



SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF MATERIAL AND SUPPLIER

SUPPLIER:	Genesis Solutions.
OFFICE ADDRESS:	12b Martha St. Seaford VIC, 3198, Australia.
TELEPHONE:	(03) 9785 9013.
FAX:	(03) 9785 9017
AH EMERGENCY TELEPHONE:	13 1126 (24 Hours) – Australian National Poisons Centre.
WEB PAGE:	www.genessolutions.com.au
Product Name:	TRAFFIC LANE CLEANER.
Other Names:	Not applicable.
Proper Shipping Name:	CORROSIVE LIQUID, N.O.S. (Contains Ammonia and Monoethanolamine).
Product Use:	Heavy duty carpet traffic lane soil removal pre-spray.
Manufacturer's Product Code:	Not applicable.
Creation Date:	11 May 2017.
Revision Date:	Before 10 May 2022.

SECTION 2 – HAZARDS IDENTIFICATION


This product is classified as **HAZARDOUS** in accordance with the GHS, and is classified as a **HAZARDOUS CHEMICAL** in accordance with the WHS, and is classified as **DANGEROUS GOODS** according to the ADG Code.

CLASSIFICATION:		
Hazard Classes & Categories:	Hazard Class	Hazard Category
Physical:	Not applicable.	
Health:	Skin Corrosion/Irritation.	1B.
	Serious Eye Damage/Irritation.	1.
Environmental:	Hazardous to the aquatic environment — Acute Hazard	3.
	Hazardous to the aquatic environment — Chronic Hazard	3.
LABEL ELEMENTS:		
Signal Word:	DANGER.	
Hazard Statements:	Causes severe skin burns and eye damage.	
	Causes serious eye damage.	
	Harmful to aquatic life.	
	Harmful to aquatic life with long lasting effects.	
Precautionary Statements:		
Prevention:	Wear protective gloves/protective clothing/eye protection/face protection.	
	Do not breathe mist/vapours/spray.	
	Wash skin thoroughly after handling.	
	Avoid release to the environment.	



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SECTION 2 – HAZARDS IDENTIFICATION (CONTINUED)

Response:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTRE or doctor/physician. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTRE or doctor/physician. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician. Wash contaminated clothing before reuse.
Storage:	Store locked up.
Disposal:	Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.
General:	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use.
Pictogram:	
Pictogram Description:	Corrosion
Other Hazards which do not result in Classification:	Not applicable.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Proportion:
Ammonia 10-35%	1336-21-6	< 10 % w/w
Amides, vegetable oil, N,N-bis(hydroxyethyl)	68155-26-0	< 5 % w/w
Monoethanolamine	141-43-5	< 5 % w/w
Benzenesulfonic acid, mono-C10-16-alkyl derivatives, sodium salts	68081-81-2	< 5 % w/w
Diethanolamine	111-42-2	< 1 % w/w
Other Ingredients (Non-Hazardous) and Water	Proprietary	To 100 % w/w
Total		100 % w/w



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SECTION 4 – FIRST AID MEASURES

Scheduled Poisons:	Poisons Information Centre in each Australian State capital city can provide additional assistance for scheduled poisons. (Phone Australia 13 1126) or a doctor (at once).
First Aid Facilities Required:	Eye wash fountains and a general washing facility should be easily accessible in the immediate work area.
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:	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Immediate medical attention is required. If swelling, redness, blistering or irritation occurs seek medical assistance. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Discard contaminated shoes, belts, and other articles made of leather.
Eye Contact:	Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Immediately seek medical attention.
Ingestion (Swallowed):	Immediately rinse out mouth and drink 1 or 2 glasses of water. Immediately seek medical attention and bring these instructions. If swallowed DO NOT induce vomiting. Never give anything by mouth to an unconscious patient. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration into the lungs. Get to a doctor or hospital quickly.
PPE for First Aiders:	Wear overalls, safety glasses or goggles and impervious gloves. Chemical resistant gloves (e.g. Butyl, neoprene, nitrile, Viton gloves >1 mm thickness, complying with AS 2161) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
Advice to Doctor:	Treat symptomatically. Poisons Information Centre in each Australian State capital city can provide additional assistance for scheduled poisons.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Extinguish with coarse water spray or foam. Use Carbon dioxide (CO ₂) or dry agent for small fires.
Unsuitable Extinguishing Media:	Not applicable.
Specific Hazards arising from the chemical:	Flammable ammonia gas will be liberated at all temperatures, which can be explosive between 16 -25% in air. Addition to concentrated mineral acids will cause instant boiling and a possible explosion.



