SECTION 1: IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name: White spirits
Other Names: Turpentine substitute

Product Codes/Trade Names: N/A
Recommended Use: Solvent, dry cleaning fluid
Applicable In: Australia
Supplier: ACB Group (ABN 79 724 186 134)
Address: 118 Swann Drive, Derrimut Victoria-3030
Telephone: +61 3 93690220
Email Address: info@acbgroup.com.au
Facsimile: +61 3 93690883
Emergency Phone Number: 000 Fire Brigade and Police (available in Australia only).
Poisons Information Centre: 13 11 26 (available in Australia only).

This Material Safety Data Sheet (MSDS) is issued by the Supplier in accordance with National standards and guidelines from the Australian Safety and Compensation Council (ASCC, formerly National Occupational Health and Safety Commission - NOHSC). The information in it must not be altered, deleted or added to. The Supplier will not accept any responsibility for any changes made to its MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in product specifications and/or ASCC standards, codes, guidelines, or Regulations.

SECTION 2: HAZARD IDENTIFICATION


White spirits is classified as Dangerous good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Signal Word DANGER

<table>
<thead>
<tr>
<th>GHS Classification</th>
<th>Pictogram</th>
<th>Hazard Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable Liquids, Category 3</td>
<td><img src="image" alt="Flammable" /></td>
<td>H226 Flammable liquid and vapour</td>
</tr>
<tr>
<td>Aspiration Hazard, Category 1</td>
<td><img src="image" alt="Aspiration" /></td>
<td>H304 May be fatal if swallowed and enters airways</td>
</tr>
<tr>
<td>Skin Corrosion/Irritation, Category 2</td>
<td><img src="image" alt="Irritation" /></td>
<td>H315 Causes skin irritation</td>
</tr>
<tr>
<td>Chronic Aquatic Toxicity, Category 3</td>
<td>N/A</td>
<td>H412 Harmful to aquatic life with long lasting effects</td>
</tr>
</tbody>
</table>


Precautionary statements:

GENERAL

P101 If medical advice is needed, have product container or label at hand
P102 Keep out of reach of children
P103 Read label before use

PREVENTATIVE

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P233 Keep container tightly closed
P240 Ground/bond container and receiving equipment
P241 Use explosion-proof electrical/ventilation/lighting equipment
P242 Use only non-sparking tools
P243 Take precautionary measures against static discharge
P264 Wash thoroughly after handling
P273 Avoid release to the environment
P280 Wear protective gloves/eye protection/face protection

RESPONSE

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352 IF ON SKIN: Wash with plenty of soap and water
P303 + P361 + P353 IF ON SKIN (or hair): Take off contaminated clothing and wash before reuse. Rinse skin with water/shower

P311 Do NOT induce vomiting
P313 If skin irritation occurs: Get medical advice/attention
P362 Take off contaminated clothing and wash before reuse
P370 + P378 In case of fire: Use foam/water spray/fog for extinction
P391 Collect spillage

STORAGE

P403 + P235 Store in a well-ventilated place. Keep cool
P405 Store locked up

DISPOSAL

P501 Dispose of contents/container in accordance with local regulations

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Synonyms</th>
<th>Proportion %</th>
<th>CAS Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM) LIGHT ALIPHATIC</td>
<td></td>
<td>&gt;60.0</td>
<td>[64742-89-8]</td>
</tr>
<tr>
<td>BENZENE</td>
<td></td>
<td>&lt; 0.1</td>
<td>[71-43-2]</td>
</tr>
<tr>
<td>n-HEXANE</td>
<td></td>
<td>&lt; 0.5</td>
<td>[110-54-3]</td>
</tr>
<tr>
<td>INGREDIENTS DETERMINED TO BE NON-HAZARDOUS</td>
<td></td>
<td>BALANCE</td>
<td></td>
</tr>
</tbody>
</table>
SECTION 4: FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre.

Swallowed: If swallowed, do NOT induce vomiting. Transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Eyes: If in eyes, hold eyes open, flood with water for at least 15 minutes. If irritation persists seek medical attention.

Skin: If skin contact occurs, remove contaminated clothing and wash skin thoroughly with water and follow by washing with soap if available.

Inhaled: Keep victim calm and remove to fresh air if safe to do so. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

First Aid Facilities: First aid kits, safety showers, eye wash stations

Advice to Doctor: Symptoms caused by exposure

<table>
<thead>
<tr>
<th>Inhalation</th>
<th>Breathing of high vapour concentrations may cause central nervous system depression resulting in dizziness, light-headedness, headache, nausea and loss of coordination. Continuous inhalation may result in unconsciousness and death.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin</td>
<td>May include redness and cracking.</td>
</tr>
<tr>
<td>Eye</td>
<td>May include redness and swelling.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May include headache, nausea, coughing and shortness of breath.</td>
</tr>
</tbody>
</table>

Medical Attention and special treatment: Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

Flammability: Product is a flammable liquid.

