# Safety Data Sheet



### **Westox Interproof**

### Westlegate Pty Ltd.

Chemwatch: **4917-49** Version No: **5.1.1.1** 

Safety Data Sheet according to WHS and ADG requirements

#### Chemwatch Hazard Alert Code: 3

Issue Date: **13/01/2020** Print Date: **14/01/2020** L.GHS.AUS.EN

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

#### **Product Identifier**

Product name	Westox Interproof	
Synonyms	proof Waterproofing; salt retarder; hydroscopic salt reducer	
Proper shipping name	RROSIVE LIQUID, N.O.S. (contains sodium metasilicate)	
Other means of identification	Not Available	

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

Relevant identified uses Salt retarder used to reduce hydroscopic salt movement in new works.

### Details of the supplier of the safety data sheet

Registered company name	Westlegate Pty Ltd.	
Address	Frost Road Campbelltown NSW 2560 Australia	
Telephone	+61 2 4628 5010	
Fax	+61 2 4628 5020	
Website	www.westox.com	
Email	info@westox.com	

### Emergency telephone number

Association / Organisation	Poisons Information Centre	
Emergency telephone numbers	13 11 26 (24hr) (Australian Poisons Information Cantre), 000 (Police, Fire Brigade or Ambulance)	
Other emergency telephone numbers	0800 764 766 (24hr) (NewZealand Poisons Information Centre), 111 (NZ Emergency Services)	

### **SECTION 2 HAZARDS IDENTIFICATION**

### Classification of the substance or mixture

Poisons Schedule	S5	
Classification [1]	Metal Corrosion Category 1, Skin Corrosion/Irritation Category 1B	
Legend:	Legend: 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI	

Label elements

Hazard pictogram(s)



SIGNAL WORD DANGER

### Hazard statement(s)

nazara statement(s)		
H290	May be corrosive to metals.	
H314	Causes severe skin burns and eye damage.	

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### Precautionary statement(s) Prevention

P260	Do not breathe mist/vapours/spray.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	
P234	Keep only in original container.	

### Precautionary statement(s) Response

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.		
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P310	Immediately call a POISON CENTER or doctor/physician.		
P321	Specific treatment (see advice on this label).		
P363	Wash contaminated clothing before reuse.		
P390	Absorb spillage to prevent material damage.		
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.		

### Precautionary statement(s) Storage

P405 Store locked up.

### Precautionary statement(s) Disposal

P501 Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

### **SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS**

### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
1344-09-8	<10	sodium metasilicate
Not Available		nonhazardous ingredients including,
7732-18-5	>60	<u>water</u>

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

Ingestion

► Observe the patient carefully.

▶ Transport to hospital or doctor without delay.

### Description of first aid measures

Description of first aid measur	es
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.</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> <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. (ICSC13719)</li> </ul>
	<ul> <li>For advice, contact a Poisons Information Centre or a doctor at once.</li> <li>Urgent hospital treatment is likely to be needed.</li> <li>If swallowed do NOT induce vomiting.</li> </ul>

If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

▶ 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.

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

Treat symptomatically.

For acute or short-term repeated exposures to highly alkaline materials:

- ▶ Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- ▶ Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- ► Oxygen is given as indicated.
- ▶ The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- ▶ Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

▶ Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- ▶ Neutralising agents should never be given since exothermic heat reaction may compound injury.
- \* Catharsis and emesis are absolutely contra-indicated.
- \* Activated charcoal does not absorb alkali.
- \* Gastric lavage should not be used.

Supportive care involves the following:

- Withhold oral feedings initially.
- ▶ If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- ▶ Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- ▶ Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

▶ Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology]

### **SECTION 5 FIREFIGHTING MEASURES**

### Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances. In such an event consider:

► foam.

- dry chemical powder.
- ▶ carbon dioxide.