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SECTION 5 – FIRE FIGHTING MEASURES (CONTINUED)

Special Protective Equipment & Precautions for Fire Fighters:	Wear self-contained breathing apparatus and full body protection. If involved in a fire, keep containers cool with water spray. If safe to do so, remove containers from the path of fire. Minimise exposure. Do not breathe fumes. Contain run-off, prevent by any means available spillage from entering drains and water course.
Hazchem Code:	2X.
IERG:	37.
Flash Point:	Not combustible.
Flammability:	Non-combustible liquid. For Ammonia (NH ₃): The main products of combustion in air, at or above 780°C are Nitrogen (N ₂) and water with small amounts of Nitrogen Dioxide (NO ₂) and Ammonium Nitrate (NH ₄ NO ₃). Ammonia decomposes into flammable Hydrogen (H ₂) gas at approximately 450°C. May form flammable mixtures with air. The presence of oil or other combustible material will increase fire hazard. Fatalities have occurred as a result of the explosive nature of the ammonia gas.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spills:	
Personal Precautions, Protective Equipment & Emergency Procedures:	<p>In case of spill, isolate hazard area and deny entry. Wear protective clothing as described in Section 8 of this safety data sheet. Eye contact MUST be prevented by means of suitable personal protection equipment. See Section 8, Exposure Controls And Personal Protection for further information regarding personal protection. See Section 4, First Aid Measures, for further information.</p> <p><u>Eye and face protection:</u> The use of face shields, chemical goggles, or safety glasses with side shield protection (meeting the requirements of AS/NZS 1337) is recommended. If exposed to dust or fume, wear dust-tight goggles (meeting the requirements of AS/NZS 1337).</p> <p><u>Skin protection:</u></p> <p><u>Hand protection:</u> Chemical resistant gloves (e.g. Butyl, neoprene, nitrile, Viton gloves >1 mm thickness, complying with AS 2161) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.</p> <p><u>Clothing:</u> Suitable protective clothing complying with AS 4501, suitable chemical resistant footwear complying with AS/NZS 2210 is recommended.</p> <p><u>Respiratory protective equipment:</u> When the product is used in case of inadequate ventilation use a full-face air purifying respirator (with Class K filter for ammonia and organic ammonia derivatives vapours) meeting the requirements of AS/NZS 1715 and AS/NZS 1716.</p>



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SECTION 6 – ACCIDENTAL RELEASE MEASURES (CONTINUED)

Environmental Precautions:	Do not allow to enter drainage system, surface or ground water. In the event of product entering waters or drainage system, or polluting soil or plants contact the Environmental Protection Authority or your local Waste Management Authority.
Methods & Materials for Containment & Cleaning up:	
Small Spills:	Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal. The wasted material can be disposed of by incineration (preferably high temperature) by an approved agent according to State, Territory and/or Local government regulations.
Large Spills:	Shut off all possible sources of ignition. Clear area of all unprotected personnel. Prevent further leakage or spillage if safe to do so. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain- prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material, but not sawdust). Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services. The wasted material can be disposed of by incineration (preferably high temperature) by an approved agent according to State, Territory and/or Local government regulations.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling:	For personal protection see section 8. Avoid spills. Avoid all personal contact, including skin and eye contact and inhalation of vapour, mist or aerosols and avoid contamination of clothing. Wear protective clothing when risk of exposure occurs. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers closed at all times. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use.
Information about Fire and Explosion Protection:	Product is classified as a Corrosive Liquid according to ADG and for the purpose of storage and handling, in accordance with the requirements of AS 3780. Refer to State Regulations for storage and transport requirements.
Conditions for Safe Storage, including any Incompatibilities:	Store in a cool (at temperatures below 25°C), dry, well-ventilated place and out of direct sunlight. Store away from incompatible materials including oxidising agents. Store away from sources of heat or ignition. Keep containers closed when not in use - check regularly for leaks.
Further Information about Storage Conditions:	This product is a Scheduled Poison S5 and must be stored, maintained and used in accordance with the relevant regulations. Containers may be hazardous when empty. Since emptied containers retain product residue, follow all SDS and label warnings even after container is emptied.



