

MATERIAL SAFETY DATA SHEET **ARMSTRONG SC-100 CONTACT ADHESIVE**

Issue Date: 1 s t June 2016

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ARMSTRONG SC-100 CONTACT ADHESIVE

SYNONYMS: "vinyl adhesive"

PROPER SHIPPING NAME: ADHESIVES

PRODUCT USE: Contact adhesive for bonding vinyl.

SUPPLIER: Armstrong Flooring Pty Ltd

Address: 29-39 Mills Road, Braeside, VIC, 3195, Australia

Telephone: +61 3 9586 5500

Emergency Tel: +61 3 9586 5500

Fax: +61 3 9580 4810

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: **HAZARDOUS SUBSTANCE. DANGEROUS GOODS.** According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE: S5

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| <p>RISK</p> <ul style="list-style-type: none">» Highly flammable.» Irritating to eyes and skin.» Harmful- danger of serious damage to health by prolonged exposure through inhalation.» Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.» Possible risk of impaired fertility.» Possible risk of harm to the unborn child.» HARMFUL- May cause lung damage if swallowed. | <p>SAFETY</p> <ul style="list-style-type: none">» Keep away from sources of ignition. No smoking.» Do not breathe gas/fumes/vapour/spray.» Use only in well ventilated areas.» Avoid exposure - obtain special instructions before use.» To clean the floor and all objects contaminated by this material use water and detergent.» Keep container tightly closed.» This material and its container must be disposed of in a safe way.» Keep away from food drink and animal feeding stuffs.» In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.» If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).» Use appropriate container to avoid environmental contamination.» Avoid release to the environment. Refer to special instructions/Safety data sheets.» This material and its container must be disposed of as hazardous waste. |
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Section 3 – COMPOSITION/INFORMATION ON INGREDIENTS

NAME	CAS RN	%
toluene	108-88-3	10-<30
acetone	67-64-1 10	-<30 n-
hexane	110-54-3 10	-<30
other non hazardous ingredients		10-<30

Section 4 – FIRST AID MEASURES

SWALLOWED:

- If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomiting.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Avoid giving milk or oils.
- Avoid giving alcohol.

EYE:

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN:

If skin contact occurs:

- Immediately remove all contaminated clothing, including footwear.
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED:

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN:

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically for simple ketones:

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema. Following acute or short term repeated exposures to n-hexane:
- Large quantities of n-hexane are expired by the lungs after vapour exposure (50-60%). Humans exposed to 100 ppm demonstrate an n-hexane biological half life of 2 hours.
- Initial attention should be directed towards evaluation and support of respiration. Cardiac dysrhythmias are a potential complication.

INGESTION:

- Ipecac syrup should be considered for ingestion of pure hexane exceeding 2-3ml/kg. Extreme caution must be taken to avoid aspiration since small amounts of n-hexane intratracheally, produce a severe chemical pneumonitis. [Ellenhorn and Barceloux: Medical Toxicology]
- BIOLOGICAL EXPOSURE INDEX BEI BEIs represent the levels of determinants which are most likely to be observed in specimens collected in a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the Exposure Standard (ES or TLV). Following acute or short term repeated exposures to toluene:
 - Toluene is absorbed across the alveolar barrier, the blood/air mixture being 11.2/15.6 (at 37 degrees C.) The concentration of toluene, in expired breath, is of the order of 18 ppm following sustained exposure to 100 ppm. The tissue/blood proportion is 1/3 except in adipose where the proportion is 8/10.
 - Metabolism by microsomal mono-oxygenation, results in the production of hippuric acid. This may be detected in the urine in amounts between 0.5 and 2.5 g/24 hr which represents, on average 0.8 gm/gm of creatinine. The biological half-life of hippuric acid is in the order of 1-2 hours.
 - Primary threat to life from ingestion and/or inhalation is respiratory failure.
 - Patients should be quickly evaluated for signs of respiratory distress (eg cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ <50 mm Hg or pCO₂ > 50 mm Hg) should be intubated.

Section 5 – FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:

- Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

FIRE FIGHTING:

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course. When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 metres in all directions.

FIRE/EXPLOSION HAZARD:

- Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers. Combustion products include: carbon dioxide (CO₂), nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material. Contains low boiling substance. Closed containers may rupture due to pressure buildup under fire conditions.

FIRE INCOMPATIBILITY:

- Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM:

- 3YE

PERSONAL PROTECTION:

Glasses:

Chemical goggles.

Gloves: PVC chemical resistant type.

Respirator: Type AXNO Filter of sufficient capacity

Section 6 – ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS:

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes. • Control personal contact by using protective equipment.

