

ENVIRO GEL 155 ACCELERATOR

Waterproofing Technologies Pty Ltd

Version No:1.1

Safety Data Sheet according to WHS and ADG requirements

Hazard Alert Code: 2

Issue Date: **14/11/2016** Print Date: **14/11/2016** S.GHS.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	ENVIRO GEL 155 ACCELERATOR
Synonyms	Not Available
Other means of identification	Not Available

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses Catalyst

Details of the supplier of the safety data sheet

Registered company name	Waterproofing Technologies Pty Ltd
Address	295 Princes Highway, St Peters, NSW, 2044, Australia
Telephone	+61 (0)2 8595 8699
Fax	+61 (0)2 8595 8660
Website	www.envirosystems.com.au
Email	sales@envirosystems.com.au

Emergency telephone number

Association / Organisation	Waterproofing Technologies Pty Ltd
Emergency telephone numbers	+61 (0)2 8595 8699
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule	Not Applicable	
Classification [1]	Skin Corrosion/Irritation Category 2, Eye Irritation Category 2A	
Legend:	1. Classification drawn from HSIS ; 2. Classification drawn from EC Directive 1272/2008 - Annex VI	

Label elements

GHS label elements



SIGNAL WORD WARNING

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.

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P101	medical advice is needed, have product container or label at hand.	
P102	Keep out of reach of children.	
P103	Read label before use.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	

Precautionary statement(s) Response

P362	Take off contaminated clothing and wash before reuse.	
P305+P351+P338	N EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P302+P352	IF ON SKIN: Wash with plenty of soap and water.	
P332+P313	If skin irritation occurs: Get medical advice/attention.	

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
280-57-9	1-10	<u>triethylenediamine</u>
3033-62-3	1-10	bis(2-dimethylaminoethyl)ether
Not Available	to 100	All other substances - non-hazardous

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	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. • Seek medical attention without delay; if pain persists or recurs seek medical attention. • Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	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.
Inhalation	 If furnes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary.
Ingestion	 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. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

Fire Fighting

Advice for firefighters

Alert Fire Brigade and tell them location and nature of hazard.

- Wear breathing apparatus plus protective gloves in the event of a fire.
- ▶ Prevent, by any means available, spillage from entering drains or water courses.
- ► Use fire fighting procedures suitable for surrounding area.
- ► DO NOT approach containers suspected to be hot.

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Fire/Explosion Hazard

Non combustible.

▶ Not considered a significant fire risk, however containers may burn.

May emit poisonous fumes. May emit corrosive fumes.

HAZCHEM

Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills

- ► Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- ▶ Control personal contact with the substance, by using protective equipment.
- ▶ Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.

Major Spills

Moderate hazard.

- ▶ Clear area of personnel and move upwind.
- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ Wear breathing apparatus plus protective gloves.
- ▶ Prevent, by any means available, spillage from entering drains or water course.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area.
- ► Avoid contact with moisture.
- ▶ Avoid contact with incompatible materials.
- ▶ DO NOT allow clothing wet with material to stay in contact with skin

Other information

Conditions for safe storage, including any incompatibilities

Suitable container

- ► Polyethylene or polypropylene container.
- ► Packing as recommended by manufacturer.
- ▶ Check all containers are clearly labelled and free from leaks

Storage incompatibility

None known

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
triethylenediamine	Diazabicyclo(2,2,2)octane, 1,4-	0.19 mg/m3	2.1 mg/m3	340 mg/m3
bis(2-dimethylaminoethyl)ether	Oxybis(N,N-dimethylethanamine), 2,2'-; (Bis(2-dimethylaminoethyl) ether; DMAEE)	0.15 ppm	1.7 ppm	5.9 ppm

Ingredient	Original IDLH	Revised IDLH
triethylenediamine	Not Available	Not Available
bis(2-dimethylaminoethyl)ether	Not Available	Not Available
All other substances - non-hazardous	Not Available	Not Available

Exposure controls

Appropriate engineering	ı
controls	

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

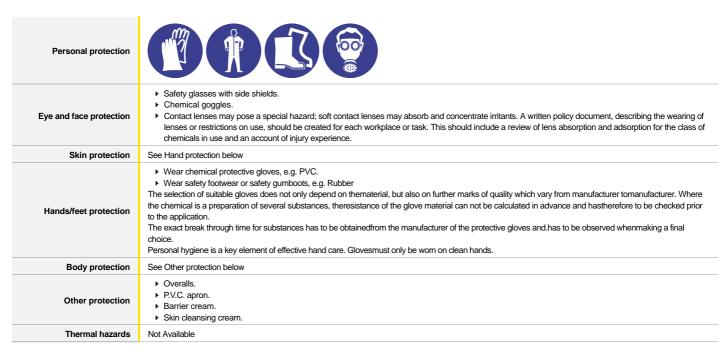
Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard 'physically' away from the worker and ventilation that strategically 'adds' and 'removes' air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly.

