### Vis-O-Guard Gel

### Frigid Fluid Company

Chemwatch: 5178-51 Version No: 3.1.1.1

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

Issue Date: 29/05/2015 Print Date: 01/06/2015 Initial Date: Not Available

### S.GHS.USA.EN

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

### **Product Identifier**

Product name	Vis-O-Guard Gel
Synonyms	Not Available
Proper shipping name	Formaldehyde solutions, flammable
Other means of identification	Not Available

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

Relevant identified uses	Use according to manufacturer's directions
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### Details of the manufacturer/importer

Registered company name	Frigid Fluid Company
Address	11631 W Grand Ave Melrose Park 60164 IL United States
Telephone	+1 708-836-1215
Fax	Not Available
Website	Not Available
Email	Not Available

### **Emergency telephone number**

Association	/ Organisation	Not Available
Emerg	ency telephone numbers	1-800-424-9300
Other emerg	ency telephone numbers	Not Available

### **SECTION 2 HAZARDS IDENTIFICATION**

### Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Classified as Dangerous Goods for transport purposes.



**GHS Classification** 

Flammable Liquid Category 2, Metal Corrosion Category 1, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 3, Acute Toxicity (Inhalation) Category 2, Skin Corrosion/Irritation Category 1B, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Carcinogen Category 1B, STOT - SE Category 1

### Label elements

**GHS** label elements









SIGNAL WORD

DANGER

### Hazard statement(s)

H225	Highly flammable liquid and vapour
H290	May be corrosive to metals
H301	Toxic if swallowed
H311	Toxic in contact with skin

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H330	Fatal if inhaled
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H317	May cause an allergic skin reaction
H350	May cause cancer
H370	Causes damage to organs

### Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. 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.

### Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep 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/doctor/physician/first aider

### Precautionary statement(s) Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised chemical landfill or if organic to high temperature incineration

### SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

CAS No	%[weight]	Name
67-56-1	30-40	<u>methanol</u>
50-00-0	15	formaldehyde.
111-46-6	5-10	diethylene glycol
107-06-2	1-5	ethylene dichloride

### **SECTION 4 FIRST AID MEASURES**

### 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	<ul> <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> <li>Inhalation of vapours or aerosols (mists, fumes) may cause lung oedema.</li> <li>Corrosive substances may cause lung damage (e.g. lung oedema, fluid in the lungs).</li> </ul>

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	<ul> <li>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 (yet) manifested.</li> <li>Before any such manifestation, the administration of a spray containing a dexamethasone derivative or beclomethasone derivative may be considered.</li> <li>This must definitely be left to a doctor or person authorised by him/her.</li> <li>(ICSC13719)</li> </ul>
Ingestion	<ul> <li>Avoid giving milk or oils.</li> <li>Avoid giving alcohol.</li> <li>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</li> <li>For advice, contact a Poisons Information Centre or a doctor.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the MSDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the MSDS.</li> </ul>
	Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:  INDUCE vomiting with fingers down the back of the throat, ONLY IF CONSCIOUS. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.  NOTE: Wear a protective glove when inducing vomiting by mechanical means.

### 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.

To treat poisoning by the higher aliphatic alcohols (up to C7):

- Gastric lavage with copious amounts of water
- It may be beneficial to instill 60 ml of mineral oil into the stomach.
- Oxvgen and artificial respiration as needed.
- ▶ Electrolyte balance: it may be useful to start 500 ml. W/6 sodium bicarbonate intravenously but maintain a cautious and conservative attitude toward electrolyte replacement unless shock or severe acidosis threatens.
- To protect the liver, maintain carbohydrate intake by intravenous infusions of glucose.
- ▶ Haemodialysis if coma is deep and persistent. [GOSSELIN, SMITH HODGE: Clinical Toxicology of Commercial Products, Ed 5)

### BASIC TREATMENT

▶ Establish a patent airway with suction where necessary.

- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for shock.
- Monitor and treat, where necessary, for pulmonary oedema.
- Anticipate and treat, where necessary, for seizures.
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.
- Give activated charcoal.

