1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name: ARMAFLEX 520 ADHESIVE
Synonym(s): ARMACELL ARMAFLEX 520

1.2 Uses and uses advised against

Use(s): ADHESIVE

1.3 Details of the supplier of the product

Supplier name: ARMACELL AUSTRALIA PTY LTD
Address: 13 - 17 Nathan Road, Dandenong, Victoria, 3175, AUSTRALIA
Telephone: (03) 8710 5999
Fax: (03) 8710 5900
Email: info.au@armacell.com
Website: http://wwwarmacell.com.au

1.4 Emergency telephone number(s)

Emergency: (03) 8710 5999, 0418 607 066

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO AUSTRALIAN WHS REGULATIONS

GHS classification(s):
- Aquatic Toxicity (Chronic): Category 2
- Serious Eye Damage / Eye Irritation: Category 2A
- Skin Corrosion/Irritation: Category 2
- Specific Target Organ Systemic Toxicity (Single Exposure): Category 3
- Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2
- Toxic to Reproduction: Category 2
- Flammable Liquids: Category 2
- Aspiration Hazard: Category 1

2.2 Label elements

Signal word: DANGER

Pictogram(s):

Hazard statement(s):
- H225: Highly flammable liquid and vapour.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H336: May cause drowsiness or dizziness.
- H361: Suspected of damaging fertility or the unborn child.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H411: Toxic to aquatic life with long lasting effects.
3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EC Number</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-HEXANE</td>
<td>110-54-3</td>
<td>203-777-6</td>
<td>30 to 40%</td>
</tr>
<tr>
<td>ACETONE</td>
<td>67-64-1</td>
<td>200-662-2</td>
<td>20 to 30%</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>203-625-9</td>
<td>10 to 20%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye
If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.

Inhalation
If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.

Skin
If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.

Ingestion
For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.

First aid facilities
Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed
Acute: Irritating to the skin. Vapours may cause drowsiness and dizziness. Chronic: Central nervous system (CNS), liver and kidney damage. Possible risk of harm to the unborn child.

4.3 Immediate medical attention and special treatment needed
Treat symptomatically.
5. FIRE FIGHTING MEASURES

5.1 Extinguishing media
Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

5.2 Special hazards arising from the substance or mixture
Highly flammable. May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition. Vapour may form explosive mixtures with air. Eliminate all ignition sources including cigarettes, open flames, spark producing switches/tools, heaters, naked lights, pilot lights and mobile phones when handling. Earth containers when dispensing fluids.

5.3 Advice for firefighters
Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code
- 3YE
- 3 Alcohol Resistant Foam is the preferred firefighting medium but, if it is not available, normal foam can be used.
Y Risk of violent reaction or explosion. Wear full fire kit and breathing apparatus. Contain spill and run-off.
E Evacuation of people in and around the immediate vicinity of the incident should be considered.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions
Prevent product from entering drains and waterways.

6.3 Methods of cleaning up
Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all sources of ignition.

6.4 Reference to other sections
See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities
Store in a cool, dry, well ventilated area, preferably flammables store, removed from direct sunlight, incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate ventilation and fire protection systems.

7.3 Specific end use(s)
No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters
Exposure standards

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Reference</th>
<th>TWA</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
</tr>
<tr>
<td>Acetone</td>
<td>SWA (AUS)</td>
<td>500</td>
<td>1185</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000</td>
<td>2375</td>
</tr>
<tr>
<td>Toluene</td>
<td>SWA (AUS)</td>
<td>50</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td></td>
<td>150</td>
<td>574</td>
</tr>
<tr>
<td>n-Hexane</td>
<td>SWA (AUS)</td>
<td>20</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>
8.2 Exposure controls
Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/ explosive vapours may accumulate in poorly ventilated areas. Vapours may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

PPE

Eye / Face Wear splash-proof goggles.
Hands Wear PVA or viton (R) gloves.
Body Wear coveralls.
Respiratory Where an inhalation risk exists, wear a Type A (Organic vapour) respirator. At high vapour levels, wear an Air-line respirator. If using product in a confined area, wear Self Contained Breathing Apparatus (SCBA).