Suitable extinguishing media: Foam, water spray or fog, dry chemical powder or carbon dioxide. Do not use water in a jet.

Hazards from combustion products: Carbon monoxide may be evolved if incomplete combustion occurs. Will float and can be reignited on surface water. Vapour is heavier than air, can spread along ground and distant ignition is possible.

Special protective precautions and equipment for fire fighters: Wear full protective clothing and self-contained breathing apparatus.

HAZCHEM Code: 3Y
SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Avoid contact with spilled or released material. Shut off leaks, if possible without personal risks. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Remove all sources of ignition in the surrounding area. Take precautionary measure against static discharge. Ensure electrical continuity by bonding and earthing all equipment.

Environmental precautions
Use appropriate containment to avoid environmental contamination. Prevent from spreading and entering waterway using sand, earth or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Ventilate contaminated area thoroughly.

For small spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.
For larger spills (> 1 drum), transfer by means such as a vacuum truck to a salvage tank for recovery or disposal. Do not flush residues with water. Retain as contaminated waste. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.

SECTION 7: HANDLING AND STORAGE

Flammable product. Avoid breathing vapours. Handle and open containers with care in a well-ventilated area.
Ensure that the workplace is ventilated such that the Occupational Exposure limit is not exceeded. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Do not eat, drink or smoke in contaminated areas. Electrostatic charges may be generated during transfer. Electrostatic discharge may cause fire. Ensure electrical continuity by earthing all equipment. Flameproof equipment necessary in area where chemical is being used. Vapours may accumulate in low or confined areas.

Bulk storage tanks should be bunded. Store in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Do not store near strong oxidants.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

National Occupational Exposure Standard (NES) Australian Safety & Compensation Council, ASCC (formerly NOHSC)

**White Spirits**
In the absence of data from National Occupational Health & Safety Commission (NOHSC) Worksafe
Australia use -
Mineral Spirits 150-200 HSPA: 350mg/m³ TWA (8hr)

All occupational exposures to atmospheric contaminants should be kept to as low a level as is workable (practicable) and in all cases to below the National Standard.
These Exposure Standards are guides to be used in the control of occupational health hazards.
These Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
TWA (Time Weighted Average): the time-weighted average airborne
concentration over an eight-hour working day, for a five-day working week over an entire working life. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

STEL (Short Term Exposure Limit): the average airborne concentration over a 15 minute period that should not be exceeded at any time during a normal eight-hour work day.

**Biological Limit Values:**
- **ENGINEERING CONTROLS**
  - **Ventilation:**
    - A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use a flame proof exhaust ventilation system.

**Special Consideration for Repair &/or Maintenance of Contaminated Equipment:**
- **PERSONAL PROTECTION**
  - **Personal Hygiene**
    - EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337).
    - HANDS: Butyl rubber or PVA gloves break through time 4hr (AS2161).
    - CLOTHING: Flame-retardant coveralls and anti-static footwear (AS3765/2210).
  - **Respiratory Protection:**
    - RESPIRATOR: Wear an approved respirator with suitable filter for organic gases and vapours if engineering controls are inadequate (AS1715/1716).
  - **Thermal Protection:**
    - None should be needed under normal circumstances.
  - **Smoking & Other Dusts**
    - Smoking must be prohibited in all areas where this product is used - see safety information on flammability.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:**
- Clear Colourless liquid

**Odour:**
- Aromatic odour

**pH, at stated concentration:**
- N/A

**Vapour pressure:**
- 34.5kPa (15°C) mm Hg (1 atmosphere)

**Vapour Density:**
- Not applicable.

**Distillation range (°C):**
- IBP 145-160 °C
- FBP 205 °C MAX

**Freezing/Melting Point (°C):**
- N/A

**Solubility:**
- Insoluble

**Specific Gravity range (H₂O = 1):**
- 0.760–0.790 at 15°C

**FLAMMABLE MATERIALS**
- **Flash Point:**
  - 31°C Min
- **Flash Point Method:**
  - Not available.
- **Flammable (Explosive) Limit – Upper:**
  - 6.0% (as percentage volume in air)
- **Flammable (Explosive) Limit – Lower:**
  - 1.0% (as percentage volume in air)
- **Auto ignition Temperature:**
  - 280°C

**ADDITIONAL PROPERTIES**
- **Evaporation Rate:**
  - No data available.
- **Molecular Weight:**
  - No data available.
- **Volatile Organic Compounds Content (VOC):**
  - (as specified by the Green Building Council of Australia) 100%
- **% Volatiles:**
  - No data available.
SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Product is stable under recommended conditions of use, storage and temperature. Flammable liquid.