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SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Control Measures:	Ensure the use of individual protection measures including Personal Protective Equipment (PPE) and that the appropriate biological monitoring is carried out.
Exposure Standards:	<p>National Occupational Exposure Limits, as published by Safework Australia:</p> <p>Time-weighted Average (TWA): None established for product.</p> <p>TWA for Ammonia is 25 ppm, 17 mg/m³. TWA for Diethanolamine is 3 ppm, 13 mg/m³. TWA for Monoethanolamine is 3 ppm, 7.5 mg/m³.</p> <p>Short Term Exposure Limit (STEL): None established for product.</p> <p>STEL for Ammonia is 35 ppm, 24 mg/m³. STEL for Monoethanolamine is 6 ppm, 15 mg/m³.</p> <p>These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.</p>
Biological Monitoring:	Safe Work Australia have not published any Biological Limits for ingredients of this product.
Engineering Controls:	When using this product use only outdoors or in a well-ventilated area and ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation (draw off vapours directly at the point of generation and exhaust from the work area) or while wearing appropriate respirator. Vapour is heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use. Provide eyewash station and safety shower.
Individual Protection Measures Including Personal Protective Equipment (PPE):	<p><u>General protective & hygiene measures:</u> The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing, and wash contaminated clothing and other protective equipment before storing or re-using. DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. Avoid contact with the eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.</p> <p><u>Eye and face protection:</u> The use of face shields, chemical goggles, or safety glasses with side shield protection (meeting the requirements of AS/NZS 1337) is recommended. If exposed to dust or fume, wear dust-tight goggles (meeting the requirements of AS/NZS 1337).</p>



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SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION (CONTINUED)

Skin protection:

Hand protection: Chemical resistant gloves (e.g. Butyl, neoprene, nitrile, Viton gloves >1 mm thickness, complying with AS 2161) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.

Clothing: Suitable protective clothing complying with AS 4501, suitable chemical resistant footwear complying with AS/NZS 2210 is recommended.

Respiratory protective equipment: When the product is used in case of inadequate ventilation use a full-face air purifying respirator (with Class K filter for ammonia and organic ammonia derivatives vapours) meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Description/

Properties:

Appearance:	Clear liquid.
Odour:	Light ammonia odour.
Odour Threshold:	0.6 - 53 ppm (detection of ammonia); 0.7 - 55 ppm (recognition of ammonia).
pH:	Ca. 11.0 – 11.5.
Melting Point/ Freezing Point:	Ca. 0°C (based on water).
Initial Boiling Point/ Boiling Range:	Ca. 100°C (based on water).
Flashpoint:	Not applicable.
Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Upper/Lower Flammability or Explosive Limits:	Not applicable.
Vapour Pressure:	Not available.
Vapour Density:	>1 (air=1).
Relative Density:	Ca. 1.02 @ 20°C.
Solubility:	Soluble in water.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Not available.
Decomposition Temperature:	Not applicable.
Viscosity:	Low.