### ADVANCED TREATMENT

▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.

- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- If the patient is hypoglycaemic (decreased or loss of consciousness, tachycardia, pallor, dilated pupils, diaphoresis and/or dextrose strip or glucometer readings below 50 mg), give 50% dextrose.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

### EMERGENCY DEPARTMENT

- Laboratory analysis of complete blood count, serum electrolytes, BUN, creatinine, glucose, urinalysis, baseline for serum aminotransferases (ALT and AST), calcium, phosphorus and magnesium, may assist in establishing a treatment regime. Other useful analyses include anion and osmolar gaps, arterial blood gases (ABGs), chest radiographs and electrocardiograph.
- Positive end-expiratory pressure (PEEP)-assisted ventilation may be required for acute parenchymal injury or adult respiratory distress syndrome.
- · Acidosis may respond to hyperventilation and bicarbonate therapy.
- Haemodialysis might be considered in patients with severe intoxication.
- Consult a toxicologist as necessary. BRONSTEIN, A.C. and CURRANCE, P.L. EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

### For C8 alcohols and above

Symptomatic and supportive therapy is advised in managing patients.

For acute or short-term repeated exposures to formaldehyde:

### INGESTION:

- ▶ Patients present early with severe corrosion of the gastro-intestinal tract and systemic effects.
- Inflammation and ulceration may progress to strictures.
- Severe acidosis results from rapid conversion of formaldehyde to formic acid. Coma, hypotension, renal failure and apnoea complicate ingestion.
- Decontaminate by dilution with milk or water containing ammonium acetate; vomiting should be induced. Follow with gastric lavage using a weak ammonia solution (converts formaldehyde to relatively inert pentamethylenetetramine)
- Gastric lavage is warranted only in first 15 minutes following ingestion.

### SKIN:

Formaldehyde can combine with epidermal protein to produce a hapten-protein couple capable of sensitising T-lymphocytes. Subsequent exposures cause a type IV hypersensitivity reaction (i.e. allergic contact dermatitis). [Ellenhorn & Barceloux: Medical Toxicology]

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

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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

Water may be an ineffective extinguishing media for methanol fires; static explosions are reported for aqueous solutions as dilute as 30%. Water may be used to cool containers.

- Alcohol stable foam.
- Dry chemical powder.
- ▶ BCF (where regulations permit).
- Carbon dioxide.

### 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

### Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- ▶ Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- ▶ Use water delivered as a fine spray to control fire and cool adjacent area.

### Fire/Explosion Hazard

- ▶ Liquid and vapour are flammable
- ▶ Moderate fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Vapour forms are explosive mixture with all.
   Moderate explosion hazard when exposed to heat or flame.
- Vapour may travel a considerable distance to source of ignition.
- ▶ Heating may cause expansion or decomposition leading to violent rupture of containers

### **SECTION 6 ACCIDENTAL RELEASE MEASURES**

### Personal precautions, protective equipment and emergency procedures

### Minor Spills

- Remove all ignition sources.
- Clean up all spills immediately.
   Avoid breathing vapours and contact with
- 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.

### Major Spills

- ▶ 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.
- ▶ No smoking, naked lights or ignition sources.

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

### **SECTION 7 HANDLING AND STORAGE**

### Precautions for safe handling

### 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.
- Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of overexposure occurs.
- ▶ Use in a well-ventilated area
- Prevent concentration in hollows and sumps.

## Other information

- Store in original containers in approved flammable liquid storage area.
- Store away from incompatible materials in a cool, dry, well-ventilated area.
- ▶ DO NOT store in pits, depressions, basements or areas where vapours may be trapped

### No smoking, naked lights, heat or ignition sources.

- Storage areas should be clearly identified, well illuminated, clear of obstruction and accessible only to trained and authorised personnel adequate security must be provided so that unauthorised personnel do not have access.
- ▶ Store according to applicable regulations for flammable materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances.

|Store in cool, well-ventilated areas between 50 and 100°F.

