1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

Material Name: **Gunwash Thinners**

Recommended Uses: Solvent. Raw material for use in the chemical industry

Other names: General Purpose Thinners, Multi Purpose Thinners, All Purpose Thinners.

Supplier :

Auschem (NSW) Pty. Ltd.
ABN: 32 084 260 159

PO Box 6309, Wetherill Park
91 Newton Road, Wetherill Park
NSW 2164 Australia

Telephone : +612 9756 5559
Fax : +612 9756 5558

Local Contact

Telephone: +612 9756 5559
Fax: +612 9756 5558

Emergency Telephone Number: 1800 651 818 (24 hours) / (International) +613 8823 3095

2. HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of 8afe Work Australia.

Hazard Category:

Xn: Harmful
Xi: Irritant

Risk Phrases (s):

R36: Irritating to eyes.
R38: Irritating to skin.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through Inhalation.
R63: Possible risk of harm to the unborn child.
R65: Harmful: May cause lung damage if swallowed.
R66: Repeated exposure may cause skin dryness or cracking.
R67: Vapours may cause drowsiness and dizziness.

Safety Phrase (s):

S2 Keep out of the reach of children. S24/25: Avoid contact with skin and eyes.
S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S62: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

Poisons Schedule (Aust): 86

DANGEROUS GOODS CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433:Transport of Dangerous Goods on Land".

Class: 3 Flammable Liquid

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components

Chemical Name	CAS	EINECS	Symbol(s)	R-phrase(s)	Conc.
Toluene	108-88-3	203-625-9	F, Xn	R11; R38; R40/20; R63; R65; R67	>60 %
Methyl Ethyl Ketone	78-93-3				30-60 %

Additional Information: Refer to chapter 16 for full text of EC R-phrases.

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4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre

Inhalation: Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

Skin Contact: For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

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

Ingestion: Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Get to a doctor or hospital quickly.

Notes to Physician: Treat symptomatically. Delayed pulmonary oedema may result.

5.FIRE-FIGHTING MEASURES

Specific Hazards: Flammable liquid. Flameproof equipment necessary in area where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapour may travel a considerable distance to source of ignition and flash back. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke.

Fire Fighting Further Advice: If safe to do so, remove containers from path of fire. Keep containers cool with water spray. On burning may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Hazchem Code: •3YE

Suitable Extinguishing Media: If material is involved in a fire use water fog (or if unavailable fine water spray), foam, dry agent (carbon dioxide, dry chemical powder).

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6. ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations. Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet.

See Chapter 13 for information on disposal.

Protective Measures: Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas.
Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by 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. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Ventilate contaminated area thoroughly.

Clean Up Methods: For large liquid spills (> 1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.
For small liquid spills (< 1 drum), transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional Advice: Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Vapour may form an explosive mixture with air. See Chapter 13 for information on disposal.

7. HANDLING AND STORAGE

General Precautions: Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. On guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling: Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Even with proper grounding and bonding, this material can still accumulate an electrostatic charge. If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur. Be aware of handling operations that may give rise to additional hazards that result from the accumulation of static charges. These include but are not limited to pumping (especially turbulent flow), mixing, filtering, splash filling, cleaning and filling of tanks and containers, sampling, switch loading, gauging, vacuum truck operations, and mechanical movements. These activities may lead to static discharge e.g. spark formation. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (<= 1 m/s until fill pipe submerged to twice its diameter, then <= 7 m/s). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations. Handle and open container with care in a well-ventilated area.

Storage: Vapours from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapour treatment system. Bulk storage tanks should be diked (bunded). Must be stored in a diked (bunded) well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Electrostatic charges will be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable.

Product Transfer: Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.
Refer to guidance under Handling section.

Recommended Materials: For containers, or container linings use mild steel, stainless steel.

Unsuitable Materials: Natural, butyl, neoprene or nitrile rubbers.

Container Advice: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Additional Information: Ensure that all local regulations regarding handling and storage facilities are followed.
See additional references that provide safe handling practices for liquids that are determined to be static accumulators: American Petroleum Institute 2003 (Protection Against Ignitions Arising out of Static, Lightning and Stray Currents) or National Fire Protection Agency 77 (Recommended Practices on

Static Electricity). CENELEC CLC/TR 50404 (Electrostatics – Code of practice for the avoidance of hazards due to static electricity).

