

Hyqual Australia

Chemwatch: **40-0273** Version No: **3.1.1.1**

Safety Data Sheet according to WHS and ADG requirements

Chemwatch Hazard Alert Code

Issue Date: **20/02/2024** Print Date: **20/02/2024** S.GHS.AUS.EN

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

Product Identifier

Product name	Searine
Synonyms	Not Available
Proper shipping name	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (contains methanol, glutaraldehyde and formaldehyde)
Other means of identification	Not Available

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

Polovant identified uses	Use according to manufacturer's directions.
Relevant identified uses	Cavity Embalming Fluid.

Details of the supplier of the safety data sheet

Registered company name	Hyqual Australia	The Champion Company
Address	31 Enterprise Street Caloundra QLD 4551 Australia	400 Harrison Street Springfield OH 45505 United States
Telephone	+61 7 5492 7122	+1 93 7324 5681
Fax	+61 7 5492 7144	+1 937 324 2397
Website	www.hyqual.com	www.thechampioncompany.com
Email	office@hyqual.com	Not Available

Emergency telephone number

Association / Organisation	Not Available	Not Available
Emergency telephone numbers	13 11 26 (Poisons Info. Hotline)	Not Available
Other emergency telephone numbers	Not Available	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

Poisons Schedule	S6
Classification [1]	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 3, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Respiratory Sensitizer Category 1, Germ cell mutagenicity Category 2, Carcinogenicity Category 1A, Specific target organ toxicity - single exposure Category 1, Chronic Aquatic Hazard Category 3
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Label elements

Hazard pictogram(s)









SIGNAL WORD DANGER

Hazard statement(s)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.

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H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H341 Suspected of causing genetic defects. H350 May cause cancer. H370 Causes damage to organs. H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P281	Use personal protective equipment as required.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+P311	IF exposed: Call a POISON CENTER or doctor/physician.
P308+P313	IF exposed or concerned: Get medical advice/attention.

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary statement(s) Disposal

P501 Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
67-56-1	30-60	<u>methanol</u>
50-00-0	1-10	<u>formaldehyde</u>
108-95-2	1-10	phenol
111-30-8	1-5	glutaraldehyde

SECTION 4 FIRST AID MEASURES

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Description of first aid measures		
Eye Contact	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.	
Skin Contact	If skin or hair contact occurs: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.	
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. 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. Transport to hospital, or doctor, without delay. 	

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Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema. Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs). As this reaction may be delayed up to 24 hours after exposure, affected individuals need complete rest (preferably in semi-recumbent posture) and must be kept under medical observation even if no symptoms are (vet) manifested. ▶ Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered. This must definitely be left to a doctor or person authorised by him/her. (ICSC13719) For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do **NOT** induce vomiting If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Ingestion Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. • Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay. Avoid giving milk or oils. Avoid giving alcohol. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

Indication of any immediate medical attention and special treatment needed

Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Mechanical means should be used if it is considered necessary to evacuate the stomach contents; these include gastric lavage after endotracheal intubation. If spontaneous vomiting has occurred after ingestion, the patient should be monitored for difficult breathing, as adverse effects of aspiration into the lungs may be delayed up to 48 hours.

For acute and short term repeated exposures to methanol:

- Toxicity results from accumulation of formaldehyde/formic acid.
- ▶ Clinical signs are usually limited to CNS, eyes and GI tract Severe metabolic acidosis may produce dyspnea and profound systemic effects which may become intractable. All symptomatic patients should have arterial pH measured. Evaluate airway, breathing and circulation.
- Stabilise obtunded patients by giving naloxone, glucose and thiamine.
- ▶ Decontaminate with Ipecac or lavage for patients presenting 2 hours post-ingestion. Charcoal does not absorb well; the usefulness of cathartic is not established.
- Forced diuresis is not effective; haemodialysis is recommended where peak methanol levels exceed 50 mg/dL (this correlates with serum bicarbonate levels below 18 meg/L).
- Ethanol, maintained at levels between 100 and 150 mg/dL, inhibits formation of toxic metabolites and may be indicated when peak methanol levels exceed 20 mg/dL. An intravenous solution of ethanol in D5W is optimal
- Folate, as leucovorin, may increase the oxidative removal of formic acid. 4-methylpyrazole may be an effective adjunct in the treatment. 8. Phenytoin may be preferable to diazepam for controlling seizure

[Ellenhorn Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI

Sampling Time Comment Determinant Index 1. Methanol in urine 15 mg/l End of shift B, NS Before the shift at end of workweek B. NS 2. Formic acid in urine 80 mg/gm creatinine

B: Background levels occur in specimens collected from subjects **NOT** exposed.