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>YELLOW LIQUID</td>
</tr>
<tr>
<td>Odour</td>
<td>SOLVENT ODOUR</td>
</tr>
<tr>
<td>Flammability</td>
<td>HIGHLY FLAMMABLE</td>
</tr>
<tr>
<td>Flash point</td>
<td>-20°C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>&gt; 66°C</td>
</tr>
<tr>
<td>Melting point</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>pH</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Vapour density</td>
<td>&gt; 1 (Air = 1)</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>0.82</td>
</tr>
<tr>
<td>Solubility (water)</td>
<td>INSOLUBLE</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>180 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>13 % (based on hexane and acetone)</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>1.1 % (based on hexane and acetone)</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Viscosity</td>
<td>155 cps to 195 cps</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>NOT AVAILABLE</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>NOT AVAILABLE</td>
</tr>
</tbody>
</table>

9.2 Other information

% Volatiles > 60 %
10. STABILITY AND REACTIVITY

10.1 Reactivity
Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability
Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions
Polymerization is not expected to occur.

10.4 Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials
Incompatible with oxidising agents (e.g. hypochlorites), acids (e.g. nitric acid), heat and ignition sources.

10.6 Hazardous decomposition products
May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity
Information available for the product:
No known toxicity data is available for this product. Based on available data, the classification criteria are not met.

Information available for the ingredient(s):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral Toxicity (LD50)</th>
<th>Dermal Toxicity (LD50)</th>
<th>Inhalation Toxicity (LC50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-HEXANE</td>
<td>25 g/kg (rat)</td>
<td>3000 mg/kg (rabbit)</td>
<td>48000 ppm/4 hours (rat)</td>
</tr>
<tr>
<td>ACETONE</td>
<td>3000 mg/kg (mouse)</td>
<td>&gt; 9400 uL/kg (guinea)</td>
<td>44000 mg/m³/4 hours</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>636 mg/kg (rat)</td>
<td>14100 µL/kg (rabbit)</td>
<td>400 ppm/24 hours</td>
</tr>
</tbody>
</table>

Skin
Irritating to the skin. Contact may result in irritation, redness, rash and dermatitis.

Eye
Irritating to the eyes. Contact may result in irritation, lacrimation, pain and redness.

Sensitization
This product is not known to be a skin or respiratory sensitisier.

Mutagenicity
This product is not classified as a mutagen.

Carcinogenicity
This product is not classified as a carcinogen.

Reproductive
Suspected of damaging fertility or the unborn child.

STOT – single exposure
Over exposure may result in dizziness and drowsiness.

STOT – repeated exposure
Long-term exposure to low concentrations damages the respiratory and central nervous system. Symptoms include pulmonary irritation, headaches, dizziness, muscular fatigue, weakness and occasional, transient tremors.

Aspiration
May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability
No information provided.

12.3 Bioaccumulative potential
No information provided.

12.4 Mobility in soil
No information provided.
12.5 Other adverse effects
If aromatic hydrocarbons are released to soil, they will evaporate from near-surface soil & leach to groundwater. Biodegradation occurs in soil & groundwater but may be slow, especially at high concentrations, which can be toxic to microorganisms. Will exist largely as vapour in air. Half life in atmosphere depends on particular hydrocarbon (eg 1-2 days (xylene); 3 hrs-1 day (toluene)).

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal
Wearing the protective equipment outlined, ensure all ignition sources are extinguished. For small quantities, absorb on paper, sand or similar and evaporate under a fume cupboard or open area. For large volumes, atomise into incinerator (mixing with more flammable solvent if required) or recycle by gravimetric separation, distilling & reusing. Contact the manufacturer/supplier for additional information (if required).

