

# GLYCEROL

## ChemWatch Review SDS

Chemwatch: 1987-5

Version No: 12.1.1.1

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Chemwatch Hazard Alert Code: 2

Issue Date: 17/03/2018

Print Date: 22/02/2021

S.GHS.USA.EN

### SECTION 1 Identification

#### Product Identifier

Product name	GLYCEROL
Chemical Name	glycerol
Synonyms	C3-H8-O3; C3-H5-(OH)3; propanetriol; glycerin; glycerine; 1,2,3-trihydroxypropane; E 422; Emery 916; Emery 917; G 101; GL 300; Glyceol Ophthalgan; Glycerin DG; Glyrol; Glysanin; IFP; Mackstat H 66; NSC 9230; Osmoglyn; Pricerine 9088 9091; 101467: GOLD CROSS GLYCEROL BP 100ML
Chemical formula	C3H8O3
Other means of identification	Not Available
CAS number	56-81-5

#### Recommended use of the chemical and restrictions on use

Relevant identified uses	As solvent, humectant, plasticiser, emollient, sweetener; in the manufacture of nitroglycerol (explosive), cosmetics, liquid soaps, liqueurs, confectioneries, blacking, printing and copying inks and lubricants. It is also used in the manufacture of elastic glues, lead oxide cements; to keep fabrics pliable; to preserve printing on cotton; for printing rollers; to keep frost from windshields; as antifreeze in automobiles, gas meters and hydraulic jacks, in shock absorber fluids. In fermentation nutrients in production of antibiotics.
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#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Sigma-Aldrich (Merck)	Albright Wilson	Probiotec Pharma (Biotech Pharmaceuticals)
Address	12 Anella Avenue Castle Hill NSW 2154 Australia	21-22 Davis Rd Wetherill Park NSW 2164 Australia	83 Cherry Lane Laverton North VIC 3026 Australia
Telephone	+61 2 9841 0555 1800 800 097	1800 814 730	+61 3 9278 7555
Fax	+61 2 9841 0500	1800 814 740	+61 3 9369 6730
Website	<a href="http://www.sigma-aldrich.com">www.sigma-aldrich.com</a>	<a href="http://www.albright.com.au">http://www.albright.com.au</a>	Not Available
Email	ausmail@sial.com	Not Available	info@biotechpharma.com.au

Registered company name	Consolidated Chemical
Address	52-62 Waterview Close Dandenong South VIC 3175 Australia
Telephone	+61 3 9799 7555
Fax	+61 3 9799 7666
Website	Not Available
Email	melb@conchem.com.au

#### Emergency phone number

Association / Organisation	Sigma-Aldrich (Merck)	XOM ERS	Consolidated Chemical
Emergency telephone numbers	1800 448 456	1800 033 111	1800 839 984
Other emergency telephone numbers	1800 448 456	Not Available	Not Available

### SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

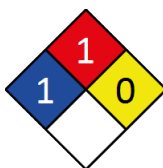
#### ChemWatch Hazard Ratings

## GLYCEROL

	Min	Max
Flammability	1	
Toxicity	0	
Body Contact	2	
Reactivity	1	
Chronic	0	

0 = Minimum  
1 = Low  
2 = Moderate  
3 = High  
4 = Extreme

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

<b>Classification</b>	Skin Corrosion/Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Eye Irritation Category 2A
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### Label elements

<b>Hazard pictogram(s)</b>	
<b>Signal word</b>	<b>Warning</b>

### Hazard statement(s)

<b>H315</b>	Causes skin irritation.
<b>H335</b>	May cause respiratory irritation.
<b>H319</b>	Causes serious eye irritation.

### Hazard(s) not otherwise classified

Not Applicable

### Precautionary statement(s) Prevention

<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P261</b>	Avoid breathing mist/vapours/spray.
<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.

### Precautionary statement(s) Response

<b>P362</b>	Take off contaminated clothing and wash before reuse.
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P312</b>	Call a POISON CENTER or doctor/physician if you feel unwell.
<b>P337+P313</b>	If eye irritation persists: Get medical advice/attention.