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Material	Type	ppm	mg/m³
Toluene	TWA	50	191
	STEL	150	574
Methyl Ethyl Ketone	TWA	150	445
	STEL	300	890

Additional Information: Skin notation means that significant exposure can also occur by absorption of liquid through the skin and of vapour through the eyes or mucous membranes.

Exposure Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapours [boiling point >65 °C (149 °F)] meeting EN14387. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

Hand Protection: Where hand contact with the product may occur the use of gloves approved to relevant standards (e.g. Europe: EN374, US: F739, AS/NZS:2161) made from the following materials may provide suitable chemical protection: Longer term protection: Viton. Incidental contact/Splash protection: Nitrile rubber. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced.
Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection: Chemical splash goggles (chemical monogoggles).

Protective Clothing: Chemical resistant gloves/gauntlets. Where risk of splashing or in spillage clean up, use chemical resistant one-piece overall with integral hood. Wear antistatic and flame retardant clothing.

Monitoring Methods: Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls. For some substances biological monitoring may also be appropriate. Examples of sources of recommended exposure measurement methods are given below or contact the supplier. Further national methods may be available. National Institute of Occupational Safety and Health (NIOSH), USA: Manual of Analytical Methods, http://www.cdc.gov/niosh/nmam/nmammenu.html. Occupational Safety and Health Administration (OSHA), USA: Sampling and Analytical Methods http://www.osha.gov/dts/sltc/methods/index.html Health and Safety Executive (HSE), UK: Methods for the Determination of Hazardous Substances, http://www.hse.gov.uk/pubns/mdhs/index.htm Institut für Arbeitsschutz Deutschen Gesetzlichen Unfallversicherung (IFA), Germany. http://www.dguv.de/ifa/en/gestis/analytical_methods/index.jsp L'Institut National de Recherche et de Securité, (INRS), France http://www.inrs.fr/accueil/risques/chimiques/controle-exposition. html

Environmental Exposure Controls: Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colourless Liquid.
Odour:	Characteristic Odour.
Solubility:	Partly Soluble
Relative Vapour Density (air=1):	>1
Specific Gravity (20°C):	0.80 – 0.86
Boiling Point:	Typical 79 - 112 °C
Melting / freezing point:	Data Not Available
Flash point:	-4 °C (MEK)
Explosion / Flammability limits in air:	LEL -1.0; UEL – 11.5
Auto-Ignition Temperature:	Data Not Available
Vapour Pressure:	Typical 2.2 kPa (Toluene)
Density:	Typical 860 kg/m3 at 15 °C / 59 °F
pH:	Data Not Available

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10. STABILITY AND REACTIVITY

Chemical Stability:	This material is thermally stable when stored and used as directed.
Conditions To Avoid:	Elevated temperatures and sources of ignition.
Incompatible Materials:	Oxidising agents.
Hazardous Decomposition Products:	Oxides of carbon and nitrogen, smoke and other toxic fumes.
Hazardous reactions:	No known hazardous reactions.

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11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Acute Effects

Inhalation:	Material may be irritant to mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness and possible nausea.
Skin Contact:	Contact with skin will result in irritation. Repeated exposure may cause skin dryness or cracking. Can be absorbed through the skin with resultant toxic effects.
Eye Contact:	An eye irritant.
Ingestion:	May cause lung damage if swallowed. Small amounts of liquid aspirated into the respiratory system during ingestion or vomiting may cause bronchopneumonia or pulmonary oedema.
Long Term Effects:	No information available for product.

Acute toxicity I Chronic toxicity

No LD50 data available for the product. However, for the constituent:

Toluene

Oral LD50 (rat):	636 mg/kg
Dermal LD50 (rabbit):	14,100 uLlkg
SKIN: (Draize):	Mild to moderate irritant
EYES: (Draize):	Mild to moderate irritant

The major effects in humans following acute exposure to high concentrations (such as in deliberate sniffing or industrial accidents) are central nervous system dysfunction and narcosis.