NS: Non-specific determinant - observed following exposure to other materials.

Depending on the degree of exposure, periodic medical examination is indicated. The symptoms of lung oedema often do not manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation is therefore essential. Immediate administration of an appropriate spray, by a doctor or a person authorised by him/her should be considered. (ICSC24419/24421

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- Alcohol stable foam.
- Dry chemical powder
- BCF (where regulations permit)
- Carbon dioxide
- Water spray or fog Large fires only.

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

Advice for firefighters

- ► Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Consider evacuation (or protect in place).

► Liquid and vapour are highly flammable.

- Fight fire from a safe distance, with adequate cover.
- ▶ If safe, switch off electrical equipment until vapour fire hazard removed.

- Severe fire hazard when exposed to heat, flame and/or oxidisers.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers. ▶ On combustion, may emit toxic fumes of carbon monoxide (CO).

Fire/Explosion Hazard

Fire Fighting

Combustion products include:

carbon dioxide (CO2) formaldehyde

other pyrolysis products typical of burning organic material.

Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

HAZCHEM

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SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Environmental precautions

See section 12

Methods and material for containment and cleaning up

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Minor Spills	Environmental hazard - contain spillage. Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container. Drains for storage or use areas should have retention basins for pH adjustments and dilution of spills before discharge or disposal of material. Check regularly for spills and leaks.
Major Spills	Environmental hazard - contain spillage. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear full body protective clothing with breathing apparatus. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). No smoking, naked lights or ignition sources.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling ▶ Containers, even those that have been emptied, may contain explosive vapours. ▶ Do NOT cut, drill, grind, weld or perform similar operations on or near containers. ▶ DO NOT allow clothing wet with material to stay in contact with skin ▶ Avoid all personal contact, including inhalation. ▶ Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. Safe handling DO NOT enter confined spaces until atmosphere has been checked Avoid smoking, naked lights, heat or ignition sources. ▶ When handling, **DO NOT** eat, drink or smoke. Contains low boiling substance: Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately. ▶ Check for bulging containers. Vent periodically ▶ Always release caps or seals slowly to ensure slow dissipation of vapours Store in original containers in approved flame-proof area.

No smoking, naked lights, heat or ignition sources. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. Other information Keep containers securely sealed. Store away from incompatible materials in a cool, dry well ventilated area. Protect containers against physical damage and check regularly for leaks.

Plastic containers may only be used if approved for flammable liquid.

- ▶ Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

- Check that containers are clearly labelled and free from leaks. For low viscosity materials (i): Drums and jerry cans must be of the non-removable head type. (ii): Where a can is to be used as an inner package, the can must have a screwed enclosure. ► For materials with a viscosity of at least 2680 cSt. (23 deg. C) ► For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
- Suitable container

Packing as supplied by manufacturer

- Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C): (i) Removable head packaging; (ii) Cans with friction closures and (iii) low pressure tubes and cartridges may be used.
- ▶ Where combination packages are used, and the inner packages are of glass, there must be sufficient inert cushioning material in contact with inner and outer packages
- In addition, where inner packagings are glass and contain liquids of packing group I there must be sufficient inert absorbent to absorb any spillage, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

Storage incompatibility

• are incompatible with strong acids, acid chlorides, acid anhydrides, oxidising and reducing agents.

reacts, possibly violently, with alkaline metals and alkaline earth metals to produce hydrogen react with strong acids, strong caustics, aliphatic amines, isocyanates, acetaldehyde, benzoyl peroxide, chromic acid, chromium oxide, dialkylzincs, dichlorine oxide, ethylene oxide, hypochlorous acid, isopropyl chlorocarbonate, lithium tetrahydroaluminate, nitrogen dioxide, pentafluoroguanidine,

- phosphorus halides, phosphorus pentasulfide, tangerine oil, triethylaluminium, triisobutylaluminium ▶ should not be heated above 49 deg. C. when in contact with aluminium equipment
- ► Avoid storage with reducing agents.