### Precautionary statement(s) Storage

<b>P405</b>	Store locked up.
<b>P403+P233</b>	Store in a well-ventilated place. Keep container tightly closed.

### Precautionary statement(s) Disposal

<b>P501</b>	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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## SECTION 3 Composition / information on ingredients

### Substances

CAS No	%[weight]	Name
56-81-5	>=96	<u>glycerol</u>

### Mixtures

See section above for composition of Substances

## SECTION 4 First-aid measures

### Description of first aid measures

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>Wash out immediately with fresh running water.</li> <li>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.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin contact occurs:</p> <ul style="list-style-type: none"> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>

Inhalation	<ul style="list-style-type: none"> <li>▸ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▸ Lay patient down. Keep warm and rested.</li> <li>▸ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▸ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▸ Transport to hospital, or doctor, without delay.</li> </ul>
Ingestion	<ul style="list-style-type: none"> <li>▸ Immediately give a glass of water.</li> <li>▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.</li> </ul>

**Most important symptoms and effects, both acute and delayed**

See Section 11

**Indication of any immediate medical attention and special treatment needed**

Treat symptomatically.

**SECTION 5 Fire-fighting measures****Extinguishing media**

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

**Special hazards arising from the substrate or mixture**

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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**Special protective equipment and precautions for fire-fighters**

Fire Fighting	<ul style="list-style-type: none"> <li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▸ Wear full body protective clothing with breathing apparatus.</li> <li>▸ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▸ Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
Fire/Explosion Hazard	<ul style="list-style-type: none"> <li>▸ Combustible.</li> <li>▸ Slight fire hazard when exposed to heat or flame.</li> <li>▸ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>▸ On combustion, may emit toxic fumes of carbon monoxide (CO).</li> </ul> <p>Combustion products include: carbon dioxide (CO<sub>2</sub>) acrolein other pyrolysis products typical of burning organic material. May emit poisonous fumes. May emit corrosive fumes.</p>

**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	<p>Slippery when spilt.</p> <ul style="list-style-type: none"> <li>▸ Remove all ignition sources.</li> <li>▸ Clean up all spills immediately.</li> <li>▸ Avoid breathing vapours and contact with skin and eyes.</li> <li>▸ Control personal contact with the substance, by using protective equipment.</li> </ul>
Major Spills	<p>Slippery when spilt. Moderate hazard.</p> <ul style="list-style-type: none"> <li>▸ Clear area of personnel and move upwind.</li> <li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▸ Wear breathing apparatus plus protective gloves.</li> </ul>

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

**SECTION 7 Handling and storage****Precautions for safe handling**

Safe handling	<ul style="list-style-type: none"> <li>▸ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>▸ Avoid all personal contact, including inhalation.</li> <li>▸ Wear protective clothing when risk of exposure occurs.</li> <li>▸ Use in a well-ventilated area.</li> <li>▸ Prevent concentration in hollows and sumps.</li> </ul>
Other information	<ul style="list-style-type: none"> <li>▸ Store in original containers.</li> <li>▸ Keep containers securely sealed.</li> <li>▸ No smoking, naked lights or ignition sources.</li> <li>▸ Store in a cool, dry, well-ventilated area.</li> </ul>

## GLYCEROL

## Conditions for safe storage, including any incompatibilities

<b>Suitable container</b>	<ul style="list-style-type: none"><li>▶ Metal can or drum</li><li>▶ Packaging as recommended by manufacturer.</li><li>▶ Check all containers are clearly labelled and free from leaks.</li></ul>
<b>Storage incompatibility</b>	<p>Glycerol:</p> <ul style="list-style-type: none"><li>▶ reacts violently with strong oxidisers, acetic anhydride, alkali metal hydrides, calcium hypochlorite, calcium oxychloride, chlorine, chromic anhydride, chromium oxides, ethylene oxide, hydrogen peroxide, phosphorous triiodide, potassium chlorate, potassium permanganate, potassium peroxide, silver perchlorate, sodium hydride, sodium peroxide, sodium triiodide, sodium tetrahydroborate, is incompatible with strong acids, caustics, aliphatic amines, isocyanates, uranium fluoride</li><li>▶ is able to polymerise above 145 C</li><li>▶ Avoid reaction with oxidising agents</li></ul>