### Special hazards arising from the substrate or mixture

Special hazards arising from the substrate or mixture			
Fire Incompatibility	None known.		
Advice for firefighters			
Fire Fighting	Alert Fire Brigade and tell them location and nature of hazard.  Wear full body protective clothing with breathing apparatus.  Prevent, by any means available, spillage from entering drains or water course.  Use fire fighting procedures suitable for surrounding area.  Do not approach containers suspected to be hot.  Cool fire exposed containers with water spray from a protected location.  If safe to do so, remove containers from path of fire.  Equipment should be thoroughly decontaminated after use.		
Fire/Explosion Hazard	<ul> <li>The material is not readily combustible under normal conditions.</li> <li>However, it will break down under fire conditions and the organic component may burn.</li> <li>Not considered to be a significant fire risk.</li> <li>Heat may cause expansion or decomposition with violent rupture of containers.</li> <li>Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).</li> <li>May emit acrid smoke.</li> <li>Decomposes on heating and produces toxic fumes of: carbon dioxide (CO2) silicon dioxide (CO2) other pyrolysis products typical of burning organic material.</li> <li>May emit corrosive fumes.</li> </ul>		
HAZCHEM	2X		

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

### Personal precautions, protective equipment and emergency procedures

See section 8

### **Environmental precautions**

See section 12

### Methods and material for containment and cleaning up

Minor Spills

- 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.
- ► 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 spill with sand, earth, inert material or vermiculite.
- ▶ Wipe up.

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Place in a suitable, labelled container for waste disposal.

Clear area of personnel and move upwind.

Alert Fire Brigade and tell them location and nature of hazard.

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).

Stop leak if safe to do so.

Contain spill with sand, earth or vermiculite.

Collect recoverable product into labelled containers for recycling.

Neutralise/decontaminate residue (see Section 13 for specific agent).

Collect solid residues and seal in labelled drums for disposal.

Wash area and prevent runoff into drains.

After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.

If contamination of drains or waterways occurs, advise emergency services.

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

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

#### Precautions for safe handling ▶ 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. Avoid contact with moisture. Avoid contact with incompatible materials. ► When handling, **DO NOT** eat, drink or smoke Safe handling ▶ Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. ▶ Work clothes should be laundered separately. Launder contaminated clothing before re-use. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. • Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained. Store in original containers. Keep containers securely sealed. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Other information Protect containers against physical damage and check regularly for leaks.

### Conditions for safe storage, including any incompatibilities

- ► Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packing as recommended by manufacturer.

DO NOT store near acids, or oxidising agents
 No smoking, naked lights, heat or ignition sources

Check all containers are clearly labelled and free from leaks.

For low viscosity materials

- Drums and jerricans must be of the non-removable head type.
- ▶ 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) and solids (between 15 C deg. and 40 deg C.):

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

- Removable head packaging;
- ► Cans with friction closures and
- ▶ low pressure tubes and cartridges

The substance may be or contains a "metalloid"

may be used.

Where combination packages are used, and the inner packages are of glass, porcelain or stoneware, there must be sufficient inert cushioning material in contact with inner and outer packages unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.

## Storage incompatibility

Suitable container

The following elements are considered to be metalloids; boron, silicon, germanium, arsenic, antimony, tellurium and (possibly) polonium. The electronegativities and ionisation energies of the metalloids are between those of the metals and nonmetals, so the metalloids exhibit characteristics of both classes. The reactivity of the metalloids depends on the element with which they are reacting. For example, boron acts as a nonmetal when reacting with sodium yet as a metal when reacting with fluorine.

Unlike most metals, most metalloids are amphoteric that is they can act as both an acid and a base. For instance, arsenic forms not only salts

such as arsenic halides, by the reaction with certain strong acid, but it also forms arsenites by reactions with strong bases.

Most metalloids have a multiplicity of oxidation states or valences. For instance, tellurium has the oxidation states +2, -2, +4, and +6. Metalloids react like non-metals when they react with metals and act like metals when they react with non-metals.

### Avoid strong acids, bases.

Avoid contact with copper, aluminium and their alloys.