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SECTION 10 – STABILITY AND REACTIVITY

Reactivity:	Ammonium hydroxide reacts violently with acids.
Chemical Stability:	Stable under recommended storage conditions.
Possibility of Hazardous Reactions:	Ammonium hydroxide is corrosive to copper, nickel, tin, zinc. and their alloys.
Conditions to Avoid:	Elevated temperatures.
Incompatible Materials:	Incompatible with peroxides, metal salts, acids, and reducing agents.
Hazardous Decomposition Products:	For Ammonia (NH ₃): The main products of combustion in air, at or above 780°C are Nitrogen (N ₂) and water with small amounts of Nitrogen Dioxide (NO ₂) and Ammonium Nitrate (NH ₄ NO ₃). Ammonia decomposes into flammable Hydrogen (H ₂) gas at approximately 450°C. May form flammable mixtures with air. The presence of oil or other combustible material will increase fire hazard. Fatalities have occurred as a result of the explosive nature of the ammonia gas.

SECTION 11 – TOXICOLOGICAL INFORMATION

Health Effects:	No data for product, following data is compiled on basis of ingredients.
Acute Toxicity Data (Oral):	No data for product. On basis of ingredients: Acute Toxicity for Ammonium Hydroxide, (Oral) LD ₅₀ (rat) 350 mg/kg, LDLo (man) 43 mg/kg. Acute Toxicity for Diethanolamine, (Oral) LD ₅₀ (rat) 0.62 mL/kg (680 mg/kg). Acute Toxicity for Monoethanolamine, (Oral) LD ₅₀ (rat) = 1090 - 1320 mg/kg.
Acute Toxicity Data (Dermal):	No data for product. On basis of ingredients: Acute Toxicity for Diethanolamine, (Dermal) LD ₅₀ (rabbit) 7.64 mL/kg (8381 mg/kg). Acute Toxicity for Monoethanolamine, (Dermal) LD ₅₀ (rat) = 1000 - 2950 mg/kg.
Acute Toxicity Data (Inhalation):	No data for product. On basis of ingredients: Acute Toxicity for Ammonium Hydroxide, (Inhalation) TCLo (human) 408 ppm, LCLo (human) 5000 ppm. Acute Toxicity for Monoethanolamine, (Inhalation) LC (mouse) greater than near-saturated vapour concentration/6 hours.



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SECTION 11 – TOXICOLOGICAL INFORMATION (CONTINUED)

Chronic Toxicity Data:

No data for product. On basis of ingredients:
Chronic exposure to Ammonia or Ammonium Hydroxide may cause chemical pneumonitis and kidney damage. Repeated or prolonged exposure may result in bronchitis.

For Monoethanolamine:

In an inhalation study with rats, guinea pigs, and dogs presented in the literature, doses varied up to 102 ppm over durations ranging from 3.5-13 wks for rats, 3.5 wks for guinea pigs, and 4-13 wks for dogs. Major signs at high exposures included mortality, severe stress, breathing difficulties, and behaviour changes. Histopathological changes were observed in lungs and nasal mucosa in guinea pigs and in livers and kidneys in guinea pigs and dogs. All exposure levels showed skin histopathology.

In an inhalation study with rats at doses up to 160 ppm for up to 6 months presented in literature, major signs included decreased body weights, altered haematological parameters, altered urine chemistries, and altered hippuric acid synthesis. The study concluded that the liver and kidney are the target organs.

In a 4-week dietary study with rats at doses of up to 2,670 mg/kg/day, the major signs at 1,280 mg/kg/day were deaths, kidney and liver histopathology. Altered liver and kidney weights were observed at 640 mg/kg/day.

Skin Corrosion/Irritation:

Product is classified as Skin Corrosion/Irritation, Hazard Category 1B; Causes severe skin burns and eye damage. No data for product. On basis of ingredients:

Contact of Ammonia or Ammonium Hydroxide with skin will result in severe irritation, and it is corrosive to skin - may cause skin burns.

Monoethanolamine, 4 hour occluded contact on rabbit; 0.5 ml resulted in severe erythema, oedema and necrosis with subsequent ulceration and scabbing, severe irritation persisted through 14 days.