Legislation
Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

<table>
<thead>
<tr>
<th>LAND TRANSPORT</th>
<th>SEA TRANSPORT</th>
<th>AIR TRANSPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>(ADG)</td>
<td>(IMDG / IMO)</td>
<td>(IATA / ICAO)</td>
</tr>
<tr>
<td>14.1 UN Number</td>
<td>1133</td>
<td>1133</td>
</tr>
<tr>
<td>14.2 Proper</td>
<td>ADHESIVES</td>
<td>ADHESIVES</td>
</tr>
<tr>
<td>Shipping Name</td>
<td>containing</td>
<td>containing</td>
</tr>
<tr>
<td>ADHESIVES</td>
<td>flammable</td>
<td>flammable</td>
</tr>
<tr>
<td>liquid</td>
<td>liquid</td>
<td>liquid</td>
</tr>
<tr>
<td>14.3 Transport</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>hazard class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.4 Packing</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.5 Environmental hazards
No information provided

14.6 Special precautions for user

<table>
<thead>
<tr>
<th>Hazchem code</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>GTEPG</td>
<td>3A1</td>
</tr>
<tr>
<td>EMS</td>
<td>F-E, S-D</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Poison schedule
Classified as a Schedule 5 (S5) Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications
Safework Australia criteria is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals.

The classifications and phrases listed below are based on the Approved Criteria for Classifying Hazardous Substances [NOHSC: 1008(2004)].

Hazard codes
F Flammable
N Dangerous for the environment
Repr. Reproductive toxin
Xi Irritant
Xn Harmful
ARMAFLEX 520 ADHESIVE

Risk phrases
R11 Highly flammable.
R36/38 Irritating to eyes and skin.
R48/20 Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment.
R62 Possible risk of impaired fertility.
R63 Possible risk of harm to the unborn child.
R65 Harmful: May cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.

Safety phrases
S16 Keep away from sources of ignition - No smoking.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S29 Do not empty into drains.
S33 Take precautionary measures against static discharges.
S35 This material and its container must be disposed of in a safe way.
S51 Use only in well ventilated areas.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Inventory listing(s)
AUSTRALIA: AICS (Australian Inventory of Chemical Substances)
All components are listed on AICS, or are exempt.

16. OTHER INFORMATION

Additional information
RESPIRATORS: In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

WORK PRACTICES - SOLVENTS: Organic solvents may present both a health and flammability hazard. It is recommended that engineering controls should be adopted to reduce exposure where practicable (for example, if using indoors, ensure explosion proof extraction ventilation is available). Flammable or combustible liquids with explosive limits have the potential for ignition from static discharge. Refer to AS 1020 (The control of undesirable static electricity) and AS 1940 (The storage and handling of flammable and combustible liquids) for control procedures.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:
The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.
ABBREVIATIONS

- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS #: Chemical Abstract Service number - used to uniquely identify chemical compounds
- CNS: Central Nervous System
- EC No.: EC No. - European Community Number
- EMS: Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
- GHS: Globally Harmonized System
- GTEPG: Group Text Emergency Procedure Guide
- IARC: International Agency for Research on Cancer
- LC50: Lethal Concentration, 50% / Median Lethal Concentration
- LD50: Lethal Dose, 50% / Median Lethal Dose
- mg/m³: Milligrams per Cubic Metre
- OEL: Occupational Exposure Limit
- pH: relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
- ppm: Parts Per Million
- STEL: Short-Term Exposure Limit
- STOT-RE: Specific target organ toxicity (repeated exposure)
- STOT-SE: Specific target organ toxicity (single exposure)
- SUSMP: Standard for the Uniform Scheduling of Medicines and Poisons
- SWA: Safe Work Australia
- TLV: Threshold Limit Value
- TWA: Time Weighted Average

REPORT STATUS

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ("SDS").

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

PREPARED BY

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[End of SDS]