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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	methanol	Methyl alcohol	200 ppm / 262 mg/m3	328 mg/m3 / 250 ppm	Not Available	Not Available
Australia Exposure Standards	formaldehyde	Formaldehyde	1 ppm / 1.2 mg/m3	2.5 mg/m3 / 2 ppm	Not Available	Not Available
Australia Exposure Standards	phenol	Phenol	1 ppm / 4 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	glutaraldehyde	Glutaraldehyde	Not Available	Not Available	0.1 ppm / 0.41 mg/m3	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
methanol	Methyl alcohol; (Methanol)	Not Available	Not Available	Not Available
formaldehyde	Formaldehyde	Not Available	Not Available	Not Available
phenol	Phenol	Not Available	Not Available	Not Available
glutaraldehyde	Gluteraldehyde	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
methanol	6,000 ppm	Not Available
formaldehyde	20 ppm	Not Available
phenol	250 ppm	Not Available
glutaraldehyde	Not Available	Not Available

Exposure controls

Appropriate engineering controls

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

The basic types of engineering controls are:

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

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Personal protection









Eye and face protection

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes.
- 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. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.

Skin protection

See Hand protection below

- ► Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber
- ► When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

NOTE:

- ► The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

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.

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

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Body protection

Hands/feet protection

See Other protection below

- Employees working with confirmed human carcinogens should be provided with, and be required to wear, clean, full body protective clothing (smocks, coveralls, or long-sleeved shirt and pants), shoe covers and gloves prior to entering the regulated area. [AS/NZS ISO 6529:2006 or national equivalent]
- ► Employees engaged in handling operations involving carcinogens should be provided with, and required to wear and use half-face filter-type respirators with filters for dusts, mists and fumes, or air purifying canisters or cartridges. A respirator affording higher levels of protection may be substituted.

 [AS/NZS 1715 or national equivalent]

Other protection

- Emergency deluge showers and eyewash fountains, supplied with potable water, should be located near, within sight of, and on the same level with locations where direct exposure is likely.
- Prior to each exit from an area containing confirmed human carcinogens, employees should be required to remove and leave protective clothing and equipment at the point of exit and at the last exit of the day, to place used clothing and equipment in impervious containers at the point of exit for purposes of decontamination or disposal. The contents of such impervious containers must be identified with suitable labels. For maintenance and decontamination activities, authorized employees entering the area should be provided with and required to wear clean, impervious garments, including gloves, boots and continuous-air supplied hood.
- Prior to removing protective garments the employee should undergo decontamination and be required to shower upon removal of the garments and

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- ▶ hood.
- Overalls
- ▶ PVC Apron.
- ▶ PVC protective suit may be required if exposure severe.
- ▶ Evewash unit.
- ▶ Ensure there is ready access to a safety shower.
- ▶ Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- ▶ For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).
- Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot an shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

Recommended material(s)

GLOVE SELECTION INDEX

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 $\ computergenerated$ selection:

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Material	CPI
BUTYL	A
NEOPRENE	В
BUTYL/NEOPRENE	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE/NATURAL	С
NITRILE	С
PE	С
PE/EVAL/PE	С
PVA	С
PVC	С
PVDC/PE/PVDC	С
SARANEX-23	С
SARANEX-23 2-PLY	С
TEFLON	С
VITON	С
VITON/NEOPRENE	С

^{*} CPI - Chemwatch Performance Index

A: Best Selection

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

Respiratory protection

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

- 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	Water-white, clear flammable liquid with pungent odour; miscible with water.		
Physical state	Liquid	Relative density (Water = 1)	0.936
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	39.44	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	39.44	Taste	Not Available
Evaporation rate	1 BuAC = 1	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available

B: Satisfactory; may degrade after 4 hours continuous immersion

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

^{*} 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.