Serious Eye Damage/Irritation:

Product is classified as Serious Eye Damage/Irritation, Hazard Category 1; Causes serious eye damage. On basis of ingredients:

Ammonia or Ammonium Hydroxide are severe eye irritants and are corrosive to eyes; contact can cause corneal burns. Contamination of eyes with Ammonia or Ammonium Hydroxide can result in permanent injury.

Monoethanolamine, contact on rabbit; 0.005 ml resulted in severe corneal injury with vascularization and corneal deformation, severe iritis, severe conjunctival irritation with necrosis and haemorrhages, healed by 21 days.

Respiratory or Skin Sensitisation:

Product is not classified as a Respiratory or Skin Sensitiser. No data for product. On basis of ingredients:

For Monoethanolamine, a repeated insult patch test was carried out on human volunteers, no skin reaction was observed.

Germ Cell Mutagenicity:

Product is not classified as a Germ Cell Mutagen. No data for product.

Carcinogenicity:

Product is not classified as a Carcinogen. No data for product.

Reproductive Toxicity:

Product is not classified as Toxic to Reproduction. No data for product.

Specific Target Organ Toxicity

Product is not classified as Specific Target Organ Toxicity (Single Exposure).

(STOT) – Single Exposure:

No data for product.



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SECTION 11 – TOXICOLOGICAL INFORMATION (CONTINUED)

Specific Target Organ Toxicity (STOT) – Repeated Exposure:	Product is not classified as Specific Target Organ Toxicity (Repeated Exposure). No data for product.
Aspiration Hazard:	Product is not classified as Aspiration Hazard. No data for product.
Information on Possible Routes of Exposure:	Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.
Ingestion (Swallowing):	Poison, not to be ingested. On basis of ingredients: Monoethanolamine is harmful if swallowed; ingestion of this product may cause nausea, vomiting, abdominal pain and chemical burns to the mouth, throat and stomach.
Eye Contact:	Product is classified as Serious Eye Damage/Irritation, Hazard Category 1; Causes serious eye damage. On basis of ingredients: Monoethanolamine causes severe burns, eye contact will cause stinging, blurring, tearing, severe pain and possible permanent corneal damage.
Skin Contact:	Product is classified as Skin Corrosion/Irritation, Hazard Category 1B; Causes severe skin burns and eye damage. No data for product. On basis of ingredients: Contact of Ammonia or Ammonium Hydroxide with skin will result in severe irritation, and it is corrosive to skin - may cause skin burns. Monoethanolamine is corrosive to skin; skin contact will cause redness, itching, irritation, severe pain and chemical burns with resultant tissue destruction.
Inhalation:	Product is not to be deliberately inhaled. No data for product. On basis of ingredients: Inhalation of Ammonia or Ammonium Hydroxide mists or aerosols will produce respiratory irritation; inhalation of high concentrations may result in shortness of breath, chest pain, severe headache and lung damage including pulmonary oedema. Effects may be delayed. Inhalation of Monoethanolamine is harmful, and inhalation of vapours will cause irritation of the nose, throat and respiratory system.
Developmental Toxicity:	For Monoethanolamine: In a developmental study with rats reported in literature, doses of up to 450 mg/kg were administered by gavage. Significant reductions in food consumption and body weight were observed in the 450 mg/kg group. The NOEL was 120 mg/kg/day for maternal toxicity and greater than 450 mg/kg/day for embryofoetal toxicity and teratogenicity. No increases in malformation rate or growth retardation were observed in foetuses or pups, indicating that Monoethanolamine was not embryotoxic or teratogenic in the rat following gavage exposure., In a cutaneous study with rats, doses of up to 225 mg/kg were administered. Severe skin irritation or lesions and a significant decrease in body weight gain were observed at 225 mg/kg/day. The NOEL was 75/mg/kg/day for maternal toxicity and greater than 225 mg/kg/day for embryofoetal toxicity and teratogenicity. A study with rabbits had similar results. The NOEL was 25 mg/kg/day for maternal toxicity and greater than 75 mg/kg/day for embryofoetal toxicity and teratogenicity.