Incompatible Materials: Incompatible with oxidizing agents, heat and sources of ignition.

Conditions to avoid: Avoid excessive heat, sparks, open flames, direct sunlight, moisture, freezing, static charges and high temperatures.

Hazardous Decomposition Products: Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids, gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

Hazardous Reactions: No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Health effects information is based on reported effects in use from overseas and Australian reports.

Effects

Expected to be of low toxicity -
LD50 Oral (rat) > 2000 mg/kg
LC50 Inhalation greater than near-saturated vapour concentration (rat, 4h)
LD50 Dermal (rabbit) > 2000 mg/kg

<table>
<thead>
<tr>
<th>Skin corrosion/irritation:</th>
<th>Mild irritant. Prolonged contact may cause defatting of skin which can lead to dermatitis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serious eye damage/irritation:</td>
<td>Mild irritant.</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation:</td>
<td>Not expected to be a sensitiser.</td>
</tr>
<tr>
<td>Germ cell mutagenicity:</td>
<td>Not mutagenic.</td>
</tr>
<tr>
<td>Carcinogenicity:</td>
<td>Not expected to be carcinogenic.</td>
</tr>
<tr>
<td>Reproductive toxicity:</td>
<td>Not expected to impair fertility.</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity (STOT) – single exposure:</td>
<td>Inhalation of vapours or mists may cause irritation to the respiratory system.</td>
</tr>
<tr>
<td>Specific Target Organ Toxicity (STOT) – repeated exposure:</td>
<td>Central nervous system: repeated exposure affects the nervous system. Effects seen at high doses only.</td>
</tr>
<tr>
<td>repeated exposure:</td>
<td>Auditory system: prolonged and repeated exposures to high concentrations have resulted in hearing loss in rats. Solvent abuse and noise interaction in the work environment may cause hearing loss.</td>
</tr>
<tr>
<td>Aspiration hazard:</td>
<td>Aspiration into the lungs when swallowed or vomited may cause chemical pneumonitis which can be fatal.</td>
</tr>
</tbody>
</table>
SECTION 12: ECOLOGICAL INFORMATION

Acute toxicity:

<table>
<thead>
<tr>
<th></th>
<th>Expected to be harmful: 10 &lt; LC/EC/IC50 &lt;= 100mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fish</td>
<td>Expected to be harmful: 10 &lt; LC/EC/IC50 &lt;= 100mg/l</td>
</tr>
<tr>
<td>Aquatic invertebrate</td>
<td>Expected to be harmful: 10 &lt; LC/EC/IC50 &lt;= 100mg/l</td>
</tr>
<tr>
<td>Algae</td>
<td>Expected to be harmful: 10 &lt; LC/EC/IC50 &lt;= 100mg/l</td>
</tr>
<tr>
<td>Microorganisms</td>
<td>Expected to be harmful: 10 &lt; LC/EC/IC50 &lt;= 100mg/l</td>
</tr>
</tbody>
</table>

Chronic toxicity:

<table>
<thead>
<tr>
<th></th>
<th>Data not available</th>
</tr>
</thead>
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</tr>
<tr>
<td>Microorganisms</td>
<td>Data not available</td>
</tr>
</tbody>
</table>

Persistence and degradability
Readily biodegradable. Oxidises by photo-chemical reactions in air.

Bioaccumulative potential
Has the potential to bioaccumulate.

Mobility in soil
Floats on water.

Other adverse effects
Data not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with 'The Hazardous Waste Act'.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name: TURPENTINE SUBSTITUTE
UN number: 1300
DG Class: 3
Subsidiary Risk 1: -
Packaging Group: III
HAZCHEM code: 3Y

SECTION 15: REGULATORY INFORMATION

Poisons Schedule: 5
SECTION 16: OTHER INFORMATION

For further information on this product, please contact:
ACB Group (ABN 79 724 186 134)
118 Swann Drive, Derrimut VIC-3030
Phone: +61 3 93690220
Fax: +61 3 93690883
Email: info@acbgroup.com.au

ADDITIONAL INFORMATION
Australian Standards References:

AS 1020 The Control of undesirable static electricity.
AS 1076 Code of Practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications) – Parts 1 to 13.
AS/NZS 1336 Recommended Practices for Occupational Eye Protection
AS/NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716 Respiratory Protective Devices
AS 1940 The Storage and Handling of Flammable and Combustible Liquids.
AS 2161 Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
AS 2380 Electrical equipment for explosive atmospheres – Explosion Protection Techniques (Parts 1 to 9).
AS 3000 Electrical installations (known as the Australian/New Zealand Wiring Rules).

Other References:

ADG Code 6th Edition

AUTHORISATION

Reason for Issue: 5 year review
Authorized by: ACB Technical Director
Date of Issue: 08 December 2015
Expiry Date: December 2020

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END OF MSDS