+ — Must not be stored together  
X — May be stored together with specific preventions  
0 — May be stored together  
+ — May be stored together

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US NIOSH Recommended Exposure Limits (RELs)	glycerol	Glycerin (anhydrous); Glycerol; Glycyl alcohol; 1,2,3-Propanetriol; Trihydroxypropane	Not Available	Not Available	Not Available	See Appendix D
US OSHA Permissible Exposure Levels (PELs) - Table Z1	glycerol	Glycerin (mist): Respirable fraction	5 mg/m3	Not Available	Not Available	Not Available
US OSHA Permissible Exposure Levels (PELs) - Table Z1	glycerol	Glycerin (mist): Total dust	15 mg/m3	Not Available	Not Available	Not Available

## Emergency Limits

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
glycerol	Glycerine (mist); (Glycerol; Glycerin)	45 mg/m3	180 mg/m3	1,100 mg/m3

Ingredient	Original IDLH	Revised IDLH
glycerol	Not Available	Not Available

## Exposure controls

<b>Appropriate engineering controls</b>	<p>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.</p> <p>The basic types of engineering controls are:</p> <ul style="list-style-type: none"><li>Process controls which involve changing the way a job activity or process is done to reduce the risk.</li><li>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.</li></ul>
<b>Personal protection</b>	
<b>Eye and face protection</b>	<ul style="list-style-type: none"><li>▶ Safety glasses with side shields.</li><li>▶ Chemical goggles.</li><li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li></ul>
<b>Skin protection</b>	See Hand protection below
<b>Hands/feet protection</b>	<ul style="list-style-type: none"><li>▶ Wear chemical protective gloves, e.g. PVC.</li><li>▶ Wear safety footwear or safety gumboots, e.g. Rubber</li></ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care.</p>
<b>Body protection</b>	See Other protection below
<b>Other protection</b>	<ul style="list-style-type: none"><li>▶ Overalls.</li><li>▶ P.V.C apron.</li><li>▶ Barrier cream.</li><li>▶ Skin cleansing cream.</li></ul>

## Recommended material(s)

## GLOVE SELECTION INDEX

## Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 &amp; 1715, EN 143:2000 &amp; 149:2001,

Continued...

## GLYCEROL

Glove selection is based on a modified presentation of the:

**"Forsberg Clothing Performance Index".**

The effect(s) of the following substance(s) are taken into account in the **computer-generated** selection:  
GLYCEROL

Material	CPI
NATURAL RUBBER	A
NATURAL+NEOPRENE	A
NITRILE	A

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

**NOTE:** As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; 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	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - 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), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- ▶ Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- ▶ Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

## SECTION 9 Physical and chemical properties

### Information on basic physical and chemical properties

Appearance	Oily, colourless, odourless liquid, with syrupy, sweet taste. Miscible with water and alcohol. Insoluble in benzene, ether, chloroform, fixed and volatile oils. Absorbs water from the air.		
Physical state	Liquid	Relative density (Water = 1)	1.2-1.3 @ 20 C
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	370
pH (as supplied)	Not Applicable	Decomposition temperature	>280
Melting point / freezing point (°C)	18	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	290	Molecular weight (g/mol)	92.1
Flash point (°C)	160	Taste	Not Available
Evaporation rate	Non Volatile	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	19	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	3	Volatile Component (%vol)	Nil @ 38 C.
Vapour pressure (kPa)	0.003 @ 50 C	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	7 approx.
Vapour density (Air = 1)	3.17	VOC g/L	Not Available

## SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
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

## GLYCEROL

## Information on toxicological effects

Inhaled	The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Not normally a hazard due to non-volatile nature of product	
Ingestion	Ingestion of large quantities may cause nausea, diarrhoea and vomiting. Biokinetic studies indicate that a 70 kg adult should be able to metabolise and excrete over 2 grams of glycerol in an 8-hour workday. Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g. liver, kidney) damage is evident.	
Skin Contact	The material may accentuate any pre-existing dermatitis condition Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. The material may cause mild but significant inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.	
Eye	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals. Prolonged eye contact may cause inflammation characterised by a temporary redness of the conjunctiva (similar to windburn).	
Chronic	Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.	
glycerol	TOXICITY	IRRITATION
	dermal (guinea pig) LD50: 58.5 mg/kg <sup>[1]</sup>	Not Available
	Oral(Rabbit) LD50; 0.027 mg/kg <sup>[2]</sup>	
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	