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SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	This product is classified as Hazardous to the aquatic environment — Acute Hazard, Hazard Category 3 and Hazardous to the aquatic environment — Chronic Hazard, Hazard Category 3 (according to GHS).
Fish Toxicity:	No data for product. On basis of ingredients: Acute Toxicity for Monoethanolamine, LC ₅₀ 125 - 206 mg/L (Fathead minnow, Pimephales promelas, 96 hours).
Invertebrates Toxicity:	No data for product. On basis of ingredients: Acute Toxicity for Monoethanolamine, LC ₅₀ 33 - 93 mg/L, (Water flea, Daphnia magna, 48 hours).
Algae Toxicity:	No data for product. On basis of ingredients: Acute Toxicity for Monoethanolamine, ErC ₅₀ 2.5 mg/L; NOEC 1.0 mg/L (Freshwater Algae, Pseudokirchneriella subcapitata, static test, growth rate inhibition, 72 hours).
Toxicity to Microorganisms:	No data for product. On basis of ingredients: Acute Toxicity for Monoethanolamine EC ₅₀ activated sludge, respiration inhibition > 1000 mg/L (activated sludge); Bacterial inhibition, micro-organisms IC ₅₀ 700 - > 2000 mg/L.
Effects on other organisms:	No data for product.
Persistence and Degradability:	No data for product. On basis of ingredients: Ammonia is readily oxidised to nitrite, which is very toxic to aquatic organisms. Monoethanolamine is readily biodegradable; passes OECD test(s); Biodegradation: 97 % 28 days OECD 301B test; 94 % 28 days OECD 301E test; >70 % 28 days OECD 301F test. Indirect Photodegradation with OH radicals. Atmospheric half-life: 0.45 day (rate = 3.50E-11 cm ³ /s). Theoretical oxygen demand: 2.36 mg/mg.
Biological Oxygen Demand (BOD):	No data for product.
Theoretical Oxygen Demand (ThOD):	No data for product.
Chemical Oxygen Demand (COD):	No data for product.
Bio-accumulative potential:	There is no evidence to suggest bioaccumulation will occur. On basis of ingredients: For Monoethanolamine, bioconcentration potential is low (BCF less than 100 or log Pow less than 3). Partition coefficient, n-octanol/water (log Pow) = -1.31 Measured.



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SECTION 12 – ECOLOGICAL INFORMATION (CONTINUED)

Mobility in Soil:	No data for product. On basis of ingredients: If Ammonia or Ammonium Hydroxide enter soil, it will be highly mobile and may enter groundwater, dissolving in it with contamination of groundwater. This may result in some adverse ecological effects. Product is completely soluble in water. For Monoethanolamine: Potential for mobility in soil is very high (Koc between 0 and 50) Henry's Law Constant (H) = 2.45 E-7 atm m ³ /mole Measured Partition coefficient, soil organic carbon/water (Koc) : 4.62 Estimated.
General:	Accidental spillage may lead to penetration in the soil and groundwater. Product is hazardous for water. Product is soluble in water. DO NOT DISCHARGE INTO DRAINS, WATERWAYS, SEWER OR ENVIRONMENT. Product is hazardous for water. Product is soluble in water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Inform local authorities if this occurs.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal methods:	
Product:	Waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority, according to State, Territory and/or Local government regulations, pertinent authorities and adhering to the necessary technical regulations. Do not allow runoff to sewer, waterway or ground. Incinerate with adequate scrubbing and ash disposal.
Individual Protection Measures:	Refer to Individual Protection Measures Including Personal Protective Equipment (PPE) in Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION.
Uncleaned Packaging:	Recommended to be disposed of according to official regulations. Recommended cleansing agent is water, if necessary with cleansing agents.
Behaviour in Sewage	No further relevant information available.
Processing Plants:	