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Respiratory protection

Type AE Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the 'Exposure Standard' (or ES), respiratoryprotection is required. Degree of protection varies with both face-piece and Class offilter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AE-AUS	-	AE-PAPR-AUS / Class 1
up to 50 x ES	-	AE-AUS / Class 1	-
up to 100 x ES	-	AE-2	AE-PAPR-2 ^

^{^ -} Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hq = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling pointorganic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

	• •		
Appearance	Liquid		
Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Available
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	Se
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See section 7

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Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.		
Ingestion	Accidental ingestion of the material may be damaging to the	e health of the individual.	
Skin Contact	through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed	ndition as classified under EC Directives); the material may still produce health damage following entry to this material asions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use	
Eye	This material can cause eye irritation and damage in some persons.		
Chronic	nevertheless exposure by all routes should be minimised as	the chronic effects adverse to the health (as classified by EC Directives using animal models); is a matter of course. cancer or mutations but there is not enough data to make an assessment.	
ENVIRO GEL 155	TOXICITY	IRRITATION	
ACCELERATOR	Not Available	Not Available	
	TOXICITY	IRRITATION	
triethylenediamine	Oral (rat) LD50: 1700 mg/kg ^[2]	Eye (rabbit): 25 mg - moderate	
		Skin (rabbit): 25 mg (open)-mild	
	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: 238 mg/kg ^[2]	Eye (rabbit): 0.25 mg - SEVERE	

bis(2dimethylaminoethyl)ether

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 238 mg/kg ^[2]	Eye (rabbit): 0.25 mg - SEVERE
Inhalation (rat) LC50: 4 mg/l/4hr ^[2]	Eye (rabbit): 1 mg - SEVERE
Oral (rat) LD50: 571 mg/kg ^[2]	Skin (rabbit): 100 mg/24h-SEVERE
	Skin (rabbit): 5 mg/24h - SEVERE
	Skin (rabbit): Corrosive *

Legend:

1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

TRIETHYLENEDIAMINE

Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.

Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.

Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

BIS(2-

While it is difficult to generalise about the full range of potential health effects posed by exposure to the many different aminecompounds, characterised by those used in the manufacture of polyurethane and polyisocyanurate foams, it is agreed that overexposure to the majority of these materials may cause adverse health effects.

- Many amine-based compounds can induce histamine liberation, which, in turn, can trigger allergic and other physiological effects, including bronchoconstriction or bronchial asthma and rhinitis.
- Systemic symptoms include headache, nausea, faintness, anxiety, a decrease in blood pressure, tachycardia (rapid heartbeat), itching, erythema (reddening of the skin), urticaria (hives), and facial edema (swelling). Systemic effects (those affecting the body) that are related to the pharmacological action of amines are usually transient.

Typically, there are four routes of possible or potentialexposure: inhalation, skin contact, eye contact, and ingestion.

Lower doses of dimethylethanolamine (DMAE) produce a gradual increase in muscle tone and perhaps an increased frequency of convulsions in susceptible individuals. Larger doses produced sleeplessness, spontaneous muscle twitches and elevated blood pressure. Increased nasal and oral secretions, difficulty in breathing, and respiratory failure have been observed. It can also cause cancers of the liver and respiratory tract. It is contraindicated in pregnancy and lactation because of its harmful effects to the foetus and growing baby.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

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The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. (aerosol)* ** BASF Canada Corneal damage, respiratory tract changes, gastrointestinal tract changes, changes in bladder weight, ptosis, changes in kidney tubules, dermatitis after systemic exposure, foetotoxicity, specific developmental abnormalities (musculoskeletal system) recorded. The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema TRIETHYLENEDIAMINE & BIS(2involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-DIMETHYLAMINOETHYL)ETHER mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the TRIETHYLENEDIAMINE & BIS(2diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms DIMETHYLAMINOETHYL)ETHER within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. 0 0 **Acute Toxicity** Carcinogenicity Skin Irritation/Corrosion Reproductivity 0 Serious Eye STOT - Single Exposure 0 Damage/Irritation Respiratory or Skin 0 STOT - Repeated Exposure 0 sensitisation

> **Aspiration Hazard** Legend:

0

💢 – Data available but does not fill the criteria for classification

Data required to make classification available

Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Mutagenicity

0

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
triethylenediamine	LC50	96	Fish	1211.993mg/L	3
triethylenediamine	EC50	48	Crustacea	>100mg/L	2
triethylenediamine	EC50	96	Algae or other aquatic plants	51.827mg/L	3
triethylenediamine	NOEC	48	Crustacea	92mg/L	2
bis(2- dimethylaminoethyl)ether	LC50	96	Fish	1863.930mg/L	3
bis(2- dimethylaminoethyl)ether	EC50	72	Algae or other aquatic plants	4mg/L	2
bis(2- dimethylaminoethyl)ether	EC50	72	Algae or other aquatic plants	24mg/L	2
bis(2- dimethylaminoethyl)ether	NOEC	72	Algae or other aquatic plants	0.26mg/L	2
Legend:	Aquatic Toxicity Data	, ,	HA Registered Substances - Ecotoxicological I database - Aquatic Toxicity Data 5. ECETOC A tition Data 8. Vendor Data	, ,	

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
triethylenediamine	HIGH	HIGH
bis(2-dimethylaminoethyl)ether	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
triethylenediamine	LOW (BCF = 13)
bis(2-dimethylaminoethyl)ether	LOW (LogKOW = -0.5386)

Mobility in soil

Ingredient	Mobility
triethylenediamine	LOW (KOC = 95.14)
bis(2-dimethylaminoethyl)ether	LOW (KOC = 21.85)

SECTION 13 DISPOSAL CONSIDERATIONS

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Waste treatment methods

Product / Packaging

disposal

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

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

- ▶ Reduction
- ▶ Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means.

- ▶ 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 land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).
- ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

TRIETHYLENEDIAMINE(280-57-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

BIS(2-DIMETHYLAMINOETHYL)ETHER(3033-62-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Υ
Canada - DSL	Υ
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Υ
Korea - KECI	Υ
New Zealand - NZIoC	Υ
Philippines - PICCS	Υ
USA - TSCA	Υ
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
bis(2-dimethylaminoethyl)ether	3033-62-3, 59948-21-9, 112326-78-0, 357920-72-0

Classification of the preparation and its individual components has drawn on official and authoritative sources.

The 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. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors BEI: Biological Exposure Index