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Upper Explosive Limit (%)	72	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	6.7	Volatile Component (%vol)	45
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	1	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

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

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

There is strong evidence to suggest that this material can cause, if inhaled once, very serious, irreversible damage of organs. Minor but regular methanol exposures may effect the central nervous system, optic nerves and retinae. Symptoms may be delayed, with headache, fatigue, nausea, blurring of vision and double vision. Continued or severe exposures may cause damage to optic nerves, which may become severe with permanent visual impairment even blindness resulting. Inhaled WARNING: Methanol is only slowly eliminated from the body and should be regarded as a cumulative poison which cannot be made non-harmful [CCINFO] Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual. Ingestion The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion. There is strong evidence to suggest that this material can cause, if swallowed once, very serious, irreversible damage of organs. Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material can produce chemical burns following direct contact with the skin. There is strong evidence to suggest that this material, on a single contact with skin, can cause very serious, irreversible damage of organs. Skin Contact 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 can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating. Eye If applied to the eyes, this material causes severe eye damage Repeated or prolonged exposure to corrosives may result in the erosion of teeth, inflammatory and ulcerative changes in the mouth and necrosis (rarely) of the jaw. Bronchial irritation, with cough, and frequent attacks of bronchial pneumonia may ensue. Strong evidence exists that this substance may cause irreversible mutations (though not lethal) even following a single exposure. Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population Studies show that inhaling this substance for over a long period (e.g. in an occupational setting) may increase the risk of cancer. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Laboratory (in vitro) and animal studies show, exposure to the material may result in a possible risk of irreversible effects, with the possibility of producing Long-term exposure to methanol vapour, at concentrations exceeding 3000 ppm, may produce cumulative effects characterised by gastrointestinal disturbances (nausea, vomiting), headache, ringing in the ears, insomnia, trembling, unsteady gait, vertigo, conjunctivitis and clouded or double vision.

Chronic

Liver and/or kidney injury may also result.

Solid phenol is highly toxic if swallowed, inhaled or on skin contact. Chronic phenol poisoning is very rarely reported, but symptoms include vomiting, difficulty in swallowing, diarrhoea, lack of appetite, headache, fainting, dizziness, dark urine, mental disturbances, possibly skin rash and death due to liver and kidney damage may occur.

Repeated exposure of animals to phenol vapour at concentrations ranging from 26 to 52 ppm has produced respiratory, cardiovascular, liver, kidney and neurologic toxicity and may produce blood cancers in mice on oral exposure.

Low concentrations cause skin reddening and irritation, occupational asthma, nasal discharge, sneezing and congestion. Long term exposure may cause chronic fatigue. There may be reduced body weight and damage to the nose with repeated high doses. It does not cause changes to foetal development, but may cause blood cancers (leukaemias).

When administered by inhalation, formaldehyde caused squamous cell carcinomas of the nose cavity in animal testing. In humans, excess occurrence of a number of cancers has been reported in humans, but the evidence is strongest for a link between formaldehyde and cancers of the nose and nasopharynx. Formaldehyde exposure has also been associated with cancers of the lung and oropharynx. Some studies have concluded that formaldehyde can sensitise the airways and cause asthma, but the mechanism is unknown. There is limited evidence that formaldehyde has any adverse effect on reproduction or development in humans. An investigation of reproductive function in female workers exposed to formaldehyde in the garment industry, revealed an increased incidence of menstrual disorders, inflammatory disease of the reproductive tract, sterility, anaemia and low birth weight among offspring.

Searine	TOXICITY Not Available	IRRITATION Not Available
methanol	TOXICITY	IRRITATION
	Not Available	Eye (rabbit): 100 mg/24h-moderate
		Eye (rabbit): 40 mg-moderate

