

Product Name **ARMAFLEX 520 ADHESIVE**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Supplier Name ARMACELL AUSTRALIA PTY LTD
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Synonym(s) ARMACELL ARMAFLEX 520
Use(s) ADHESIVE
SDS Date 01 Jun 2010

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

RISK PHRASES

R11 Highly flammable.
R36/38 Irritating to eyes and skin.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R62 Possible risk of impaired fertility.
R63 Possible risk of harm to the unborn child.
R65 Harmful: May cause lung damage if swallowed.

SAFETY PHRASES

S2 Keep out of reach of children.
S9 Keep container in a well ventilated place.
S16 Keep away from sources of ignition - No smoking.
S36/37 Wear suitable protective clothing and gloves.
S46 If swallowed, contact a doctor or Poisons Information Centre immediately and show container or label.
S62 If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

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

UN No. 1133 **DG Class** 3 **Subsidiary Risk(s)** None Allocated
Packing Group II **Hazchem Code** 3YE

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Ingredient	Formula	CAS No.	Content
N-HEXANE	C6-H14	110-54-3	30-40%
ACETONE	C3-H6-O	67-64-1	20-30%
TOLUENE	C7-H8	108-88-3	10-20%

4. 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.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flammability	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, pilot lights, mobile phones etc when handling. Earth containers when dispensing fluids.
Fire and Explosion	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.
Extinguishing	Dry agent, carbon dioxide or foam. Prevent contamination of drains or waterways.
Hazchem Code	3YE

6. ACCIDENTAL RELEASE MEASURES

Spillage	Contact emergency services where appropriate. Use personal protective equipment. Clear area of all unprotected personnel. Ventilate area where possible. Contain spillage, then cover / absorb spill with non-combustible absorbant material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Eliminate all ignition sources. Prevent spill entering drains or waterways.
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7. STORAGE AND HANDLING

Storage	Store in a cool, dry, well ventilated area, preferably flammables store, removed from direct sunlight, heat or ignition sources, oxidising agents, acids and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Large storage areas should have appropriate fire protection and ventilation systems.
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.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Stds

Ingredient	Reference	TWA		STEL	
Acetone	ASCC (AUS)	500 ppm	1185 mg/m ³	1000 ppm	2375 mg/m ³
n-Hexane	ASCC (AUS)	20 ppm	72 mg/m ³	--	--
Toluene	ASCC (AUS)	50 ppm	191 mg/m ³	150 ppm	574 mg/m ³

Biological Limits

Ingredient	Reference	Determinant	Sampling Time	BEI
ACETONE	ACGIH BEI	Acetone in urine	End of shift	50 mg/L
N-HEXANE	ACGIH BEI	2,5-Hexanedione in urine (without hydrolysis)	End of shift at end of workweek	0.4 mg/L
TOLUENE	ACGIH BEI	o-Cresol in urine	End of shift	0.5 mg/L
	ACGIH BEI	Hippuric acid in urine	End of shift	1.6 g/g creatinine

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Ingredient	Reference	Determinant	Sampling Time	BEI
	ACGIH BEI	Toluene in blood	Prior to last shift of workweek	0.05 mg/L

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 or confined areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended standard.

PPE Wear splash-proof goggles, viton (R) or PVA gloves and coveralls. Where an inhalation risk exists, wear: a Type A (Organic vapour) respirator. At high vapour levels, wear: an Air-line respirator. If spraying, wear: a Type A-Class P1 (Organic gases/vapours and Particulate) respirator.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance	YELLOW LIQUID	Solubility (water)	INSOLUBLE
Odour	SOLVENT ODOUR	Specific Gravity	0.82
pH	NOT AVAILABLE	% Volatiles	> 60 %
Vapour Pressure	180 mm Hg @ 20°C	Flammability	HIGHLY FLAMMABLE
Vapour Density	> 1 (Air = 1)	Flash Point	-20°C (Acetone)
Boiling Point	> 66°C	Upper Explosion Limit	13 % (based on hexane and acetone)
Melting Point	NOT AVAILABLE	Lower Explosion Limit	1.1 % (based on hexane and acetone)
Evaporation Rate	NOT AVAILABLE		
Viscosity	155 cps to 195 cps		

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under recommended conditions of storage.
Conditions to Avoid	Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.
Material to Avoid	Incompatible with oxidising agents (eg. hypochlorites), acids (eg. nitric acid), heat and ignition sources.
Hazardous Decomposition Products	May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition.
Hazardous Reactions	Polymerization is not expected to occur.