MAJOR SPILLS:

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 – HANDLING & STORAGE

PROCEDURE FOR HANDLING:

- Containers, even those that have been emptied, may contain explosive vapours.
- Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- DO NOT allow clothing wet with material to stay in contact with skin.
- Electrostatic discharge may be generated during pumping - this may result in fire.
- Ensure electrical continuity by bonding and grounding (earthing) all equipment.
- Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec).
- Avoid splash filling.
- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps. Contains low boiling substance. Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.
- Check for bulging containers.
- Vent periodically
- Always release caps or seals slowly to ensure slow dissipation of vapours.

SUITABLE CONTAINER:

- Packing as supplied by manufacturer.
- Plastic containers may only be used if approved for flammable liquid.
- Check that containers are clearly labelled and free from leaks.
- For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
- For materials with a viscosity of at least 2680 cSt. (23 deg. C)
- For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
- Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C).

STORAGE INCOMPATIBILITY:

» Toluene:

- reacts violently with strong oxidisers, bromine, bromine trifluoride, chlorine, hydrochloric acid/ sulfuric acid mixture, 1,3-dichloro-5,5-dimethyl-2,4-imidazolidindione, dinitrogen tetraoxide, fluorine, concentrated nitric acid, nitrogen dioxide, silver chloride, sulfur dichloride, uranium fluoride, vinyl acetate
- forms explosive mixtures with strong acids, strong oxidisers, silver perchlorate, tetranitromethane
- is incompatible with bis-toluenediazo oxide
- attacks some plastics, rubber and coatings. For alkyl aromatics: The alkyl side chain of aromatic rings can undergo oxidation by several mechanisms. The most common and dominant one is the attack by oxidation at benzylic carbon as the intermediate formed is stabilised by resonance structure of the ring.
- Following reaction with oxygen and under the influence of sunlight, a hydroperoxide at the alpha-position to the aromatic ring, is the primary oxidation product formed (provided a hydrogen atom is initially available at this position) - this product is often short-lived but may be stable dependent on the nature of the aromatic substitution; a secondary C-H bond is more easily attacked than a primary C-H bond whilst a tertiary C-H bond is even more susceptible to attack by oxygen
- Monoalkylbenzenes may subsequently form monocarboxylic acids; alkyl naphthalenes mainly produce the corresponding naphthalene carboxylic acids.
- Oxidation in the presence of transition metal salts not only accelerates but also selectively decomposes the hydroperoxides.

- Hock-rearrangement by the influence of strong acids converts the hydroperoxides to hemiacetals. Peresters formed from the hydroperoxides undergo Criegee rearrangement easily.
- Alkali metals accelerate the oxidation while CO₂ as co-oxidant enhances the selectivity.
- Microwave conditions give improved yields of the oxidation products.
- Photo-oxidation products may occur following reaction with hydroxyl radicals and NO_x - these may be components of photochemical smogs. Oxidation of Alkylaromatics: T.S.S Rao and Shubhra Awasthi: E-Journal of Chemistry Vol 4, No. 1, pp 1-13 January 2007.
- Vigorous reactions, sometimes amounting to explosions, can result from the contact between aromatic rings and strong oxidising agents.
- Aromatics can react exothermically with bases and with diazo compounds.

Acetone:

- may react violently with chloroform, activated charcoal, aliphatic amines, bromine, bromine trifluoride, chlorotriazine, chromic(IV) acid, chromic(VI) acid, chromium trioxide, chromyl chloride, hexachloromelamine, iodine heptafluoride, iodoform, liquid oxygen, nitrosyl chloride, nitrosyl perchlorate, nitryl perchlorate, perchloromelamine, peroxomonosulfuric acid, platinum, potassium tert-butoxide, strong acids, sulfur dichloride, trichloromelamine, xenon tetrafluoride.
- reacts violently with bromoform and chloroform in the presence of alkalies or in contact with alkaline surfaces.
- may form unstable and explosive peroxides in contact with strong oxidisers, fluorine, hydrogen peroxide (90%), sodium perchlorate, 2-methyl-1,3butadiene
- can increase the explosive sensitivity of nitromethane on contact flow or agitation may generate electrostatic charges due to low conductivity.
- Ketones in this group are reactive with many acids and bases liberating heat and flammable gases (e.g., H₂).
- Ketones react with reducing agents such as hydrides, alkali metals, and nitrides to produce flammable gas (H₂) and heat.
- Ketones are incompatible with isocyanates, aldehydes, cyanides, peroxides, and anhydrides.
- Ketones react violently with aldehydes, HNO₃ (nitric acid), HNO₃ + H₂O₂ (mixture of nitric acid and hydrogen peroxide), and HClO₄ (perchloric acid).

STORAGE REQUIREMENTS:

- Store in original containers in approved flame-proof area.
- No smoking, naked lights, heat or ignition sources.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- Keep containers securely sealed.