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		Skin (rabbit): 20 r	ng/24 h-moderate
	TOXICITY	IRRITATION	
forms ald also de	Not Available	Eye (human): 4 pp	
formaldehyde		Skin (human): 0.7	mg/24H SEVERE
		Skin (rabbit): 2 m	
		1 (,	
	TOXICITY	IRRITATION	
	dermal (rat) LD50: =525 mg/kg ^[2]	Eye(rabbit): 100	mg rinse - mild
phenol	Inhalation (rat) LC50: 0.316 mg/l/4H ^[2]	Eye(rabbit): 5 mg	j - SEVERE
	Oral (rat) LD50: 317 mg/kg ^[2]	Skin(rabbit): 500	mg open -SEVERE
		Skin(rabbit): 500	mg/24hr - SEVERE
	TOVICITY	IDDITATION	
	TOXICITY	IRRITATION	mg/24h-SEVERE
	dermal (rat) LD50: >2500 mg/kg ^[2]		
glutaraldehyde	Inhalation (rat) LC50: 0.48 mg/l/4hd ^[2]	Eye (rabbit): 1 m	
	Oral (rat) LD50: =66 mg/kg ^[2]	1	mg/3d-int-SEVERE
		Skin (rabbit): 13 r	
		Skin (rabbit): 2 m	g/24h-SEVERE
Legend:	Value obtained from Europe ECHA Registered Substated at a extracted from RTECS - Register of Toxic Effect of the extracted from RTECS - Register of Toxic Effect of the extraction of the e		from manufacturer's SDS. Unless otherwise specified
	1		
METHANOL	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.		
	No significant acute toxicological data identified in literat	ure search.	
FORMALDEHYDE	WARNING: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS. Tenth Annual Report on Carcinogens: Substance anticipated to be Carcinogen [National Toxicology Program: U.S. Dep. of Health & Human Services 2002]		
PHENOL	The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.		
GLUTARALDEHYDE	Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins. Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema. Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure. Animal testing shows that glutaraldehyde has a high acute toxicity through inhalation and it may cause lung damage. It is corrosive to the skin and eyes and exposure to its vapours has caused irritation to the nose and breathing difficulties. It can sensitise skin and irritate the joints in animal testing. Prolonged skin contact can result in absorption through the skin (although absorption rates are low) according to laboratory testing with human skin tissue. It is not		
FORMALDEHYDE & GLUTARALDEHYDE	known whether glutaraldehyde causes genetic damage. The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.		
FORMALDEHYDE & PHENOL	The material may produce severe irritation to the eye cau conjunctivitis.	sing pronounced inflammation. Repeated	d or prolonged exposure to irritants may produce
FORMALDEHYDE & PHENOL & GLUTARALDEHYDE	The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. 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. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.		
Acute Toxicity	~	Carcinogenicity	✓
Skin Irritation/Corrosion	~	Reproductivity	0
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	~
Respiratory or Skin sensitisation	*	STOT - Repeated Exposure	0
Mutagenicity	✓	Aspiration Hazard	0

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ьедена:

 → Data available to make classification - Data avaliable but udes flot fill the criteria for Gassilication

N - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Searine	Not Available	Not Available	Not Available	Not Available	Not Available
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	15-400mg/L	2
	EC50	48	Crustacea	>10000mg/L	4
methanol	EC50	96	Algae or other aquatic plants	3382.800mg/L	3
	BCF	24	Algae or other aquatic plants	0.05mg/L	4
	EC0	168	Algae or other aquatic plants	=530mg/L	1
	NOEC	72	Crustacea	0.1mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.035mg/L	4
formaldehyde	EC50	48	Crustacea	0.3mg/L	4
	EC50	96	Algae or other aquatic plants	0.788mg/L	4
	NOEC	96	Algae or other aquatic plants	<0.1mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	0.00175mg/L	4
	EC50	48	Crustacea	3.1mg/L	2
phenol	EC50	96	Algae or other aquatic plants	0.0611mg/L	4
	BCF	24	Fish	60mg/L	4
	EC10	0.5	Algae or other aquatic plants	0.076mg/L	4
	NOEC	144	Crustacea	0.01mg/L	4
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	3.5mg/L	4
glutaraldehyde	EC50	48	Crustacea	0.75mg/L	4
	EC50	72	Algae or other aquatic plants	=0.61mg/L	1
	NOEC	96	Crustacea	0.16mg/L	2

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

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methanol	LOW	LOW
formaldehyde	LOW (Half-life = 14 days)	LOW (Half-life = 2.97 days)
phenol	LOW (Half-life = 10 days)	LOW (Half-life = 0.95 days)
glutaraldehyde	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
methanol	LOW (BCF = 10)
formaldehyde	LOW (LogKOW = 0.35)
phenol	LOW (BCF = 17.5)
glutaraldehyde	LOW (LogKOW = -0.1821)

Mobility in soil

Ingredient	Mobility	

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methanol	HIGH (KOC = 1)
formaldehyde	HIGH (KOC = 1)
phenol	LOW (KOC = 268)
glutaraldehyde	HIGH (KOC = 1.094)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

- ► Containers may still present a chemical hazard/ danger when empty.
- ▶ Return to supplier for reuse/ recycling if possible.