### Conditions for safe storage, including any incompatibilities

### Suitable container

- ▶ Packing as supplied by manufacturer.
- ▶ Plastic containers may only be used if approved for flammable liquid.
- 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.

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- ► Avoid reaction with oxidising agents
- Avoid strong acids, bases
- Avoid storage with reducing agents

### Methanol:

- reacts violently with strong oxidisers, acetyl bromide, alkyl aluminium salts, beryllium dihydride, bromine, chromic acid, 1-chloro-3,3-difluoro-2-methoxycyclopropene, cyanuric chloride, diethylzinc, isophthaloyl chloride, nitric acid, perchloric acid, potassium-tert-butoxide, potassium sulfur diimide, Raney nickel catalysts, 2,4,6-trichlorotriazine, triethylaluminium, 1,3,3-trifluoro-2-methoxycyclopropene
- is incompatible with strong acids, strong caustics, alkaline earth and alkali metals, aliphatic amines, acetaldehyde, benzoyl peroxide, 1,3-bis(din-cyclopentadienyl iron)-2-propen-1-one, calcium carbide, chloroform, chromic anhydride, chromium trioxide, dialkylzinc, dichlorine oxide, dichloromethane, ethylene oxide, hypochlorous acid, isocyanates, isopropyl chlorocarbonate, lithium tetrahydroaluminate, magnesium, methyl azide, nitrogen dioxide, palladium, pentafluoroguanidine, perchloryl fluoride, phosphorus pentasulfide, phosphorus trioxide, potassium, tangerine oil, triisobutylaluminium
- mixtures with lead perchlorate, sodium hypochlorite are explosive
- may react with metallic aluminium at high temperatures
- ▶ slowly corrodes lead and aluminium
- ▶ may generate electrostatic charges, due to low conductivity, on flow or agitation
- attacks some plastics, rubber and coatings.

Static induced flash fires have happened when filling plastic containers with methanol / water solutions with as low as 30% methanol content Formaldehyde:

- is a strong reducing agent
- ▶ may polymerise in air unless properly inhibited (usually with methanol up to 15%) and stored at controlled temperatures
- ▶ will polymerize with active organic material such as phenol
- reacts violently with strong oxidisers, hydrogen peroxide, potassium permanganate, acrylonitrile, caustics (sodium hydroxide, yielding formic acid and flammable hydrogen), magnesium carbonate, nitromethane, nitrogen oxides (especially a elevated temperatures), peroxyformic acid
- is incompatible with strong acids (hydrochloric acid forms carcinogenic bis(chloromethyl)ether\*), amines, ammonia, aniline, bisulfides, gelatin, iodine, magnesite, phenol, some monomers, tannins, salts of copper, iron, silver.
- acid catalysis can produce impurities: methylal, methyl formate

Aqueous solutions of formaldehyde:

- ▶ slowly oxidise in air to produce formic acid
- attack carbon steel

Concentrated solutions containing formaldehyde are:

- unstable, both oxidising slowly to form formic acid and polymerising; in dilute aqueous solutions formaldehyde appears as monomeric hydrate (methylene glycol) the more concentrated the solution the more polyoxymethylene glycol occurs as oligomers and polymers (methanol and amine-containing compounds inhibit polymer formation)
- readily subject to polymerisation, at room temperature, in the presence of air and moisture, to form paraformaldehyde (8-100 units of formaldehyde), a solid mixture of linear polyoxymethylene glycols containing 90-99% formaldehyde; a cyclic trimer, trioxane (CH2O3), may also form

Flammable and/or toxic gases are generated by the combination of aldehydes with azo, diazo compounds, dithiocarbamates, nitrides, and strong reducing agents

\*The empirical equation may be used to determine the concentration of bis(chloromethyl)ether (BCME) formed by reaction with HCl: log(BCME)ppb = -2.25 + 0.67\* log(HCHO) ppm + 0.77\* log(HCl)ppm

Assume values for formaldehyde, in air, of 1 ppm and for HCl of 5 ppm, resulting BCME concentration, in air, would be 0.02 ppb.

