



MATERIAL SAFETY DATA SHEET

ALUWEAR PROTECT PART B (HARDENER) STANDARD

COMPANY DETAILS

Company:	Direct Mining Solution (Pty) Ltd
Trade name:	Africa Operations Solutions
Address:	19 Foreman Street Spartan
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IDENTIFICATION

Product Name:	AluWear Protect Trowelable, (Part B)
Other Names:	Triethylenetetramine
Manufacturer's Code:	ALW002
UN Number:	2259
Dangerous Goods Class and Subsidiary Risk:	Class 8 Packaging GP II
Hazchem Code:	2X
Use:	Epoxy resin curing agent. Used in formulation with other substances to improve the wet strength of paper. Also used in preparation of surfactant and softener formulations.

PHYSICAL DESCRIPTION/PROPERTIES

Appearance:	Light straw coloured liquid. Amine odour.
Boiling/Melting Point:	Greater than 250 deg C
Vapour Pressure:	Less than 1 mmHG at 20 deg C
Specific Gravity:	0.973-0.981 at 25 deg C
Flash Point:	118 deg C (astm D-93, pmcc)
Flammable limits:	LFL: 1.1% at 185 deg C. UFL: greater than 6.4% at 185 deg C
Solubility in Water:	Mixes completely

OTHER PROPERTIES

Not applicable.

INGREDIENTS

Chemical Name:	CAS Number:	Proportion:
Triethylenetetramine	112-24-3	98-100%
Silane		<2%

HEALTH HAZARD INFORMATION

HEALTH EFFECTS - ACUTE:

Swallowed:	Single dose oral toxicity is considered to be low. Swallowing may cause gastrointestinal irritation or ulceration. Swallowing may cause burns of mouth and throat.
Eye:	May cause pain. May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness.
Skin:	Short single exposure may cause severe skin burns. Has caused an allergic skin reaction in humans. A single prolonged exposure may result in the material being absorbed in harmful amounts.
Inhaled:	May cause respiratory sensitisation in susceptible individuals. Excessive exposure may cause irritation to upper respiratory tract.

HEALTH EFFECTS - CHRONIC:

Systemic Effects:	(Other target organs) - no relevant information found.
Cancer Information:	Did not cause cancer in long term animal studies.
Teratology (birth defects):	Laboratory animals that were fed exaggerated doses of triethylenetriamine showed adverse foetal effects that were believed to be associated with an observed copper deficiency. Exposures having no effect on the mother should have no effect on the foetus.
Reproductive effects:	No relevant effects found.

FIRST AID:

Swallowed:	Do NOT induce vomiting. Give large amounts of water or milk to drink and seek medical advice.
Eye:	Hold eyes open and flood with running water for at least 30 minutes. Prompt medical consultation is essential.
Skin:	In the case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Seek medical advice if irritation persists.
Inhaled:	Remove to fresh air. Seek medical advice if effects persist.

ADVICE TO DOCTOR:

May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or oesophageal control. If burn is present, treat as thermal burn, after decontamination.

Supportive care:	Treatment based on judgement of the doctor in response to reactions of the patient. Excessive exposure may aggravate pre-existing asthma. Treat symptomatically.
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PRECAUTIONS FOR USE

EXPOSURE STANDARDS:

None established.

ENGINEERING CONTROLS:

Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTION:

Respiratory Protection:

Use of an approved respirator. Selection of air purifying or positive-pressure supplied air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions use an approved positive pressure self contained breathing apparatus.

Skin Protection:

Use protective clothing impervious to this material. Selection of specific items such as face shield, gloves, boots, apron or full body suit will depend on the operation.

Eye/Face Protection:

Use approved chemical goggles. Wear a face shield which allows the use of chemical goggles, or wear a full face respirator to protect face and eyes when there is any likelihood of splashes. Eye wash should be located in the immediate work area.

FLAMMABILITY:

Will burn under the right conditions of heat and oxygen supply. Classed as a combustible liquid. At ambient temperatures, vapour mixtures with air are not expected to be explosive.

SAFE HANDLING INFORMATION

Storage & Transport:

Classified as a dangerous good, class 8 - corrosive, for transport and storage. Store in accordance with regulations for storage of dangerous goods: some state authorities may also regulate combustible liquid status for this product. Class 8 substances shall not be loaded in the same vehicle or packed in the same freight container with:

- Class 1** Explosives
- Class 4.3** Dangerous when wet substances
- Class 5.1** Organic Peroxides
- Class 6** Poisonous (toxic) substances

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Spills and Disposal:

In the case of a spill, wear personal protective equipment as indicated above. Spilt material should be absorbed into dry inert material then placed into appropriately labelled container and disposed of in accordance with local regulations. Avoid contaminating waterways, drains, sewers or ground.

Fire/Explosion Hazard:

Extinguishing Media: Water fog, alcohol foam, carbon dioxide, dry chemical. Hazardous combustion products include carbon dioxide, toxic carbon monoxide and oxides of nitrogen. Unidentified organic compounds may be formed during combustion.

OTHER INFORMATION

Note:

Prevent spillage from entering waterways or drains.