

BLACK ETCH PRIMER

SAFETY DATA SHEET ACCORDING TO WHS AND ADG REQUIREMENTS

CHEMWATCH:
VERSION NO:
ISSUE DATE:
PRINT DATE:

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

PRODUCT IDENTIFIER

Product name	Black Etch Primer
Synonyms	A1031, A1031C
Proper shipping name	AEROSOLS
Other means of identification	Not Available

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses	Application is by spray atomisation from a hand held aerosol pack Use according to manufacturer's directions.
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DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Registered company name	Silver Zinc Supplies
Address	2/10 Maiella Street Stapytton Queensland 4207 Australia
Telephone	1300 2653 425
Fax	+61 7 3287 4568
Website	silverzincsupplies.com.au
Email	orders@silverzinc.com.au

EMERGENCY TELEPHONE NUMBER

Association / Organisation	Silver Zinc Supplies
Emergency Telephone Numbers	0400018006
Other emergency telephone numbers	Not Available

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SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

HAZARDOUS CHEMICAL. DANGEROUS GOODS. ACCORDING TO THE WHS REGULATIONS AND THE ADG CODE.

CHEMWATCH HAZARD RATINGS

	Min	Max
Flammability	4	
Toxicity	2	
Body Contact	3	
Reactivity	1	
Chronic	2	

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

Poisons Schedule	Not Applicable
Classification ⁽¹⁾	Flammable Aerosols Category 1, Acute Toxicity (Oral) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - single exposure Category 3 (narcotic effects), Acute Aquatic Hazard Category 3, Chronic Aquatic Hazard Category 2
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)

H222	Extremely flammable aerosol.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H402	Harmful to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
AUH044	Risk of explosion if heated under confinement.

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PRECAUTIONARY STATEMENT(S) PREVENTION

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

PRECAUTIONARY STATEMENT(S) RESPONSE

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).
P362	Take off contaminated clothing and wash before reuse.
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P330	Rinse mouth.

PRECAUTIONARY STATEMENT(S) STORAGE

P405	Store locked up.
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

PRECAUTIONARY STATEMENT(S) DISPOSAL

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCES

SEE SECTION BELOW FOR COMPOSITION OF MIXTURES

MIXTURES

CAS No.	% [Weight]	Name
1330-20-7	10-30	xylene
71-36-3	10-30	n-butanol
67-63-0	10-30	isopropranol
25068-38-6	1-10	bisphenol A / diglycidyl ether resin, liquid
7779-90-0	1-10	zinc phosphate
115-10-6	30-60	dimethyl ether
7664-38-2	0.5-1	phosphoric acid
Not Available	1-10	Not Available 1-10 pigment and filler

SECTION 4 FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact	<p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh 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. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	<p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents. Seek medical attention in the event of irritation.
Inhalation	<p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> Remove to fresh air. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
Ingestion	<ul style="list-style-type: none"> Avoid giving milk or oils. Avoid giving alcohol. Not considered a normal route of entry. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.

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INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED FOR PHOSPHATE SALTS

INTOXICATION:

- All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.
- Ingestion of large quantities of phosphate salts (over 1.0 grams for an adult) may cause an osmotic catharsis resulting in diarrhoea and probable abdominal cramps. Larger doses such as 4-8 grams will almost certainly cause these effects in everyone. In healthy individuals most of the ingested salt will be excreted in the faeces with the diarrhoea and, thus, not cause any systemic toxicity. Doses greater than 10 grams hypothetically may cause systemic toxicity.
- Treatment should take into consideration both anionic and cation portion of the molecule.
- All phosphate salts, except calcium salts, have a hypothetical risk of hypocalcaemia, so calcium levels should be monitored.

Treat symptomatically.

FOR LOWER ALKYL ETHERS:

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.
- A low-stimulus environment must be maintained.
- Monitor and treat, where necessary, for shock.
- 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.

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.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension without signs of hypovolaemia may require vasopressors.
- 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.
- Ethers may produce anion gap acidosis. Hyperventilation and bicarbonate therapy might be indicated.
- Haemodialysis might be considered in patients with impaired renal function.
- Consult a toxicologist as necessary.

BRONSTEIN, A.C. AND CURRANCE, P.L.**EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE:****2ND ED. 1994**

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FOR ACUTE OR SHORT TERM REPEATED EXPOSURES TO ISOPROPANOL:

- Rapid onset respiratory depression and hypotension indicates serious ingestions that require careful cardiac and respiratory monitoring together with immediate intravenous access.
- Rapid absorption precludes the usefulness of emesis or lavage 2 hours post-ingestion. Activated charcoal and cathartics are not clinically useful. Ipecac is most useful when given 30 mins. post-ingestion.
- There are no antidotes.
- Management is supportive. Treat hypotension with fluids followed by vasopressors.
- Watch closely, within the first few hours for respiratory depression; follow arterial blood gases and tidal volumes.
- Ice water lavage and serial haemoglobin levels are indicated for those patients with evidence of gastrointestinal bleeding.