### PACKAGE MATERIAL INCOMPATIBILITIES

Storage incompatibility

Not Available

### **SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION**

### **Control parameters**

### OCCUPATIONAL EXPOSURE LIMITS (OEL)

### INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
US OSHA Permissible Exposure Levels (PELs) - Table Z1	methanol	Methyl alcohol	260 mg/m3 / 200 ppm	Not Available	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	methanol	Methanol	200 ppm	250 ppm	Not Available	TLV® Basis: Headache; eye dam; dizziness; nausea; BEI
US NIOSH Recommended Exposure Limits (RELs)	methanol	Carbinol, Columbian spirits, Methanol, Pyroligneous spirit, Wood alcohol, Wood naphtha, Wood spirit	260 mg/m3 / 200 ppm	325 mg/m3 / 250 ppm	Not Available	[skin]
US OSHA Permissible Exposure Levels (PELs) - Table Z1	formaldehyde.	Formaldehyde	0.75 ppm	2 ppm	Not Available	see 1910.1048
US OSHA Permissible Exposure Levels (PELs) - Table Z2	formaldehyde.	Formaldehyde	0.75 ppm	2 ppm	Not Available	see 1910.1048
US ACGIH Threshold Limit Values (TLV)	formaldehyde.	‡ Formaldehyde	Not Available	Not Available	0.3 ppm	TLV® Basis: URT & eye irr
US NIOSH Recommended Exposure Limits (RELs)	formaldehyde.	Methanal, Methyl aldehyde, Methylene oxide / Formaldehyde solution [Note: Formalin is an aqueous solution that is 37% formaldehyde by weight; inhibited solutions usually contain 6-12% methyl alcohol. Also see specific listings for Formaldehyde and Methyl alcohol.]	0.016 ppm	Not Available	0.1 ppm	Ca See Appendix A
US OSHA Permissible Exposure Levels (PELs) - Table Z1	ethylene dichloride	Ethylene dichloride (1,2-Dichloroethane)	Not Available	Not Available	Not Available	See Table Z-2
US OSHA Permissible Exposure Levels (PELs) - Table Z2	ethylene dichloride	Ethylene dichloride	50 ppm	Not Available	100 ppm	(Z37.21–1969)
US ACGIH Threshold Limit Values (TLV)	ethylene dichloride	Ethylene dichloride	10 ppm	Not Available	Not Available	TLV® Basis: Liver dam; nausea

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US NIOSH Recommended Exposure Limits (RELs)	ethylene dichloride	1,2-Dichloroethane; Ethylene chloride; Glycol dichloride	4 mg/m3 / 1 ppm	8 mg/m3 / 2 ppm	Not Available	Ca See Appendix A See Appendix C (Chloroethanes)
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### **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
diethylene glycol	Diethylene glycol	6.9155 ppm	80 ppm	250 ppm
ethylene dichloride	Ethylene dichloride; (1,2-Dichloroethane)	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
methanol	25,000 ppm	6,000 ppm
formaldehyde.	30 ppm	20 ppm
diethylene glycol	Not Available	Not Available
ethylene dichloride	1,000 ppm	50 ppm

### **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.

### Personal protection











Eve 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.

### Skin protection

### See Hand protection below

- ▶ Wear chemical protective gloves, e.g. PVC.
- ▶ Wear safety footwear or safety gumboots, e.g. Rubber

### Hands/feet protection

### 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.

### Body protection

### See Other protection below

# Other protection

- 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]
- 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 with the property and levels protective delibing and levels protective delibing and
- 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.