Section 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE CONTROLS:

Source	Material	TWA ppm T	WA mg/m ³	STEL ppm	STEL mg/m ³
Australia Exposure Standards	toluene (Toluene)	50	191	150	574
Australia Exposure Standards	acetone (Acetone)	500	1185	1000	2375
Australia Exposure Standards	n- hexane (Hexane (n-Hexane))	20	72		

PERSONAL PROTECTION

RESPIRATOR:

Type AXNO Filter of sufficient capacity

EYE:

- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at

the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET:

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber. Suitability and durability of glove type is dependent on usage. Factors such as: • frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity,

OTHER:

- Overalls.
- PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.

ENGINEERING CONTROLS:

»For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating	0.25- 0.5 m/s (50- 100 f/min.)
from tank (in still air). aerosols, fumes from pouring operations,	0.5- 1 m/s (100- 200 f/min.)
intermittent container filling, low speed conveyer transfers, welding,	
spray drift, plating acid fumes, pickling	
(released at low velocity into zone of active generation)	
direct spray, spray painting in shallow booths,	1- 2.5 m/s (200- 500 f/min.)
drum filling, conveyer loading, crusher dusts, gas discharge	
(active generation into zone of rapid air motion)	

Section 9 – PHYSICAL & CHEMICAL PROPERTIES

APPEARANCE:

Yellow highly flammable liquid with a hydrocarbon solvent odour; partly mixes with water.

PHYSICAL PROPERTIES:

Liquid.

Molecular Weight: Not Applicable	Boiling Range (°C): 56.5- 111.0
Melting Range (°C): Not Available	Specific Gravity (water=1): ~0.82
Solubility in water (g/L): Partly Miscible	pH (as supplied): Not Available
pH (1% solution): Not Available	Vapour Pressure (kPa): 2.47 @ 20C
Volatile Component (%vol): Not Available	Evaporation Rate: Not Available
Relative Vapour Density (air=1): Not Available	Flash Point (°C): <- 30
Lower Explosive Limit (%): 2.62	Upper Explosive Limit (%): 13.00
Autoignition Temp (°C): Not Available	Decomposition Temp (°C): Not Available
State: Liquid	Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY:

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS:

ACUTE HEALTH EFFECTS

- » HARMFUL- May cause lung damage if swallowed.
- » Irritating to eyes and skin.
- » Vapours may cause dizziness or suffocation.

CHRONIC HEALTH EFFECTS

- » Possible risk of impaired fertility.
- » Possible risk of harm to the unborn child.
- » Harmful: danger of serious damage to health by prolonged exposure through inhalation.

TOXICITY AND IRRITATION:

» Unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

» For toluene:

Acute Toxicity Humans exposed to intermediate to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis, and death. Similar effects are observed in short-term animal studies.</>. for acetone: The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin.

TOLUENE: » unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (human) LDLo: 50 mg/kg
 Oral (rat) LD50: 636 mg/kg
 Inhalation (human) TClO: 100 ppm
 Inhalation (man) TClO: 200 ppm
 Inhalation (rat) LC50: >26700 ppm/1h
 Dermal (rabbit) LD50: 12124 mg/kg

IRRITATION:

Skin (rabbit): 20 mg/24h - Moderate
 Skin (rabbit): 500 mg - Moderate
 Eye (rabbit): 0.87 mg - Mild
 Eye (rabbit): 2mg/24h - SEVERE
 Eye (rabbit): 100 mg/30sec - Mild

» The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

For toluene:

Acute Toxicity Humans exposed to intermediate to high levels of toluene for short periods of time experience adverse central nervous system effects ranging from headaches to intoxication, convulsions, narcosis, and death. Similar effects are observed in short-term animal studies.</>.

ACETONE:

» Unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (man) TDLo: 2857 mg/kg
 (rat) LD50: 5800 mg/kg
 (human) TClO: 500 ppm
 (man) TClO: 12000 ppm/4 hr
 (man) TClO: 10 mg/m³/6 hr
 (rat) LC50: 50100 mg/m³/8 hr
 Dermal (rabbit) LD50: 20000 mg/kg

IRRITATION:

Eye (human): 500 ppm - Irritant Oral
 Eye (rabbit): 3.95 mg - SEVERE Inhalation
 Eye (rabbit): 20mg/24hr - Moderate Inhalation
 Skin (rabbit): 395mg (open) - Mild Inhalation
 Skin (rabbit): 500 mg/24hr - Mild Inhalation

» The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. for acetone: The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin.