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

### **Control parameters**

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#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA

Not Available

#### **EMERGENCY LIMITS**

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
sodium metasilicate	Silicic acid, sodium salt; (Sodium silicate)	5.9 mg/m3	65 mg/m3	390 mg/m3
Ingredient	Original IDLH	Revised IDLH		
3				
sodium metasilicate	Not Available	Not Available		

#### OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
sodium metasilicate	Е	≤ 0.01 mg/m³
Notes:	Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.	

#### MATERIAL DATA

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- ► cause inflammation
- ▶ cause increased susceptibility to other irritants and infectious agents
- ▶ lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

None assigned. Refer to individual constituents.

### **Exposure 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.

General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

# Appropriate engineering controls

Type of Contaminant.	All Opecu.
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Type of Contaminant

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Air Speed

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#### Personal protection











Personal protection

Eye and face protection

- Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.
- ▶ Chemical goggles.whenever there is a danger of the material coming in contact with the eyes; goggles must be properly fitted.
- Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection.
- Alternatively a gas mask may replace splash goggles and face shields.
- 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. Lens should be removed at the first signs of eye redness or irritation lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

#### Skin protection

#### See Hand protection below

► Elbow length PVC gloves

Wear safety footwear.

▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots.

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 choice.

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.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- · frequency and duration of contact,
- · chemical resistance of glove material,
- glove thickness and
- dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- · Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

As defined in ASTM F-739-96 in any application, gloves are rated as:

- Excellent when breakthrough time > 480 min
- Good when breakthrough time > 20 min
- Fair when breakthrough time < 20 min</li>Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

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

### ► Overalls

### Other protection

- ▶ PVC Apron.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.
- ► Ensure there is ready access to a safety shower.

### 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  $\it computer-generated$  selection:

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Material	СРІ
BUTYL	A
NEOPRENE	A
VITON	A
NATURAL RUBBER	С

### Respiratory protection

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

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	AK-AUS / Class1 P2	-
up to 50	1000	-	AK-AUS / Class 1 P2

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PVA C

- \* CPI Chemwatch Performance Index
- A: Best Selection
- B: Satisfactory; may degrade after 4 hours continuous immersion
- C: Poor to Dangerous Choice for other than short term immersion

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

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

up to 50	5000	Airline *	-
up to 100	5000	-	AK-2 P2
up to 100	10000	-	AK-3 P2
100+			Airline**

- \* Continuous Flow \*\* Continuous-flow or positive pressure demand A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)
  - Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- ▶ The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

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

### Information on basic physical and chemical properties

Appearance	Transparent blue, green or red low viscosity alkaline li	quid; mixes with water.	
Physical state	Liquid	Relative density (Water = 1)	1.0-1.2
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	10.5-12.5	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Miscible	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

### **SECTION 10 STABILITY AND REACTIVITY**

Reactivity	See section 7
Chemical stability	<ul> <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**

### Information on toxicological effects

Inhaled	Not normally a hazard due to non-volatile nature of product Inhalation of alkaline corrosives may produce irritation of the respiratory tract with coughing, choking, pain and mucous membrane damage. Pulmonary oedema may develop in more severe cases; this may be immediate or in most cases following a latent period of 5-72 hours. Symptoms may include a tightness in the chest, dyspnoea, frothy sputum, cyanosis and dizziness. Findings may include hypotension, a weak and rapid pulse and moist rales.
Ingestion	Ingestion of alkaline corrosives may produce immediate pain, and circumoral burns. Mucous membrane corrosive damage is characterised by a white appearance and soapy feel; this may then become brown, oedematous and ulcerated. Profuse salivation with an inability to swallow or speak may also result. Even where there is limited or no evidence of chemical burns, both the oesophagus and stomach may experience a

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burning pain; vomiting and diarrhoea may follow. The vomitus may be thick and may be slimy (mucous) and may eventually contain blood and shreds of mucosa. Epiglottal oedema may result in respiratory distress and asphyxia. Marked hypotension is symptomatic of shock; a weak and rapid pulse, shallow respiration and clammy skin may also be evident. Circulatory collapse may occur and, if uncorrected, may produce renal failure. Severe exposures may result in oesophageal or gastric perforation accompanied by mediastinitis, substernal pain, peritonitis, abdominal rigidity and fever. Although oesophageal, gastric or pyloric stricture may be evident initially, these may occur after weeks or even months and years. Death may be quick and results from asphyxia, circulatory collapse or aspiration of even minute amounts. Death may also be delayed as a result of perforation, pneumonia or the effects of stricture formation.