FOR ACUTE OR SHORT TERM REPEATED EXPOSURES TO XYLENE:

- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The
- use of charcoal and cathartics is equivocal.
- Pulmonary absorption is rapid with about 60-65% retained at rest.
- Primary threat to life from ingestion and/or inhalation, is respiratory failure.
- Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate
- tidal volumes or poor arterial blood gases ($pO_2 < 50$ mm Hg or $pCO_2 > 50$ mm Hg) should be intubated.
- Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective
- bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.

BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
Methylhippu-ric acids in urine	1.5 gm/gm creatinine 2 mg/min	End of shift Last 4hrs of shift	

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SECTION 5 FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

- **SMALL FIRE: WATER SPRAY, DRY CHEMICAL OR CO2**
- **LARGE FIRE: WATER SPRAY OR FOG.**

SPECIAL HAZARDS ARISING FROM THE SUBSTRATE OR MIXTURE

Fire Incompatibility	<ul style="list-style-type: none"> • Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
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ADVICE FOR FIREFIGHTERS

Fire Fighting	<ul style="list-style-type: none"> • Alert Fire Brigade and tell them location and nature of hazard. • May be violently or explosively reactive. • Wear breathing apparatus plus protective gloves. • 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. • 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 style="list-style-type: none"> • Liquid and vapour are highly flammable. • Severe fire hazard when exposed to heat or flame. • Vapour forms an explosive mixture with air. • Severe explosion hazard, in the form of vapour, when exposed to flame or spark. • Vapour may travel a considerable distance to source of ignition. • Heating may cause expansion or decomposition with violent container rupture. • Aerosol cans may explode on exposure to naked flames. • Rupturing containers may rocket and scatter burning materials. • Hazards may not be restricted to pressure effects. • May emit acrid, poisonous or corrosive fumes. • On combustion, may emit toxic fumes of carbon monoxide (CO). <p>Combustion products include:</p> <ul style="list-style-type: none"> • carbon dioxide (CO2) • phosphorus oxides (POx) • metal oxides • other pyrolysis products typical of burning organic material. • Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
HAZCHEM	Not Applicable

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SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES - **SEE SECTION 8**ENVIRONMENTAL PRECAUTIONS - **SEE SECTION 12**

ADVICE FOR FIREFIGHTERS

Minor Spills	<ul style="list-style-type: none"> • Clean up all spills immediately. • Avoid breathing vapours and contact with skin and eyes. • Wear protective clothing, impervious gloves and safety glasses. • Shut off all possible sources of ignition and increase ventilation. • Wipe up. • If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. • Undamaged cans should be gathered and stowed safely.
Major Spills	<ul style="list-style-type: none"> • 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 breathing apparatus plus protective gloves. • Prevent, by any means available, spillage from entering drains or water courses • No smoking, naked lights or ignition sources. • Increase ventilation. • Stop leak if safe to do so. • Water spray or fog may be used to disperse / absorb vapour. • Absorb or cover spill with sand, earth, inert materials or vermiculite. • If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated. • Undamaged cans should be gathered and stowed safely. • Collect residues and seal in labelled drums for disposal.

PERSONAL PROTECTIVE EQUIPMENT ADVICE IS CONTAINED IN SECTION 8 OF THE SDS.

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SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Safe handling

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- **DO NOT enter confined spaces until atmosphere has been checked.**
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- **DO NOT incinerate or puncture aerosol cans.**
- **DO NOT spray directly on humans, exposed food or food utensils.**
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- 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.

Other Information

- Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can
- Store in original containers in approved flammable liquid storage area.
- **DO NOT store in pits, depressions, basements or areas where vapours may be trapped.**
- No smoking, naked lights, heat or ignition sources.
- Keep containers securely sealed. Contents under pressure.
- Store away from incompatible materials.
- Store in a cool, dry, well ventilated area.
- Avoid storage at temperatures higher than 40 deg C.
- Store in an upright position.
- Protect containers against physical damage.
- Check regularly for spills and leaks.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Suitable container

- DO NOT use aluminium or galvanised containers
- Aerosol dispenser.
- Check that containers are clearly labelled.

Storage Incompatibility

- Avoid oxidising agents, acids, acid chlorides, acid anhydrides, chloroformates.