Under controlled conditions, inhalation of 50, 75 or 100 ppm oftoluene for 4 to 6 hours was associated with headache and irritation. There are also numerous reports of altered central nervous system performance among humans inhaling 40 ppm to more than 100 ppm.

Both bioassay tests and other available data (including two human studies) indicate that toluene is not carcinogenic.

Based on available in-vivo data, studies of humans are inconclusive with regard to genotoxicity, while most in-vitro studies indicate negative results for toluene.

While there have been some reported developmental effects in experimental animal testing involving toluene, studies do not provide evidence that toluene is teratogenic following inhalation.

Methyl Ethyl Ketone

Oral LD50 (rat):	2,737 mg/kg
Inhalation LC50 (rat):	23,500 mg/m3/8 hr
Dermal LD50 Range (rabbit):	5,000-13,000 mg/kg
EYES (rabbit):	Moderate irritant. Eye irritation reported in humans exposed to vapour at 350 ppm

Mutagenicity:	Methyl ethyl ketone has been shown to be without genotoxic activity in a variety of in vitro and in vivo tests. Among the tests, which produced negative results, are assays for point mutation (eg. Ames test and mouse lymphoma), chromosomal aberration (rat liver cells in vitro and mouse bone marrow in vivo), DNA damage (unscheduled DNA synthesis in rat hepatocytes), and morphologic transformation (BALB 3T3 morphologic transformation.
Reproductive I developmental Effects:	No human studies have been reported. An initial inhalation study with rats indicated fetotoxicity (eg. delayed foetal development) and possible teratogenicity at 3000 ppm. However, a comprehensive follow-up study in rats showed only slight fetotoxicity accompanied by maternal toxicity at 3000 ppm, but no teratogenic effects. No significant differences were seen between rats exposed to 1000 ppm or 400 ppm methyl ethyl ketone and the control. Likewise, an inhalation study with mice showed only fetotoxicity at 3000 ppm and no effects at 1000 ppm or 400 ppm methyl ethyl ketone.

Methyl ethyl ketone is not neurotoxic. It has been shown to potentiate the neurotoxic effects of hexane, 2,5-hexanedione and methyl-n-butyl ketone and has also potentiated the liver toxicity of halogenated solvents (eg. chloroform and carbon tetrachloride) in animal studies.

Not a skin sensitiser based on human patch test.

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12. ECOLOGICAL INFORMATION

Avoid contaminating waterways. No data available for the product. However, for the constituent:

Ecotoxicity:	Toluene Toxic to aquatic organisms. Avoid contaminating waterways. Material is moderately toxic to aquatic organisms on an acute basis (LC50 between 1 and 10 mg/L in most sensitive species).
LC50 (Daphnia magna):	60-313 mg/L
Persistence anddegradability:	No information available.
Mobility:	No information available.

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13. DISPOSAL CONSIDERATIONS

Refer to State/Territory Land Waste Management Authority.

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14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail".

UN No:	1263
Dangerous Goods Class:	3
Packing Group:	II
Hazchem Code:	•3YE
Emergency Response Guide No:	14
Proper Shipping Name:	PAINT RELATED MATERIAL

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2) or radioactive substances (Class 7), however exemptions may apply.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

UN No:	1263
Dangerous Goods Class:	3
Packing Group:	II
Proper Shipping Name:	PAINT RELATED MATERIAL

AIR TRANSPORT

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

UN No:	1263
Dangerous Goods Class:	3
Packing Group:	II
Proper Shipping Name:	PAINT RELATED MATERIAL

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15. REGULATORY INFORMATION

Poisons Schedule (Aust): S6

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

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16. OTHER INFORMATION

MSDS Version Number: 1.0

MSDS Effective Date: 10.04.2013

MSDS Revisions: A vertical bar (|) in the left margin indicates an amendment from the previous version.

Uses and Restrictions: Raw material for use in the chemical industry.
Use only in industrial processes.

MSDS Distribution: The information in this document should be made available to all who may handle the product

Disclaimer: This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