Accidental ingestion of the material may be damaging to the health of the individual.

#### 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, puncture wounds 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 following direct contact with the skin.

### Eye

Direct contact with alkaline corrosives may produce pain and burns. Oedema, destruction of the epithelium, corneal opacification and iritis may occur. In less severe cases these symptoms tend to resolve. In severe injuries the full extent of the damage may not be immediately apparent with late complications comprising a persistent oedema, vascularisation and corneal scarring, permanent opacity, staphyloma, cataract, symblepharon and loss of sight.

### 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. Gastrointestinal disturbances may also occur. Chronic exposures may result in dermatitis and/or conjunctivitis.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

Westox Interproof	TOXICITY	IRRITATION	
	Not Available	Not Available	
	TOXICITY	IRRITATION	
sodium metasilicate	dermal (rat) LD50: >5000 mg/kg <sup>[1]</sup>	Skin (human): 250 mg/24h SEVERE	
	Oral (rat) LD50: 1153 mg/kg <sup>[2]</sup>	Skin (rabbit): 250 mg/24h SEVERE	
	TOXICITY	IRRITATION	
water	Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available	
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise		

Legend:

specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

# SODIUM METASILICATE

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce coniunctivitis

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

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. The disorder is characterised by dyspnea, cough and mucus production.

### WATER

No significant acute toxicological data identified in literature search.

Acute Toxicity	×	Carcinogenicity	×
Skin Irritation/Corrosion	✓	Reproductivity	X
Serious Eye Damage/Irritation	×	STOT - Single Exposure	X
Respiratory or Skin sensitisation	×	STOT - Repeated Exposure	x
Mutagenicity	×	Aspiration Hazard	×

Leaend:

X - Data either not available or does not fill the criteria for classification

- Data available to make classification

### **SECTION 12 ECOLOGICAL INFORMATION**

### Toxicity

Westox Interproof	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	Not Available	Not Available	Not Available	Not Available	Not Available
sodium metasilicate	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
	LC50	96	Fish	1-108mg/L	2
	EC50	48	Crustacea	1-700mg/L	2

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	EC50	72	Algae or other aquatic plants	207mg/L	2
	NOEC	96	Fish	348mg/L	2
	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
water	LC50	96	Fish	897.520mg/L	3
	EC50	96	Algae or other aquatic plants	8768.874mg/L	3
Legend:	V3.12 (QSAR) -	- Aquatic Toxicity Data (Estimated) 4. U	A Registered Substances - Ecotoxicological Inform S EPA, Ecotox database - Aquatic Toxicity Data 5. (Japan) - Bioconcentration Data 8. Vendor Data	,	

Microbial methylation plays important roles in the biogeochemical cycling of the metalloids and possibly in their detoxification. Many microorganisms (bacteria, fungi, and yeasts) and animals are now known to biomethylate arsenic, forming both volatile (e.g., methylarsines) and nonvolatile (e.g., methylarsonic acid and dimethylarsinic acid) compounds. Antimony and bismuth, also undergo biomethylation to some extent. Trimethylatibine formation by microorganisms is now well established, but this process apparently does not occur in animals. Formation of trimethylbismuth by microorganisms has been reported in a few cases.

Prevent, by any means available, spillage from entering drains or water courses.

DO NOT discharge into sewer or waterways

### Persistence and degradability

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

#### Bioaccumulative potential

Ingredient	Bioaccumulation	
water	LOW (LogKOW = -1.38)	

#### Mobility in soil

Ingredient	Mobility	
water	LOW (KOC = 14.3)	

### **SECTION 13 DISPOSAL CONSIDERATIONS**

### Waste treatment methods

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
- ► 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.