SECTION 14 – TRANSPORT INFORMATION

General:	This product is classified as DANGEROUS GOODS according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).
UN Number:	UN 1760.
UN Proper Shipping Name or Technical Name:	CORROSIVE LIQUID, N.O.S. (Contains Ammonia and Monoethanolamine).
ADG Class:	8.
Packing Group:	II.
HAZCHEM Code:	2X.
IERG:	37.
Segregation:	Not to be loaded with Explosives (Class 1), Dangerous When Wet (Class 4.3) Oxidising Agents (Class 5.1), Organic Peroxides (Class 5.2), Radioactive Material (Class 7) or Food or Food Empties, other restrictions may also apply.



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SECTION 14 – TRANSPORT INFORMATION (CONTINUED)

Marine Transport:	This product is classified as DANGEROUS GOODS by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.
UN Number:	UN 1760.
UN Proper Shipping Name or Technical Name:	CORROSIVE LIQUID, N.O.S. (Contains Ammonia and Monoethanolamine).
DG Class:	8.
Packing Group:	II.
Air Transport:	This product is classified as DANGEROUS GOODS by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
UN Number:	UN 1760.
UN Proper Shipping Name or Technical Name:	CORROSIVE LIQUID, N.O.S. (Contains Ammonia and Monoethanolamine).
DG Class:	8.
Packing Group:	II.

SECTION 15 – REGULATORY INFORMATION

Australian Standards:	AS/NZS 1337.1:2010: Personal eye protection - Eye and face protectors for occupational applications. AS/NZS 1715:2009: Selection, use and maintenance of respiratory protective equipment. AS/NZS 1716:2012: Respiratory protective devices. AS 1940:2004: The storage and handling of flammable and combustible liquids. AS/NZS 2161.1:2000: Occupational protective gloves: Selection, use and maintenance. AS/NZS 2161.2:2005: Occupational protective gloves: General requirements. AS/NZS 2161.10.1:2005: Occupational protective gloves: Protective gloves against chemicals and micro-organisms —Terminology and performance requirements. AS/NZS 2161.10.2:2005: Occupational protective gloves: Protective gloves against chemicals and micro-organisms—Determination of resistance to penetration. AS/NZS 2161.10.3:2005: Occupational protective gloves: Protective gloves against chemicals and micro-organisms—Determination of resistance to permeation by chemicals. AS/NZS 2210.1:2010: Safety, protective and occupational footwear - Guide to selection, care and use. AS/NZS 2210.2:2009: Occupational protective footwear - Test methods (ISO 20344:2004, MOD). AS/NZS 2210.4:2009: Occupational protective footwear - Specification for protective footwear (ISO 20346:2004, MOD). AS 3780:2008: The storage and handling of corrosive substances. AS/NZS 4501.1:2008: Occupational protective clothing - Guidelines on the selection, use, care and maintenance of protective clothing. AS/NZS 4501.2:2006: Occupational protective clothing - General requirements.
NICNAS:	All ingredients present on AICS.
SUSMP:	Poisons Schedule 5 allocated.



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SECTION 16 – OTHER INFORMATION

Acronyms and Comments:

ACGIH:	American Conference of Industrial Hygienists.
ADG Code:	Australian Code for the Transport of Dangerous Goods by Road and Rail.
AICS:	Australian Inventory of Chemical Substances.
AS:	Standards issued by Standards Australia, GPO Box 476, Sydney NSW 2001, Australia.
AS/NZ:	Standards issued by Standards Australia, GPO Box 476, Sydney NSW 2001, Australia and Standards New Zealand, Private Bag 2439 Wellington 6140, New Zealand.
BEI:	Biological Exposure Indices published by the Conference of Governmental Industrial Hygienists (ACGIH), 1330 Kemper Meadow Drive, Cincinnati, OH 45240-4148, USA.
CAS Number:	Chemical Abstracts Service Registry Number.
DT₅₀:	Time taken for a 50% decline in mass or concentration of a substance to occur from dissipation processes.
GHS:	Globally Harmonized System of Classification and Labelling of Chemicals, a globally harmonized system for classification and labelling of chemicals proposed by the United Nations.
HAZCHEM:	An emergency action code of numbers and letters which gives information to emergency services.
HSPA:	Hydrocarbon Solvents Producers Association is a sector group of CEFIC (European Council of the Chemical Industry), Avenue E. van Nieuwenhuysse, 4 box 1, B-1160 Brussels, Belgium.
IARC:	International Agency for Research on Cancer.
IERG:	Dangerous Goods Initial Emergency Response Guide (SAA/SNZ HB 76:2010 Standards Australia/Standards New Zealand).
IMDG:	International Maritime Dangerous Goods Code for transport by sea.
LC/LD:	The median lethal dose, LD ₅₀ (abbreviation for "lethal dose, 50%"), LC ₅₀ (lethal concentration, 50%) is the dose required to kill half the members of a tested population after a specified test duration. LD ₅₀ figures are frequently used as a general indicator of a substance's acute toxicity.
LOAEC:	Lowest Observed Adverse Effect Concentration, this is the lowest concentration or amount found by experiment or observation that causes an adverse alteration.
LOAEL:	Lowest Observed Adverse Effect Level, this is the lowest concentration or amount of a substance found by experiment or observation that causes an adverse alteration of morphology, functional capacity, growth, development, or lifespan of a target organism distinguished from normal (control) organisms of the same species and strain under defined conditions of exposure.
NICNAS:	National Industrial Chemicals Notification and Assessment Scheme.
NOAEC:	No Observed Adverse Effect Concentration, this is the greatest concentration or amount found by experiment or observation that causes no adverse alteration.
NOEC:	No-Observed-Effect-Concentration. The highest concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test, that causes no observable adverse effects on the test organisms (i.e., the highest concentration of toxicant in which the values for the observed responses are not statistically significantly different from the controls).



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SECTION 16 – OTHER INFORMATION (CONTINUED)

NOEL:	No-Observable-Effect-Level. It is the greatest concentration or amount of a substance, found by experiment or observation, that causes no alterations of morphology, functional capacity, growth, development, or life span of target organisms distinguishable from those observed in normal (control) organisms of the same species and strain under the same defined conditions of exposure.
NTP:	National Toxicology Program (USA Department of Health and Human Services).
OSHA:	Occupational Safety and Health Administration (USA).
PPE:	Personal Protective Equipment.
Safe Work Australia:	Safe Work Australia was formerly the Australian Safety and Compensation Council, which included the National Occupational Health and Safety Commission (NOHSC).
SDS:	Safety Data Sheet.
STEL:	Exposure standard - short term exposure limit, a 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.
SUSMP:	Standard for the Uniform Scheduling of Medicines and Poisons.
TDL_o:	Total Dose Low means the smallest deadly dose, which caused a toxic or other harmful effect after application on humans or animal.
TWA:	Exposure standard - time-weighted average, the average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day working week.
UN Number:	United Nations Number.
WHS:	Model work health and safety legislation introduced by the Australian government which consists of an integrated package of a model Work Health and Safety (WHS) Act, supported by model Work Health and Safety (WHS) Regulations, model Codes of Practice and a National Compliance and Enforcement Policy. The WHS Regulations implement a new system of chemical hazard classification, labelling and safety data sheet requirements based on the GHS.
Issue Date:	11 May 2017.
Supersedes Issue Date:	1 February 2010.
Revision Information:	Classification according to GHS.
Contact Point:	Regulatory Affairs Manager.
Telephone:	(03) 9785 9013.
Note:	Safety Data Sheets are updated frequently. Please ensure that you have a current copy.



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Disclaimer:

This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of this product, and in particular how to safely handle and use this product in the workplace. Since Genesis Solutions cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace. This SDS does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.