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary	Toxic - irritant. This product has the potential to cause adverse health effects. Use safe work practices to avoid eye or skin contact and inhalation. Over exposure may result in anaemia, loss of appetite, tremors and blood, liver and kidney damage. Occupational exposure to n-hexane may result in peripheral neuropathy (nerve damage) in workers, with numbness or tingling in extremities. Recovery from effects on the peripheral nervous system is not immediate upon cessation of exposure, and effects may progress 2-3 months.
Eye	Irritant. Contact may result in irritation, lacrimation, pain, redness and conjunctivitis. May result in burns with prolonged contact.
Inhalation	Irritant - toxic. Over exposure may result in irritation of the nose and throat, coughing, nausea, headache, fatigue, loss of appetite and vomiting. High level exposure may result in dizziness, breathing difficulties, pulmonary oedema and unconsciousness. Chronic exposure may result in kidney, liver and CNS damage.
Skin	Irritant. Contact may result in drying and defatting of the skin, rash and dermatitis. May be absorbed through skin with harmful effects.
Ingestion	Toxic. Ingestion may result in nausea, vomiting, abdominal pain, dizziness, fatigue and diarrhoea. Ingestion of large quantities may result in liver and kidney damage, and unconsciousness. Aspiration may result in chemical pneumonitis and pulmonary oedema.
Toxicity Data	N-HEXANE (110-54-3)

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LC50 (Inhalation): 48000 ppm/4 hours (rat)
LD50 (Ingestion): 25 g/kg (rat)
LD50 (Skin): 3000 mg/kg (rabbit)
ACETONE (67-64-1)
LC50 (Inhalation): 44000 mg/m3/4 hours (mouse)
LCLo (Inhalation): 1600 ppm/4 hours (rat)
LD50 (Ingestion): 3000 mg/kg (mouse)
LD50 (Intraperitoneal): 1297 mg/kg (mouse)
LD50 (Intravenous): 5500 mg/kg (rat)
LD50 (Skin): > 9400 uL/kg (guinea pig)
LDLo (Ingestion): 8000 mg/kg (dog)
LDLo (Intraperitoneal): 500 mg/kg (rat)
LDLo (Intravenous): 1576 mg/kg (rabbit)
LDLo (Skin): 20 mL/kg (rabbit)
LDLo (Subcutaneous): 5000 mg/kg (guinea pig/dog)
TCLo (Inhalation): 500 ppm (human)
TDLo (Ingestion): 2857 mg/kg (man)
TOLUENE (108-88-3)
LC50 (Inhalation): 400 ppm/24 hours (mouse)
LCLo (Inhalation): 1600 ppm (guinea pig)
LD50 (Ingestion): 636 mg/kg (rat)
LD50 (Skin): 14100 uL/kg (rabbit)
LDLo (Ingestion): 50 mg/kg (human)
TCLo (Inhalation): 50 ppm (man)
TDLo (Ingestion): 400 mg/kg (rat)

12. ECOLOGICAL INFORMATION

Environment Limited ecotoxicity data was available for this product at the time this report was prepared. Ensure appropriate measures are taken to prevent this product from entering the environment.

13. DISPOSAL CONSIDERATIONS

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 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

Shipping Name	ADHESIVES containing flammable liquid			
UN No.	1133	DG Class	3	Subsidiary Risk(s) None Allocated
Packing Group	II	Hazchem Code	3YE	GTEPG 3A1

IATA

Shipping Name	ADHESIVES containing flammable liquid			
UN No.	1133	DG Class	3	Subsidiary Risk(s) None Allocated
Packing Group	II			

IMDG

Shipping Name	ADHESIVES containing flammable liquid			
UN No.	1133	DG Class	3	Subsidiary Risk(s) None Allocated
Packing Group	II			

15. REGULATORY INFORMATION

Poison Schedule Classified as a Schedule 5 (S5) Poison using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

AICS All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

16. OTHER INFORMATION

Additional Information SYNERGISM - ANTAGONISM: Ingredients in this product may act together to aggravate or reduce adverse effects. Accordingly the time weighted average concentration (TWA) provided for single ingredients should be considered as a guide only and all due care exercised when handling.

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.

ABBREVIATIONS:

ADB - Air-Dry Basis.

BEI - Biological Exposure Indice(s)

CAS# - Chemical Abstract Service number - used to uniquely identify chemical compounds.

CNS - Central Nervous System.

EC No - European Community Number.

IARC - International Agency for Research on Cancer.

M - moles per litre, a unit of concentration.

mg/m³ - Milligrams per cubic metre.

NOS - Not Otherwise Specified.

NTP - National Toxicology Program.

OSHA - Occupational Safety and Health Administration.

pH - relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).

ppm - Parts Per Million.

RTECS - Registry of Toxic Effects of Chemical Substances.

TWA/ES - Time Weighted Average or Exposure Standard.

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 Chem Alert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this Chem Alert 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.

Report Status This document has been compiled by RMT on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer 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.

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.

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End of Report