



ABN 46 091 597 661

20 Jensen Rd Banyo 4014

Insitu Geotech Services Pty Ltd



SAFE WORK METHOD STATEMENT (SWMS)

ACTIVITY:

Working With In Situ Testing Rigs

SITE/PROJECT:

Generic Project

RISK ASSESSMENT											
No.	Activity	Risk/Unwanted Event	Latent Risk			Risk Control Measures	Hierarchy of Controls	Residual Risk			Person to Implement
			Severity	Likelihood	Risk Rating			Severity	Likelihood	Risk Rating	
1	Pre-Start Check-Over This involves following a checklist that is part of Daily Record Sheet.	(i) Items missed. (ii) Injury from checking equipment (slips, trips, back injury)	2	C	M	Use checklist on Daily Report Sheet. Make sure checks are made by experienced people using correct lifting techniques.	Eliminate	1	D	L	Project Operator & Trained Assistants
2	Working Outdoors	(i) heat stroke, (ii) sunburn, (iii) hypothermia	1	C	L	Keep hydrated. Apply sunscreen and/or wear shade hat. Wear warm clothing when cold.	Eliminate	1	E	L	All personnel
3	Identify Test Location Test locations are nominated by client's supervisor, not by IGS.	(i) undertaking test in wrong location, (ii) hitting underground services.	3	C	M	Test at locations advised by client's supervisor. Sight locations in a pre-test walk-over. Ask if in doubt (don't test until sure).	Eliminate	3	E	L	Project Operator & Trained Assistants
4	Traversing	(i) Rig roll-over. (ii) Collision	3	D	M	Check terrain before traversing. Only experienced personnel should drive rig.	Substitute	3	E	L	Project Operator & Trained Assistants
5	Set Up To Test This involves lifting the rig up on jacks and levelling it. Often timber sleepers are placed under each jack. Process is reversed after test.	(i) Back injury, splinters, cuts or bruises handling wooden sleepers under jacks. (ii) Hands or feet caught under jacks.	3	C	M	Use appropriate lifting techniques and wear gloves when handling sleepers. Use slow rate of jack speed. Communicate closely.	Substitute and PPE	3	E	L	All personnel
6	Testing & Pulling Out This involves pushing a probe into the ground at slow steady pace using the hydraulic pusher in the centre of the rig. The pusher moves at only 20mm per second during pushing. Extension rods 1m long are added progressively as the test proceeds. Each weighs 7kg and is screwed on manually. The process is reversed when pulling out.	Cuts, bruises, crushed fingers.	3	C	M	Use slow rate of travel when head is pushing down and hands are sometimes on pusher. Hands not to be located on top of the pusher when head is travelling up. Inspect rods every time added or removed and file smooth any sharp edges that develop. Wear gloves when handling rods.	Substitute and PPE	2	D	L	Project Operator & Trained Assistants
7	End of Day Pack-Up Rig is locked, sleepers stored on board, computers packed up, etc.	Back injury, cuts, bruises	3	C	M	Equipment to be isolated before inspection. Equipment to be allowed to cool down before manual handling if necessary. Use appropriate lifting techniques and wear gloves when handling sleepers.	Eliminate and PPE	2	D	L	All personnel

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Issued By: Allan McConnell

15/08/2011

Page 2 of 5



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GLYCEROL MSDS

Material Safety Data Sheet

GLYCEROL 98%

Infosafe No. AJ17V Issue Date August 2006 Status ISSUED by APSSC

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: GLYCEROL 98%
Product Code: A4277
Company Name: APS, A Division of Nuplex Industries (Aust) Pty Ltd
Address: 8 Abbott Road SEVEN HILLS NSW 2147
Emergency Tel: 1800 022 037 (24H)
Telephone/Fax Number: (02) 9839 4000 / (02) 9674 6225
Recommended Use: Not available.
Other Names: None Listed
Other Information: New Zealand: Asia Pacific Specialty Chemicals (NZ) Limited

2. HAZARDS IDENTIFICATION

Hazard Classification: Australia: Not classified as Hazardous, according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC).
New Zealand: Not classified as Hazardous according to the Hazardous Substances (Classification) Regulations 2001, New Zealand.

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Not classified as Dangerous Goods for transport, according to the NZS 5433:1999 Transport of Dangerous Goods on Land.