### Product / Packaging disposal

- ▶ 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 with suitable dilute acid followed by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or Incineration in a licensed apparatus (after admixture with suitable combustible material).
- ▶ Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

### **SECTION 14 TRANSPORT INFORMATION**

### **Labels Required**



**Marine Pollutant** 

**HAZCHEM** 2X

### Land transport (ADG)

UN number	1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (contains sodium metasilicate)

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Transport hazard class(es)	Class 8 Subrisk Not Applicable		
Packing group	III		
Environmental hazard	Not Applicable		
Special precautions for user	Special provisions 223 274  Limited quantity 5 L		

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

UN number	1760		
UN proper shipping name	Corrosive liquid, n.o.s. * (contains sodium metasilicate)		
Transport hazard class(es)	ICAO/IATA Class 8 ICAO / IATA Subrisk Not Applicable ERG Code 8L		
Packing group	Ш		
Environmental hazard	Not Applicable		
	Special provisions	A3 A803	
	Cargo Only Packing Instructions	856	
	Cargo Only Maximum Qty / Pack	60 L	
Special precautions for user	Passenger and Cargo Packing Instructions	852	
	Passenger and Cargo Maximum Qty / Pack	5 L	
	Passenger and Cargo Limited Quantity Packing Instructions	Y841	
	Passenger and Cargo Limited Maximum Qty / Pack	1 L	

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

UN number	1760		
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (contains sodium metasilicate)		
Transport hazard class(es)	IMDG Class 8 IMDG Subrisk Not Applicable		
Packing group	III		
Environmental hazard	Not Applicable		
Special precautions for user	EMS Number F-A , S-B Special provisions 223 274 Limited Quantities 5 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

### SODIUM METASILICATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Dangerous Goods Code (ADG Code) - Dangerous Goods List
Australia Dangerous Goods Code (ADG Code) - List of Emergency Action Codes
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) Schedule 10 / Appendix C
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) -

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

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

### WATER IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

GESAMP/EHS Composite List - GESAMP Hazard Profiles

IMO IBC Code Chapter 17: Summary of minimum requirements

IMO MARPOL (Annex II) - List of Noxious Liquid Substances Carried in Bulk

International Air Transport Association (IATA) Dangerous Goods Regulations

International Maritime Dangerous Goods Requirements (IMDG Code)

United Nations Recommendations on the Transport of Dangerous Goods Model

Regulations

IMO IBC Code Chapter 18: List of products to which the Code does not apply

### **National Inventory Status**

National Inventory	Status
Australia - AICS	Yes
Canada - DSL	Yes

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### **Westox Interproof**

Canada - NDSL	No (sodium metasilicate; water)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	Yes	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	Yes	
Vietnam - NCI	Yes	
Russia - ARIPS	Yes	
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)	

### **SECTION 16 OTHER INFORMATION**

Revision Date	13/01/2020
Initial Date	08/04/2002

#### **SDS Version Summary**

Version	Issue Date	Sections Updated
4.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
5.1.1.1	13/01/2020	Acute Health (eye), Acute Health (inhaled), Acute Health (skin), Acute Health (swallowed), Advice to Doctor, Chronic Health, Classification, Disposal, Engineering Control, Environmental, Exposure Standard, Fire Fighter (extinguishing media), Fire Fighter (fire/explosion hazard), Fire Fighter (fire fighting), Fire Fighter (fire incompatibility), First Aid (inhaled), First Aid (skin), First Aid (swallowed), Handling Procedure, Ingredients, Personal Protection (other), Personal Protection (eye), Personal Protection (hands/feet), Physical Properties, Spills (major), Spills (minor), Storage (storage incompatibility), Storage (storage requirement), Storage (suitable container), Synonyms, Transport, Transport Information

#### Other information

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

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

### **Definitions and abbreviations**

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

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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