GLYCEROL	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.		
Acute Toxicity	✗	Carcinogenicity	✗
Skin Irritation/Corrosion	✓	Reproductivity	✗
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✗	STOT - Repeated Exposure	✗
Mutagenicity	✗	Aspiration Hazard	✗

Legend: ✗ – Data either not available or does not fill the criteria for classification  
 ✓ – Data available to make classification

## SECTION 12 Ecological information

## Toxicity

glycerol	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	>11mg/L	2
	NOEL	48	Not Available	12ug/cm	4
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data				

For Glycerol: Log Kow: -2.66 to -2.47, Atmospheric Fate: Glycerol is broken down in the air by hydroxyl radicals the half-life for this process is 6.8 hours. However, only a negligible amount of the substance will move to the atmospheric compartment. Terrestrial Fate: Only a negligible amount of glycerol will move into the soil compartment, if released into the environment. Aquatic Fate: Glycerol is considered to be readily biodegradable in the aquatic environment.

**DO NOT** discharge into sewer or waterways.

## Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
glycerol	LOW	LOW

## Bioaccumulative potential

Ingredient	Bioaccumulation
glycerol	LOW (LogKOW = -1.76)

## Mobility in soil

Ingredient	Mobility
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## GLYCEROL

Ingredient	Mobility
glycerol	HIGH (KOC = 1)

## SECTION 13 Disposal considerations

## Waste treatment methods

Product / Packaging disposal	<p>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.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"><li>▸ Reduction</li><li>▸ Reuse</li><li>▸ Recycling</li><li>▸ Disposal (if all else fails)</li></ul> <p>This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.</p> <ul style="list-style-type: none"><li>▸ <b>DO NOT allow wash water from cleaning or process equipment to enter drains.</b></li><li>▸ It may be necessary to collect all wash water for treatment before disposal.</li><li>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>▸ Where in doubt contact the responsible authority.</li><li>▸ Recycle wherever possible or consult manufacturer for recycling options.</li><li>▸ Consult State Land Waste Authority for disposal.</li><li>▸ Bury or incinerate residue at an approved site.</li><li>▸ Recycle containers if possible, or dispose of in an authorised landfill.</li></ul>
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## SECTION 14 Transport information

## Labels Required

Marine Pollutant	NO
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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

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
glycerol	Not Available

Transport in bulk in accordance with the ICG Code

Product name	Ship Type
glycerol	Not Available

## SECTION 15 Regulatory information

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

## glycerol is found on the following regulatory lists

US DOE Temporary Emergency Exposure Limits (TEELs)
US NIOSH Recommended Exposure Limits (RELs)
US OSHA Permissible Exposure Levels (PELs) - Table Z1
US OSHA Permissible Exposure Limits - Annotated Table Z-1
US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US TSCA Chemical Substance Inventory - Interim List of Active Substances

## Federal Regulations

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

## Section 311/312 hazard categories

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No

Continued...

## GLYCEROL

Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	Yes
Respiratory or Skin Sensitization	No
Serious eye damage or eye irritation	Yes
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No
Hazards Not Otherwise Classified	No

## US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

None Reported

## State Regulations

## US. California Proposition 65

None Reported

## National Inventory Status

National Inventory	Status
Australia - AIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (glycerol)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - ARIPS	Yes
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## SECTION 16 Other information

Revision Date	17/03/2018
Initial Date	12/05/2005

## SDS Version Summary

Version	Issue Date	Sections Updated
11.1.1.1	21/11/2013	Acute Health (skin), CAS Number, Synonyms, Toxicity and Irritation (Other)
12.1.1.1	17/03/2018	Supplier Information, Synonyms

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

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.

## 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

Continued...



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

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