



SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF MATERIAL AND SUPPLIER

SUPPLIER:	Genesis Solutions.
OFFICE ADDRESS:	12bMartha St. 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:	CITRO.
Other Names:	Not applicable.
Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S. (contains isopropanol and <i>d</i> -limonene).
Product Use:	Gum remover.
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:	Flammable Liquids.	2.
Health:	Acute Toxicity - Oral.	5.
	Skin Corrosion/Irritation.	2.
	Serious Eye Damage/Irritation.	1.
	Sensitisation - Skin.	1.
	Specific Target Organ Toxicity (Single Exposure).	3.
Environmental:	Hazardous to the aquatic environment — Acute Hazard	1.
	Hazardous to the aquatic environment — Chronic Hazard	1.
LABEL ELEMENTS:		
Signal Word:	DANGER.	
Hazard Statements:	Highly flammable liquid and vapour.	
	May be harmful if swallowed.	
	Causes skin irritation.	
	Causes serious eye damage.	
	May cause an allergic skin reaction.	
	May cause drowsiness or dizziness.	
	Very toxic to aquatic life.	
	Very toxic to aquatic life with long lasting effects.	



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SECTION 2 – HAZARDS IDENTIFICATION (CONTINUED)

Precautionary Statements:

Prevention:

Keep container tightly closed.
Wear protective gloves/protective clothing/eye protection/face protection.
Avoid breathing mist/vapours/spray.
Wash skin thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Ground/bond container and receiving equipment.
Contaminated work clothing should not be allowed out of the workplace.
Avoid release to the environment.

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 plenty of soap and water, and shower.
If skin irritation or rash occurs: Get medical advice/attention.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTRE or doctor/physician if you feel unwell.
Take off contaminated clothing and wash before reuse.
In case of fire: Use alcohol resistant foam (preferred) or normal foam for extinction.
Collect spillage.

Storage:

Store in a well-ventilated place. Keep container tightly closed and cool.
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:

Flammable Liquid Corrosion Exclamation mark Environment

Other Hazards which do not result in Classification:

Not applicable.



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SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Proportion:
Isopropanol (Isopropyl Alcohol)	67-63-0	30 - 60 % w/w
(R)- <i>p</i> -mentha-1,8-diene (<i>d</i> -limonene)	5989-27-5	30 - 60 % w/w
Ethyl Glycol Monobutyl Ether (2-Butoxy Ethanol)	111-76-2	10 - < 30 % w/w
Dodecan-1-ol, ethoxylated	9002-92-0	< 10 % w/w
Total		100 % w/w

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, PVC, 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.



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SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Extinguish with alcohol resistant foam (preferred if available, but normal foam can be used). Use Carbon dioxide (CO ₂) or dry agent for small fires.
Unsuitable Extinguishing Media:	Not applicable.
Specific Hazards arising from the chemical:	In general fire, upon combustion, this product may emit Carbon monoxide (CO), Carbon dioxide (CO ₂), and other possibly toxic gases and vapours.
Special Protective Equipment & Precautions for Fire Fighters:	Wear self-contained breathing apparatus and full body protection. Cool containers / tanks with water spray. Minimise exposure. Do not breathe fumes. Contain run-off, prevent by any means available spillage from entering drains and water course.
Hazchem Code:	•3YE.
IERG:	14.
Flash Point:	< 23°C (Closed Cup).
Flammability:	Highly flammable liquid and vapour. In general fire, upon combustion, this product may emit Carbon monoxide (CO), Carbon dioxide (CO ₂), and other possibly toxic gases and vapours.

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, PVC, 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. NOTE: Material is a skin sensitiser. 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 A filter for organic vapours boiling above 65°C) 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:	Classified as a Flammable liquid according to ADG and for the purpose of storage and handling, in accordance with the requirements of AS 1940. 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.