N-HEXANE:

» Unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 28710 mg/kg
 Inhalation (human) TCLO: 190 ppm/8W
 Inhalation (rat) LD50: 48000 ppm/4h

IRRITATION:

Eye(rabbit): 10 mg - Mild

» The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

CARCINOGEN :

toluene	International Agency for Research on Cancer (IARC) Carcinogens	Group	3
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REPROTOXIN:

toluene	ILO Chemicals in the electronics industry that have toxic effects on reproduction		Reduced fertility or sterility
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SKIN:

toluene	Australia Exposure Standards – Skin	Notes	Sk
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Section 12 – ECOLOGICAL INFORMATION

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. This material and its container must be disposed of as hazardous waste. Avoid release to the environment. Refer to special instructions/ safety data sheets.

Ecotoxicity:

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulat ion	Mobility
Armstrong SC-100				
toluene			LOW	HIGH
acetone			LOW	HIGH
n- hexane			LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

»Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.
- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: Burial in a licensed land-fill or Incineration in a licensed apparatus (after admixture with suitable combustible material).
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14 - TRANSPORTATION INFORMATION

Labels Required: FLAMMABLE LIQUID
HAZCHEM: ●3YE (ADG7)

ADG7:

Class or division:	3	Subsidiary risk:	None
UN No.:	1133	UN packing group:	II
Special provisions:	None	Packing Instructions:	None
Notes:	None	Limited quantities:	5 L
Packagings and IBCs -	P001, IBC02	Packagings and IBCs -	PP1
Packing instruction:		Special packing provisions:	None : None

Shipping Name: ADHESIVES containing flammable liquid

Land Transport UNDG:

Class or division:	3	Subsidiary risk:	None
UN No.:	1133	UN packing group:	II

Shipping Name: ADHESIVES containing flammable liquid

Air Transport IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None.
UN/ID Number:	1133	Packing Group:	II
Special provisions:	A3		

Shipping Name: ADHESIVES CONTAINING FLAMMABLE LIQUID

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1133	Packing Group:	II
EMS Number:	F- E, S- D	Special provisions:	944
Limited Quantities:	5 L	Marine Pollutant:	Not Determined

Shipping Name: ADHESIVES containing flammable liquid

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: S5

REGULATIONS

Armstrong SC-100 Contact Adhesive (CAS: None): No regulations applicable

Regulations for ingredients toluene (CAS: 108-88-3) is found on the following regulatory lists;

Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - organic compounds)

Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)

Australia - Australian Capital Territory Environment Protection Regulation Ecosystem maintenance - Organic chemicals - Non-pesticide anthropogenic organics

Australia - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Domestic water quality Australia Exposure Standards Australia Hazardous Substances Australia High Volume Industrial Chemical List (HVICL)

Australia Illicit Drug Reagents/Essential Chemicals - Category III Australia Inventory of Chemical Substances (AICS) Australia National Pollutant Inventory Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix F (Part 3) Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix I Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5 Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6 GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships IMO IBC Code Chapter 17: Summary of minimum requirements IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products International Agency for Research on Cancer (IARC) Carcinogens OECD Representative List of High Production Volume (HPV) Chemicals United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and

Psychotropic Substances Under International Control - Table II WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water

acetone (CAS: 67-64-1) is found on the following regulatory lists; Australia - Victoria Occupational Health and Safety Regulations - Schedule 9: Materials at Major Hazard Facilities (And Their Threshold Quantity) Table 2 Australia Exposure Standards Australia Hazardous Substances Australia High Volume Industrial Chemical List (HVICL) Australia Illicit Drug Reagents/Essential Chemicals - Category III Australia Inventory of Chemical Substances (AICS) Australia National Pollutant Inventory Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2) Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix F (Part 3) Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5 GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships IMO IBC Code Chapter 18: List of products to which the Code does not apply IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products OECD Representative List of High Production Volume (HPV) Chemicals United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances - Table II United Nations List of Precursors and Chemicals Frequently used in the Illicit Manufacture of Narcotic Drugs and Psychotropic Substances Under International Control - Table II

n-hexane (CAS: 110-54-3) is found on the following regulatory lists; Australia Exposure Standards Australia Hazardous Substances Australia High Volume Industrial Chemical List (HVICL) Australia Inventory of Chemical Substances (AICS) Australia National Pollutant Inventory Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Appendix E (Part 2) Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 5 GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships IMO IBC Code Chapter 17: Summary of minimum requirements IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO International Chemical Secretariat (ChemSec) REACH SIN* List (*Substitute It Now!) 1.0 International Council of Chemical Associations (ICCA) - High Production Volume List OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

» The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Material Safety Data Sheets are updated frequently. Please ensure that you have a current copy.

This MSDS summarises at the date of issue our best knowledge of the health and safety hazard information of the product, and in particular how to safely handle and use the product in the workplace. Since Armstrong Flooring Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this MSDS in the context of how the user intends to handle and use the product in the workplace.

If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.

Our responsibility for product as sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available upon request.