Otherwise:

- ▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product.

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

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

- ▶ Reduction
- ▶ Reuse
- ► Recycling
- Product / Packaging disposal
- ▶ Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Treat and neutralise at an approved treatment plant. Treatment should involve: Neutralisation followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus.
- ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required



Marine Pollutant

NO Not Applicable

•3WE

HAZCHEM

Land transport (ADG)

UN number	3286		
UN proper shipping name	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (contains methanol, glutaraldehyde and formaldehyde)		
Transport hazard class(es)	Class 3 Subrisk 6.1, 8		
Packing group			
Environmental hazard	Not Applicable		
Special precautions for user	Special provisions 274 Limited quantity 1 L		

Air transport (ICAO-IATA / DGR)

UN number	3286		
UN proper shipping name	Flammable liquid, toxic, corrosive, n.o.s. * (contains methanol, glutaraldehyde and formaldehyde)		
Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subrisk ERG Code	3 6.1, 8 3CP	
Packing group			
Environmental hazard	Not Applicable		

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	Special provisions	Not Applicable
	Cargo Only Packing Instructions	363
	Cargo Only Maximum Qty / Pack	5 L
Special precautions for user	Passenger and Cargo Packing Instructions	352
	Passenger and Cargo Maximum Qty / Pack	1 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y340
	Passenger and Cargo Limited Maximum Qty / Pack	0.5 L

Sea transport (IMDG-Code / GGVSee)

UN number	3286		
UN proper shipping name	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (contains methanol, glutaraldehyde and formaldehyde)		
Transport hazard class(es)	IMDG Class 3 IMDG Subrisk 6.1, 8		
Packing group			
Environmental hazard	Not Applicable		
Special precautions for user	EMS Number F-E, S-C Special provisions 274 Limited Quantities 1 L		

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

METHANOL(67-56-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

FORMALDEHYDE(50-00-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

PHENOL(108-95-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

GLUTARALDEHYDE(111-30-8) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix E (Part 2)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix F (Part 3)

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule

National Inventory Status

National Inventory	Status
Australia - AICS	Υ
Canada - DSL	Υ
Canada - NDSL	N (phenol; methanol; formaldehyde; glutaraldehyde)

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

SECTION 16 OTHER INFORMATION

Revision Date	20/02/2024
Initial Date	08/10/2013

SDS Version Summary

Version	Issue Date	Sections Updated
2.1.1.1	05/09/2018	Classification
3.1.1.1	20/02/2024	Acute Health (inhaled), Acute Health (skin), Acute Health (swallowed), Advice to Doctor, Chronic Health, Classification, Disposal, Engineering Control, Environmental, Fire Fighter (extinguishing media), Fire Fighter (fire/explosion hazard), Fire Fighter (fire fighting), First Aid (inhaled), First Aid (swallowed), Handling Procedure, Instability Condition, Personal Protection (other), Personal Protection (Respirator), Physical Properties, Spills (major), Spills (minor), Storage (storage incompatibility), Storage (storage requirement), Storage (suitable container), Supplier Information, Transport, Transport Information

Other information

Ingredients with multiple cas numbers

Name	CAS No
formaldehyde	50-00-0, 8005-38-7, 8006-07-3, 8013-13-6, 112068-71-0

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

 ${\sf PC-TWA: Permissible \ Concentration-Time \ Weighted \ Average}$

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 $_{\circ}$

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

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

TLV: Threshold Limit Value LOD: Limit Of Detection OTV: Odour Threshold Value BCF: BioConcentration Factors

BEI: Biological Exposure Index
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