Other solvents | - | Hydrocarbon solvents |

The values listed are indicative of this product's physical and chemical properties. For a full product specification, please consult the Technical Data Sheet.

10. STABILITY AND REACTIVITY

Chemical stability

Stable at room temperature and pressure

Conditions to avoid

Excessive heat, mineral acids, strong oxidisers, halogenated compounds

Hazardous decomposition products

Carbon dioxide, carbon monoxide and organic complexes on incomplete burning/oxidation

Hazardous reactions

Strong oxidising agents, mineral acids

Hazardous polymerisation

Will not occur

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

Small amounts of liquid aspirated into the lungs during ingestion, or from vomiting, may cause chemical pneumonitis, or pulmonary oedema. Ingesting any amount of this product will result in headaches, nausea, dizziness, and tracheal burning.

Eye Contact

This product is irritating to eyes, but will not permanently damage the eye tissue

Skin Contact

This product is irritating to the skin with prolonged exposure. It may result in dryness and cracking.

Inhalation

This product is irritating to the respiratory tract. Exposure to large concentrations over an extended period of time will result in muscle weakness, tingling in hands and feet, blurred vision, headaches, nausea, loss of appetite, hallucinations, and possible loss of consciousness.

Chronic Effects

This product may contain 0.1 to 1% of ethylbenzene. IARC has evaluated ethylbenzene and classified it as a "possible human carcinogen" (Group 2B) based on sufficient evidence for cancer in exposed humans. This product may contain 0.1 to 1% naphthalene. IARC evaluated naphthalene and concluded that there was sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans. Accordingly, IARC classified naphthalene as a possible human carcinogen (Group 2B).

Other Health Effects Information

Repeated or prolonged exposure to this product will result in defatting of the skin and subsequent dryness and cracking. Persons with existing skin and respiratory conditions may be sensitive to this product.

Toxicological Information

Oral LD₅₀: Rat: 5g/kg

Dermal LD₅₀: Inhal: rat: 18g/m³/4H

12. ECOLOGICAL INFORMATION

Ecotoxicity

Aquatic Toxicity:

Fish Toxicity LC₅₀: No data available
 Daphnia Magna EC₅₀: 1,2,4 Trimethyl benzene: F30 mmol/m³
 Blue-green algae: No data available
 Green algae: No data available

Persistence/Biodegradability: Log P: 3.63

Mobility: Water solubility: 57mg/L - limited potential to contaminate groundwater

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national and local authorities. Packaging may still contain product residue that may be harmful. Ensure that empty packaging is managed in accordance with Dangerous Goods regulations.

Special Precautions

This product is not suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ashless and can be incinerated in a regulated facility. In the absence of a designated industrial incinerator, this product should be treated and disposed through chemical waste treatment, or considered for use in solvent recycling.

14. TRANSPORT INFORMATION

| Road and Rail Transport | | Marine Transport | | Air Transport | |
|-------------------------|-----------------------|----------------------|-----------------------|----------------------|-----------------------|
| UN No. | 1300 | UN No. | 1300 | UN No. | 1300 |
| Proper Shipping Name | Turpentine Substitute | Proper Shipping Name | Turpentine Substitute | Proper Shipping Name | Turpentine Substitute |
| DG Class | 3 | DG Class | 3 | DG Class | 3 |
| Sub. Risk | None | Sub. Risk | None | Sub. Risk | None |
| Packing Group | III | Packing Group | III | Packing Group | III |
| Hazchem | 3Y | Hazchem | 3Y | Hazchem | 3Y |

Dangerous Goods Segregation

This product is Dangerous Goods Class 3, packing group III

15. REGULATORY INFORMATION

Country/Region: Australia

Inventory: AICS

Status: Listed

Poisons Schedule: 5

16. OTHER INFORMATION

Reasons for Issue: Upgrade to 16-point MSDS; Amalgamated supplier changes in all sections

Abbreviations:

AICS: Australian Inventory of Chemical Substances

CAS Number: Chemical Abstracts Number

IARC: International Agency for Research on Cancer

ASCC: Australian Safety and Compensation Council

PPE: Personal Protective Equipment

MATERIAL SAFETY DATA SHEET

MINERAL TURPENTINE

N/R: Non-regulated

N/A: Not applicable

References:

- Supplier Material Safety Data Sheets
- <http://hsis.ascc.gov.au/SearchHS.aspx> (August, 2008)
- Animal toxicology data: <http://chem.sis.nlm.nih.gov/chemidplus> (July, 2008)
- Ecotoxicology data: http://cfpub.epa.gov/ecotox/quick_query.htm (July, 2008)
- *Sax's Dangerous Properties of Industrial Materials*, Richard J Lewis Snr., pub. Canada (2005)

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses, but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact Univar Australia Pty Ltd.