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SECTION 7 – HANDLING AND STORAGE (CONTINUED)

Further Information about Storage Conditions:	This material is DANGEROUS GOODS , classified as Flammable liquid according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) and must be stored in accordance with the relevant regulations. It also meets the requirements of Environmentally hazardous substance, Acute 1 and Chronic 1 according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code). This material is not classified as a Scheduled Poison. 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 2-Butoxyethanol is 20 ppm, 96.9 mg/m³ (via inhalation only, for skin absorption see below).</p> <p>TWA for Isopropanol is 400 ppm, 983 mg/m³.</p> <p>Short Term Exposure Limit (STEL): None established for product.</p> <p>STEL for 2-Butoxyethanol is 50 ppm, 242 mg/m³ (via inhalation only, for skin absorption see below).</p> <p>STEL for Isopropanol is 500 ppm, 1230 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> <p>The adopted Occupational Exposure Standards listed only consider absorption via inhalation, and are valid only on the condition that significant skin absorption cannot occur.</p>
Biological Monitoring:	<p>Safe Work Australia have not published any Biological Limits for ingredients of this product.</p> <p>However, according to ACGIH:</p> <p>BEI for 2-Butoxyethanol as Butoxyacetic acid (BAA) in urine (with hydrolysis) is 200 mg/g Creatinine, to be sampled at end of shift.</p> <p>BEI for Isopropanol as Acetone in urine is 40 mg/L, to be sampled at end of shift (Background determinant, Non-specific determinant).</p>



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SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION (CONTINUED)

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 General protective & hygiene measures: The usual precautionary measures **Including Personal Protective** are to be adhered to when handling chemicals. Keep away from foodstuffs, **Equipment (PPE):** 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.

Eye and face protection: 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).

Skin protection:

Hand protection: Chemical resistant gloves (e.g. Butyl, neoprene, nitrile, PVC, 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. NOTE: Material is a skin sensitiser. 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 A filter for organic vapours boiling above 65°C) meeting the requirements of AS/NZS 1715 and AS/NZS 1716.



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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical Description/ Properties:

Appearance:	Clear liquid.
Odour:	Alcohol/citrus odour.
Odour Threshold:	Not available.
pH:	Not applicable.
Melting Point/ Freezing Point:	Not available.
Initial Boiling Point:	Ca. 82°C (based on Isopropanol).
Flashpoint:	< 23°C (Closed Cup).
Evaporation Rate:	Not available.
Flammability (solid, gas):	Not applicable.
Upper/Lower Flammability or Explosive Limits:	Lower Explosive Limit (LEL): 2 %; Upper Explosive Limit (UEL): 12 % (based on Isopropanol).
Vapour Pressure:	Not available.
Vapour Density:	>1 (air=1).
Relative Density:	Ca. 0.85 @ 20°C.
Solubility:	Partially miscible with water.
Partition coefficient: n-octanol/water:	Not available.
Auto-ignition Temperature:	Ca. 425°C (based on Isopropanol).
Decomposition Temperature:	Not available.
Viscosity:	Low.

SECTION 10 – STABILITY AND REACTIVITY

Reactivity:	No reactivity hazards are known for the material.
Chemical Stability:	Product is stable under directed conditions of use, storage and temperature. Highly flammable liquid and vapour. May slowly form into peroxides.
Possibility of Hazardous Reactions:	No known hazardous reactions, but see Incompatible Materials below.
Conditions to Avoid:	Avoid heat, sparks, static electricity, ignition sources, light.
Incompatible Materials:	Strong oxidants (such as nitrates, perchlorates and peroxides): increased risks of fire and explosion. Phosgene: produces isopropyl chlorocarbonate and hydrochloric acid. Ferric salt: causes explosive heat decomposition reaction. Hydrogen – Palladium: may catch fire if mixed in the air. Strong acid: May cause violent reaction. Alkali metals or alkali earth metals: may release flammable toxic gases.
Hazardous Decomposition Products:	In general fire, upon combustion, this product may emit Carbon monoxide (CO), Carbon dioxide (CO ₂), and other possibly toxic gases and vapours. Phosgene: produces isopropyl chlorocarbonate and hydrochloric acid. Ferric salt: causes explosive heat decomposition reaction. Hydrogen – Palladium: may catch fire if mixed in the air. Strong acid: May cause violent reaction. Alkali metals or alkali earth metals: may release flammable toxic gases.