### Thermal hazards

Not Available

### 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 *computer-generated* selection:

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Material	СРІ
BUTYL	С
BUTYL/NEOPRENE	С
NAT+NEOPR+NITRILE	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NEOPRENE/NATURAL	С

### Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), 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	BAX-AUS P2	-	BAX-PAPR-AUS / Class 1 P2
up to 50 x ES	-	BAX-AUS / Class 1 P2	-
up to 100 x ES	-	BAX-2 P2	BAX-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen

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NITDII E	С
NITRILE	C
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
##ethylene	dichloride
##diethylene	glycol

 $\mbox{cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur \mbox{dioxide(SO2), G = } \\$ Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

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

### **SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES**

### Information on basic physical and chemical properties

Appearance	Pale blue flammable gel with a pungent odour; mixes with wat	ter.	
Physical state	Gel	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Applicable	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	63	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	27 (PMCC)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Flammable.	Oxidising properties	Not Available
Upper Explosive Limit (%)	73	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	6	Volatile Component (%vol)	>90
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	<ul> <li>Static induced flash fires have happened when filling plastic containers with methanol / water solutions with as low as 30% methanol content.</li> <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**

<sup>\*</sup> 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

<sup>\*</sup> 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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Vis-O-Guard Gel

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Inhaled	and vertigo. Aliphatic alcohols with more than 3-carbons cause headache, dizzir	ay be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, ness, drowsiness, muscle weakness and delirium, central depression, coma, seizures and a well as low blood pressure and irregular heart rhythms, may follow.			
Ingestion	The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.  Strong evidence exists that exposure to the material may produce serious irreversible damage (other than carcinogenesis, mutagenesis and teratogenesis) following a single exposure by swallowing.  Swallowing of the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis; serious consequences may result. (ICSC13733)  This substance if swallowed may cause immediate severe abdominal pain, with vomiting, nausea, passage of frequent watery stool, reduced or no urine production, dizziness, followed by unconsciousness, convulsions and may result in death. It can also cause sight problems and possible permanent blindness.  Methanol may produce a burning or painful sensation in the mouth, throat, chest, and stomach.				
Skin Contact	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 serious, irreversible damage of organs.  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.  Minor regular skin contact results in hardening of skin, making it feel like leather. It may also cause skin inflammation and an itchy rash especially among workers exposed to formaldehyde in hospitals, in the production of resins, textiles, shampoos and laminated furniture.				
Eye	The material can produce chemical burns to the eye following direct If applied to the eyes, this material causes severe eye damage. 510n	· · · · · · · · · · · · · · · · · · ·			
Chronic	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.  Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.  There is ample evidence that this material can be regarded as being able to cause cancer in humans based on experiments and other information.  Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.  There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.				
Vis-O-Guard Gel	TOXICITY  Not Available	IRRITATION  Not Available			
		1			
	TOXICITY  Dermal (rabbit) LD50: 15800 mg/kg <sup>[2]</sup>	IRRITATION  Eye (rabbit): 100 mg/24h-moderate			
methanol	Inhalation (rat) LC50: 64000 ppm/4h <sup>[2]</sup>	Eye (rabbit): 40 mg-moderate			
	Oral (rat) LD50: >11872769 mg/kg <sup>[1]</sup>	Skin (rabbit): 20 mg/24 h-moderate			
	TOXICITY	IRRITATION			
	Dermal (rabbit) LD50: 270 mg/kg <sup>[2]</sup>	Eye (human): 4 ppm/5m			
formaldehyde.	Inhalation (rat) LC50: 250 ppm/4H <sup>[2]</sup>	Eye (rabbit): 0.75 mg/24H SEVERE			
	Oral (rat) LD50: 100 mg/kgm <sup>[2]</sup>	Skin (human): 0.15 mg/3d-l mild			
		Skin (rabbit): 2 mg/24H SEVERE			
	TOXICITY	IRRITATION			
	Dermal (rabbit) LD50: 11890 mg/kgd <sup>[2]</sup>	Eye (rabbit) 50 mg mild			
diethylene glycol	Oral (rat) LD50: 12000 mg/kg <sup>[2]</sup>	Skin (human): 112 mg/3d-I mild			
		Skin (rabbit): 500 mg mild			

ethylene dichloride

Legend:

TOXICITY

Dermal (rabbit) LD50: 3890 mg/kg<sup>[2]</sup>

Inhalation (monkey) LC50: 3000 ppm/7H<sup>[2]</sup>

Inhalation (mouse) LC50: 1.06 mg/L/6H<sup>[2]</sup>

Inhalation (rat) LC50: 1000 ppm/7h $^{[2]}$ Inhalation (rat) LC50: 5.1 mg/L/6H<sup>[2]</sup>

Oral (rat) LD50: 680 mg/kg<sup>[2]</sup> 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.\* Value obtained from manufacturer's msds. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

IRRITATION

Skin (rabbit): 500 mg/24h - mild

Skin (rabbit): 625 mg - mild

### ETHYLENE DICHLORIDE

Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases.

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Vis-O-Guard Gel & FORMALDEHYDE.

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 antibodymediated 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.

**METHANOL &** DIETHYLENE GLYCOL 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.

Acute Toxicity	<b>~</b>	Carcinogenicity	<b>~</b>
Skin Irritation/Corrosion	✓	Reproductivity	0
Serious Eye Damage/Irritation	<b>✓</b>	STOT - Single Exposure	<b>✓</b>
Respiratory or Skin sensitisation	<b>✓</b>	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend:

✓ – Data required to make classification available

X - Data available but does not fill the criteria for classification

Not Available to make classification

### **CMR STATUS**

REPROTOXIN	ethylene dichloride ILO Chemicals in the electronics industry that have toxic effects on reproduction	
CARCINOGEN	US Environmental Defense Scorecard Recognized Carcinogens US Air Toxics Hot formaldehyde. Spots TSD for Describing Available Cancer Potency Factors US NIOSH P65 2A Ca See Appendix A Recommended Exposure Limits (RELs) - Carcinogens	
	ethylene dichloride  US NIOSH Recommended Exposure Limits (RELs) - Carcinogens US Air Toxics Hot Spots TSD for Describing Available Cancer Potency Factors US Environmental (Chloroethanes) 2B P65-MC P65	
EYE	formaldehyde. US - California OEHHA/ARB - Acute Reference formaldehyde. US - California OEHHA/ARB - Acute Reference formaldehyde. Exposure Levels and Target Organs (RELs) - Eye as a Toxic Air Contaminant. The Air Resources Board has identified this sub	ostance
RESPIRATORY	formaldehyde. US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs) - Respiratory X	
SKIN	US - Hawaii Air Contaminant Limits - Skin Designation US - Alaska Limits for Air Contaminants - Skin Designation US NIOSH Recommended Exposure Limits (RELs) - Skin US - Washington Permissible exposure limits of air contaminants - Skin US - Michigan Exposure Limits for Air Contaminants - Skin US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants - Skin US ACGIH Threshold Limit Values (TLV) - Skin US - California Permissible Exposure Limits for Chemical Contaminants - Skin US - North Carolina Permissible Exposure Limits (PELs) for Air Contaminants - Skin US - Minnesota Permissible Exposure Limits (PELs) - Skin	

### **SECTION 12 ECOLOGICAL INFORMATION**

### **Toxicity**

For Formaldehyde:

Environmental Fate: Formaldehyde is common in the environment as a contaminant of smoke and as photochemical smog. Concentrated solutions containing formaldehyde are unstable and oxidize slowly. In the presence of air and moisture, polymerization takes place readily in concentrated solutions at room temperature to form paraformaldehyde.

Atmospheric Fate: In the atmosphere, formaldehyde both photolysis and reacts with reactive free radicals (primarily hydroxyl radicals). Reaction with nitrate radicals, insignificant during the day, may be an important removal process at night. Air Quality Standards: <0.1 mg/m3 as a 30 min.

### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
methanol	LOW	LOW
formaldehyde.	LOW (Half-life = 14 days)	LOW (Half-life = 2.97 days)
diethylene glycol	LOW	LOW
ethylene dichloride	HIGH (Half-life = 360 days)	MEDIUM (Half-life = 121.54 days)

### **Bioaccumulative potential**

•	
Ingredient	Bioaccumulation
methanol	LOW (BCF = 10)
formaldehyde.	LOW (LogKOW = 0.35)
diethylene glycol	LOW (BCF = 180)
ethylene dichloride	LOW (BCF = 6)

### Mobility in soil

Ingredient	Mobility

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methanol	HIGH (KOC = 1)
formaldehyde.	HIGH (KOC = 1)
diethylene glycol	HIGH (KOC = 1)
ethylene dichloride	LOW (KOC = 43.79)

### **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.

### Product / Packaging

disposal

- 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 MSDS and observe all notices pertaining to the product.
- ▶ 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.

### **SECTION 14 TRANSPORT INFORMATION**

### **Labels Required**



Otherwise:



Marine Pollutant

NO

### Land transport (DOT)

UN number	1198
Packing group	III
UN proper shipping name	Formaldehyde solutions, flammable
Environmental hazard	No relevant data
Transport hazard class(es)	Class 3 Subrisk 8
Special precautions for user	Special provisions 176, B1, IB3, T4, TP1

### Air transport (ICAO-IATA / DGR)

UN number	1198	
Packing group	III	
UN proper shipping name	Formaldehyde solution, flammable	
Environmental hazard	No relevant data	
Transport hazard class(es)	ICAO/IATA Class 3 ICAO / IATA Subrisk 8 ERG Code 3Ci	
	Special provisions	A180
	Cargo Only Packing Instructions	365
	Cargo Only Maximum Qty / Pack	60 L
Special precautions for user	Passenger and Cargo Packing Instructions	354
	Passenger and Cargo Maximum Qty / Pack	5 L
	Passenger and Cargo Limited Quantity Packing Instructions	Y342
	Passenger and Cargo Limited Maximum Qty / Pack	1 L

### Sea transport (IMDG-Code / GGVSee)

UN number	1198
Packing group	III
UN proper shipping name	FORMALDEHYDE SOLUTION, FLAMMABLE
Environmental hazard	Not Applicable
Transport hazard class(es)	IMDG Class 3 IMDG Subrisk 8

	EMS Number
Special precautions for user	Special prov
	Limited Qua

EMS Number	F-E, S-C
Special provisions	Not Applicable
Limited Quantities	5 L

### Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	methanol	Υ
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	formaldehyde.	Υ
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	ethylene dichloride	Y

### **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

"US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US - Hawaii Air Contaminant Limits", "US - California Permissible Exposure Limits for Chemical Contaminants", "US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens", "US - Idaho - Limits for Air Contaminants", "US - California Proposition 65 - Reproductive Toxicity", "US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US - Oregon Permissible Exposure Limits (Z-1)", "US - Michigan Exposure Limits for Air Contaminants", "US - California Proposition 65 - Priority List for the Development of MADLs for Chemicals Causing Reproductive Toxicity", "US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)", "US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values", "US - Alaska Limits for Air Contaminants", "US NIOSH Recommended Exposure Limits (RELs)", "US - Washington Permissible exposure limits of air contaminants", "US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants", "US Priority List for the Development of Proposition 65 Safe Harbor Levels - No Significant Risk Levels (NSRLs) for Carcinogens and Maximum Allowable Dose Levels (MADLs) for Chemicals Causing Reproductive Toxicity", "US - Minnesota Permissible Exposure Limits (PELs)", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants", "US ACGIH Threshold Limit Values (TLV)", "US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)", "US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory", "US OSHA Permissible Exposure Levels (PELs) - Table Z1"