Risk Phrase(s)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Table with 4 columns: Ingredients, Name, CAS, Proportion. Row: Glycerol, 56-81-5, 100 %

4. FIRST AID MEASURES

Inhalation: Remove the source of contamination or move the victim to fresh air.
Ingestion: Do NOT induce vomiting. Wash out mouth with water.
Skin: Wash affected area thoroughly with soap and water.
Eye: If contact with the eye(s) occurs, wash with copious amounts of water.
First Aid Facilities: Eye wash and normal washroom facilities.
Advice to Doctor: Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Carbon dioxide, dry chemical powder, alcohol-resistant foam and sand.
Hazards from Combustion Products: Under fire conditions this product may emit toxic and/or irritating fumes including carbon monoxide and carbon dioxide.
Specific Hazards: Combustible.
Precautions in connection with Fire: Full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Other: Increase ventilation. Evacuate all unnecessary personnel. Wear protective

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Issued By: Allan McConnell

15/08/2011

Page 3 of 5



ABN 46 091 597 661

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Information clothing to minimise skin and eye exposure. If possible contain. Dike the spill or place inert absorbent material onto spillage. Collect material with clean non sparking tools and place into the same container. Large spills may be taken up with a pump or vacuum. If the spillage enters the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

7. HANDLING AND STORAGE

Precautions for Safe Handling Use in a well ventilated area. Do not take internally. Build up of mists or vapours in the atmosphere should be prevented. Avoid breathing in spray or mists or vapours. Exposure without protection should be prevented in order to lessen the possibility of disorders. It is essential that all who come into contact with this material maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for Safe Storage Store in a cool, dry, well-ventilated out of direct sunlight. Keep containers closed when not in use and securely sealed to protect against physical damage. Inspect regularly for deficiencies such as damage or leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure standards have been established for this material by the Australian National Occupational Health & Safety Commission (NOHSC) or the Occupational Safety and Health Service (OSH) of the New Zealand Department of Labour.

Biological Limit Values No biological limit allocated.

Engineering Controls Use with good general ventilation. If mists or vapours are produced local exhaust ventilation should be used.

Respiratory Protection If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.

Eye Protection Safety glasses with side shields, goggles or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection Wear gloves of impervious material such as rubber. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Wear appropriate clothing including chemical resistant apron where clothing is

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Protection likely to be contaminated.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Clear viscous liquid.

Odour Almost odourless.

Melting Point 18°C

Boiling Point 290°C

Solubility in Water Soluble.

Solubility in Organic Solvents Insoluble in ether and chloroform.

Specific Gravity 1.263 g/mL @ 15°C
1.2594 g/mL @ 25°C
1.242 g/mL @ 50°C

pH Value 5.5 - 6.5 (33% solution)

Vapour Pressure 1300 Pa @ 167.2°C

Vapour Density (Air=1) Not available.

Flash Point 160°C (Cleveland open cup)

Flammability Combustible.

Auto-Ignition Temperature 386°C

Flammable Limits - Lower Not available.

Flammable Limits - Upper Not available.

Molecular Weight 92.09

10. STABILITY AND REACTIVITY

Chemical Stability Stable under normal conditions.

Conditions to Avoid Extremes of temperature and direct sunlight.

Incompatible Materials Unknown.

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15/08/2011

Page 4 of 5



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Hazardous Decomposition Products None known.
Hazardous Reactions
Hazardous Polymerization Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information Acute toxicity: (Glycerin)
LD50 Oral (rat): 12600 mg/kg
LD50 Skin (rabbit): > 10 g/kg
LC50 Inhalation (rat): > 570 mg/m3/1hr

Inhalation Inhalation of product vapours may cause irritation of the nose, throat and respiratory system.

Ingestion Ingestion of this product may irritate the gastric tract causing nausea and vomiting.

Skin May cause redness, itching and irritation.

Eye May cause eye irritation, tearing, stinging, blurred vision, and redness.

Chronic Effects Not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Not available.

Persistence / Degradability % degradation by BOD = 63% 14 days. (OECD301C)

Mobility Not available.

Environment Protection Avoid contaminating waterways.

Acute Toxicity - Fish LC50 Carp: > 1000 mg/L (48hr)

Acute Toxicity - Daphnia EC50 Daphnia magna: > 1000 mg/L (3hr)

Other Information BOD5: 0.58 g/g
COD(Cr): 1.1 g/g

13. DISPOSAL CONSIDERATIONS

Disposal Considerations Dispose of waste according to federal, EPA and state regulations.

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14. TRANSPORT INFORMATION

Transport Information Australia:
Not classified as Dangerous Goods, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

New Zealand:
Not classified as Dangerous Goods for transport according to the NZS 5433:1999 Transport of Dangerous Goods on Land.

Storage and Transport Not classified as dangerous goods.

15. REGULATORY INFORMATION

Regulatory Information Australia:
Not classified as hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC).
Poison Schedule: Not Scheduled

New Zealand:
Not classified as Hazardous according to the Hazardous Substances (Classification) Regulations 2001.

Poisons Schedule Not Scheduled

Packaging & Labelling No special packaging or labelling requirements.

16. OTHER INFORMATION

Date of preparation or last revision of MSDS MSDS Reviewed: August 2006

Contact Person/Point Australia: Business Hours: Mr Paul Verren
Telephone: (02) 9839 4024
Emergency Tel: 1800 022 037

New Zealand: Business Hours: Mr Lloyd Williams
Telephone: (09) 276 4019
Emergency Tel: 0800 154 666

IMPORTANT ADVICE: This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Nuplex Industries (Aust) Pty Ltd. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

END OF MSDS

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Page 5 of 5