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SECTION 11 – TOXICOLOGICAL INFORMATION

Health Effects:	No data for product, following data is compiled on basis of ingredients.
Acute Toxicity Data (Oral):	Product is classified as Acute Toxicity – Oral, Hazard Category 5; May be harmful if swallowed. No data for product. On basis of ingredients: No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, (Oral) LD ₅₀ (rat) 1,300 mg/kg. Acute Toxicity for Isopropanol, (Oral) LD ₅₀ (mouse) 3,600 mg/kg; LDLo (human) 5,272 mg/kg. Acute Toxicity for <i>d</i> -Limonene, (Oral) LD ₅₀ (rat) 4,400 mg/kg.
Acute Toxicity Data (Dermal):	No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, (Dermal) LD ₅₀ (rabbit) 220 mg/kg. Acute Toxicity for Isopropanol, (Dermal) LD ₅₀ (rabbit) 12,800 mg/kg. Acute Toxicity for <i>d</i> -Limonene, (Dermal) LD ₅₀ (rabbit) > 5,000 mg/kg.
Acute Toxicity Data (Inhalation):	No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, (Inhalation) TCL ₀ (human) 100 ppm. Acute Toxicity for 2-Butoxyethanol, (Inhalation) LC ₅₀ (rat) 450 ppm/4 hours. Acute Toxicity for Isopropanol, (Inhalation) LC ₅₀ (rat) 16,000 ppm/8 hours.
Chronic Toxicity Data:	No data for product.
Skin Corrosion/Irritation:	Product is classified as Skin Corrosion/Irritation, Hazard Category 2; Causes skin irritation. No data for product. On basis of ingredients: Isopropyl Alcohol is non-irritating to skin; repeated contact may cause defatting of skin which can lead to dermatitis.
Serious Eye Damage/Irritation:	Product is classified as Serious Eye Damage/Irritation, Hazard Category 1; Causes serious eye damage. On basis of ingredients: Isopropanol is irritating to eyes. <i>d</i> -Limonene is a mild eye irritant.
Respiratory or Skin Sensitisation:	Product is classified as a Skin Sensitiser, Hazard Category 1; May cause an allergic skin reaction. It is not classified as a Respiratory Sensitiser. No data for product. On basis of ingredients: Isopropanol is not expected to be a sensitiser. For <i>d</i> -Limonene, contact with skin will result in irritation, and it is a skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
Germ Cell Mutagenicity:	Product is not classified as a Germ Cell Mutagen. No data for product. On basis of ingredients: Isopropyl Alcohol is not expected to be mutagenic.
Carcinogenicity:	Product is not classified as a Carcinogen. No data for product. On basis of ingredients: Isopropyl Alcohol is not expected to be carcinogenic.
Reproductive Toxicity:	Product is not classified as Toxic to Reproduction. No data for product. On basis of ingredients: 2-Butoxyethanol has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals. Isopropyl Alcohol causes foetotoxicity in animals at doses which are maternally toxic, but does not impair fertility.
Specific Target Organ Toxicity (STOT) – Single Exposure:	Product is classified as Specific Target Organ Toxicity (Single Exposure), Hazard Category 3; May cause drowsiness or dizziness.



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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):	Not to be ingested. On basis of ingredients: Swallowing of <i>d</i> -Limonene can result in nausea, vomiting, diarrhoea, and abdominal pain.
Eye Contact:	Product is classified as Serious Eye Damage/Irritation, Hazard Category 1; Causes serious eye damage. On basis of ingredients: Isopropanol is irritating to eyes. <i>d</i> -Limonene is a mild eye irritant.
Skin Contact:	Product is classified as Skin Corrosion/Irritation, Hazard Category 2; Causes skin irritation. Product is also classified as a Skin Sensitiser, Hazard Category 1; May cause an allergic skin reaction. No data for product. On basis of ingredients: Isopropanol is non-irritating to skin; repeated contact may cause defatting of skin which can lead to dermatitis. Isopropanol is not expected to be a sensitiser. For <i>d</i> -Limonene, contact with skin will result in irritation, and it is a skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
Inhalation:	Product is not to be deliberately inhaled. No data for product. On basis of ingredients: Inhalation of Isopropanol may cause drowsiness or dizziness. Inhalation of <i>d</i> -Limonene may be irritant to the mucous membranes of the respiratory tract (airways). Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea.
Repeated Dose Toxicity:	No data for product.
Developmental Toxicity:	2-Butoxyethanol has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	This product is classified as Hazardous to the aquatic environment — Acute Hazard, Hazard Category 1 and Hazardous to the aquatic environment — Chronic Hazard, Hazard Category 1 (according to GHS) and meets the requirements of an Environmentally hazardous substance, Acute 1 and Environmentally hazardous substance, Chronic 1 (according to the ADG Code). No data for product.
Fish Toxicity:	No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, LC ₅₀ 1474 mg/L (Rainbow trout, <i>Oncorhynchus mykiss</i> , 96 hours). Acute Toxicity for Isopropanol, LC ₅₀ 8970-9280 mg/L (Golden Orfe, <i>Leuciscus idus</i> , static test, 48 hours). Acute Toxicity for <i>d</i> -Limonene, LC ₅₀ 0.688 - 0.702 mg/L (Fathead minnow, <i>Pimephales promelas</i> , 96 hours).