### formaldehyde.(50-00-0) is found on the following regulatory lists

"US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)", "US -Hawaii Air Contaminant Limits", "US - California Permissible Exposure Limits for Chemical Contaminants", "US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens", "US - Idaho - Limits for Air Contaminants", "US ACGIH Threshold Limit Values (TLV) - Carcinogens", "US National Toxicology Program (NTP) 13th Report Part A Known to be Human Carcinogens", "US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US EPA Carcinogens Listing", "US - Oregon Permissible Exposure Limits (Z-2)", "US - Oregon Permissible Exposure Limits (Z-1)","International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs","US - Michigan Exposure Limits for Air Contaminants", "US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Mutagens", "US - California - Proposition 65 - Priority List for the Development of MADLs for Chemicals Causing Reproductive Toxicity", "US - California OEHHA/ARB - Acute Reference Exposure Levels and Target Organs (RELs)","US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values","US - Alaska Limits for Air Contaminants","US NIOSH Recommended Exposure Limits (RELs)", "US OSHA Carcinogens Listing", "US - Washington Permissible exposure limits of air contaminants", "US -Wyoming Toxic and Hazardous Substances Table Z-2 Acceptable ceiling concentration, Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift", "US OSHA Permissible Exposure Levels (PELs) - Table Z2", "US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants", "US - Minnesota Permissible Exposure Limits (PELs)", "US - California Proposition 65 - Carcinogens", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants","US - Idaho - Acceptable Maximum Peak Concentrations", "US ACGIH Threshold Limit Values (TLV),","US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)","US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory", "US OSHA Permissible Exposure Levels (PELs) - Table Z1", "US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens'

### diethylene glycol(111-46-6) is found on the following regulatory lists

"US AIHA Workplace Environmental Exposure Levels (WEELs)", "US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory"

### ethylene dichloride(107-06-2) is found on the following regulatory lists

"US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants", "US ATSDR Minimal Risk Levels for Hazardous Substances (MRLs)", "US -Hawaii Air Contaminant Limits", "US National Toxicology Program (NTP) 13th Report Part B. Reasonably Anticipated to be a Human Carcinogen", "US -California Permissible Exposure Limits for Chemical Contaminants", "US - California Proposition 65 - No Significant Risk Levels (NSRLs) for Carcinogens","US - Idaho - Limits for Air Contaminants","US ACGIH Threshold Limit Values (TLV) - Carcinogens","US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants", "US EPA Carcinogens Listing", "US - Oregon Permissible Exposure Limits (Z-2)", "US - Oregon Permissible Exposure Limits (Z-1)", "International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs", "US - Michigan Exposure Limits for Air Contaminants". "US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Mutagens". "US - California Proposition 65 - Priority List for the Development of MADLs for Chemicals Causing Reproductive Toxicity", "US - Washington Toxic air pollutants and their ASIL, SQER and de minimis emission values", "US - Alaska Limits for Air Contaminants", "US NIOSH Recommended Exposure Limits (RELs)", "US Washington Permissible exposure limits of air contaminants", "US - Wyoming Toxic and Hazardous Substances Table Z-2 Acceptable ceiling concentration, Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift", "US OSHA Permissible Exposure Levels (PELs) - Table Z2", "US Spacecraft Maximum Allowable Concentrations (SMACs) for Airborne Contaminants", "US - Minnesota Permissible Exposure Limits (PELs)", "US - California Proposition 65 - Carcinogens", "US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants", "US - Idaho - Acceptable Maximum Peak Concentrations", "US ACGIH Threshold Limit Values (TLV)", "US - California OEHHA/ARB - Chronic Reference Exposure Levels and Target Organs (CRELs)","US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants","US Toxic Substances Control Act (TSCA) Chemical Substance Inventory", "US OSHA Permissible Exposure Levels (PELs) - Table Z1", "US TSCA New Chemical Exposure Limits (NCEL)", "US - New Jersey Right to Know - Special Health Hazard Substance List (SHHSL): Carcinogens"

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Υ

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### Vis-O-Guard Gel

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

### **SECTION 16 OTHER INFORMATION**

### Other information

### Ingredients with multiple cas numbers

Name	CAS No
ethylene dichloride	107-06-2, 1300-21-6, 52399-93-6

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.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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