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SECTION 12 – ECOLOGICAL INFORMATION (CONTINUED)

Invertebrates Toxicity:	No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, LC ₅₀ 1550 mg/L, (Water flea, Daphnia magna, 48 hours). Acute Toxicity for Isopropanol, EC ₅₀ > 10,000 mg/L (Water flea, Daphnia magna, static test, 24 hours). Acute Toxicity for <i>d</i> -Limonene, EC ₅₀ 0.577 mg/L, (Water flea, Daphnia magna, 48 hours).
Algae Toxicity:	No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, EbC ₅₀ 911 mg/L, (Freshwater Algae, Pseudokirchneriella subcapitata, static test, biomass growth inhibition, 72 hours). Acute Toxicity for Isopropanol, TGK (Toxicity Threshold Concentration) 1,800 mg/L (Green Algae, Scenedesmus quadricauda, static test, growth inhibition, 8 days).
Toxicity to Microorganisms:	No data for product. On basis of ingredients: Acute Toxicity for 2-Butoxyethanol, IC ₂₀ > 1000 mg/L (Bacteria). Acute Toxicity for Isopropyl Alcohol, LC/EC/IC ₅₀ > 1000 mg/L.
Effects on other organisms:	No data for product.
Persistence and Degradability:	No data for product. On basis of ingredients: 2-Butoxyethanol is readily biodegradable (90.4 % degradation after 28 days). Isopropyl Alcohol is readily biodegradable, meeting the 10-day window criterion, and oxidises by photo-chemical reactions in air.
Biological Oxygen Demand (BOD):	No data for product. On basis of ingredients: 2-Butoxyethanol has BOD of 5.2 % after 5 days, and 57 % after 10 days and 72.2 % after 20 days.
Chemical Oxygen Demand (COD):	No data for product. On basis of ingredients: 2-Butoxyethanol has COD of 2180 mg/g.
BOD/COD Ratio:	No data for product.
Bio-accumulative potential:	There is no evidence to suggest bioaccumulation will occur. On basis of ingredients: Bioconcentration potential of 2-Butoxyethanol is low (BCF < 100 or Log P _{ow} < 3), Partition coefficient, n-octanol/water (log P _{ow}): 0.81 Measured. Isopropyl Alcohol is not expected to bioaccumulate significantly.
Mobility in Soil:	No data for product. On basis of ingredients: If Isopropanol enters 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. Accidental spillage of product may lead to penetration in the soil and groundwater. Product is expected to cause adverse ecological effects in water. Product is partially soluble in water. The primary mode of removal from surface water is volatilisation.
General:	DO NOT DISCHARGE INTO DRAINS, WATERWAYS, SEWER OR ENVIRONMENT. Product is expected to cause adverse ecological effects in water. Product is partially 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.



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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 1993.
UN Proper Shipping Name or Technical Name:	FLAMMABLE LIQUID, N.O.S. (contains isopropanol and <i>d</i> -limonene).
ADG Class:	3.
Packing Group:	II.
HAZCHEM Code:	•3YE.
IERG:	14.
Segregation:	Not to be loaded with Explosives (Class 1), Toxic Gas (Class 2.3), Spontaneously combustible (Class 4.2), Oxidising Agents (Class 5.1), Organic Peroxides (Class 5.2), Radioactive Material (Class 7), other restrictions may also apply.
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 1993.
UN Proper Shipping Name or Technical Name:	FLAMMABLE LIQUID, N.O.S. (contains isopropanol and <i>d</i> -limonene).
DG Class:	3.
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 1993.
UN Proper Shipping Name or Technical Name:	FLAMMABLE LIQUID, N.O.S. (contains isopropanol and <i>d</i> -limonene).
DG Class:	3.
Packing Group:	II.



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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:	No Poisons Schedule allocated.

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.



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SECTION 16 – OTHER INFORMATION (CONTINUED)

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).
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.



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SECTION 16 – OTHER INFORMATION (CONTINUED)

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 October 2013.
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.
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.