LEGEND

X – MUST NOT BE STORED TOGETHER
O – MAY BE STORED TOGETHER WITH SPECIFIC PREVENTIONS
+ – MAY BE STORED TOGETHER

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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS - OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Sampling Time	TWA	STEL	Peak	Notes
Australia Exposure Standards	xylene	Xylene (o-, m-, p- isomers)	80ppm / 350mg / m3	655mg / m3 / 150ppm	Not Available	Not Available
Australia Exposure Standards	n-butanol	n-Butyl alcohol	Not Available	Not Available	50ppm / 152mg / m3	Not Available
Australia Exposure Standards	isopropanol	Isopropyl alcohol	400ppm / 983mg / m3	1230mg / m3 / 500ppm	Not Available	Not Available
Australia Exposure Standards	dimethyl ether	Dimethyl ether	400ppm / 760mg / m3	950mg / m3 / 500ppm	Not Available	Not Available
Australia Exposure Standards	phosphoric acid	Phosphoric acid	1mg / m3	3mg / m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
xylene	Xylenes	Not Available	Not Available	Not Available
n-butanol	Butyl alcohol, n-; (n-Butanol)	60ppm	800ppm	8000**ppm
isopropanol	Isopropyl alcohol	400ppm	2000*ppm	12000**ppm
bisphenol A/ diglycidyl ether resin, liquid	Epoxy resin includes EPON 1001, 1007, 820, ERL-2795	90mg / m3	990mg / m3	5900mg / m3
zinc phosphate	Zinc phosphate (3:2)	12mg / m3	36mg / m3	220mg / m3
dimethyl ether	Methyl ether; (Dimethyl ether)	3000ppm	3800*ppm	7200*ppm
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
xylene	900ppm	Not Available
n-butanol	1400ppm	Not Available
isopropanol	2000ppm	Not Available
bisphenol A/ diglycidyl ether resin, liquid	Not Available	Not Available
zinc phosphate	Not Available	Not Available
dimethyl ether	Not Available	Not Available
phosphoric acid	1000mg / m3	Not Available

OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
bisphenol A/ diglycidyl ether resin, liquid	E	≤ 0.1ppm
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.	

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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 conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.
- Provide adequate ventilation in warehouse or closed 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

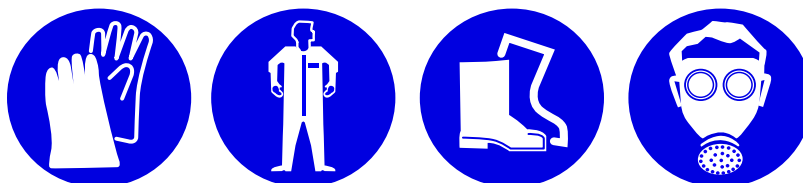
Type of Contaminant	Speed
aerosols, (released at low velocity into zone of active generation)	0.5-1m/s
direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid air motion)	1-2.5m/s (200-500 f/min.)

Within each range the appropriate value depends on:

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.

Personal protection



Eye and face protection

No special equipment for minor exposure i.e. when handling small quantities. OTHERWISE for potentially moderate or heavy exposures:

- Safety glasses with side shields.
- NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.

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Skin protection	See Hand protection below
Hands/feet protection	<p>No special equipment needed when handling small quantities. OTHERWISE:</p> <ul style="list-style-type: none"> For potentially moderate exposures: Wear general protective gloves, eg. light weight rubber gloves. For potentially heavy exposures: Wear chemical protective gloves, eg. PVC. and safety footwear.
Body protection	See Other protection below
Other protection	<p>No special equipment needed when handling small quantities. OTHERWISE:</p> <ul style="list-style-type: none"> Overalls. Skin cleansing cream. Eyewash unit. Do not spray on hot surfaces.

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:

Etch Primer Black

Material	CPI
BUTYL	C
BUTYL/NEOPRENE	C
HYPALON	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE	C
PE/EVAL/PE	C
PVA	C
PVC	C
PVDC/PE/PVDC	C
SARANEX-23	C
TEFLON	C
VITON	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.

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 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)

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation.

Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black flammable liquid; not miscible with water. Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable hydrocarbon propellant.		
Physical state	Liquid	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 Applicable	Decomposition temperature	Not Available
Melting point/freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point & boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	-41 (propellant)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> Elevated temperatures. Presence of open flame. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

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SECTION 1.1 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Inhaled	<ul style="list-style-type: none"> Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful. The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Exposure to n-butanol causes dose dependent irritation and headaches in humans, but CNS depression and prostration in mice. Though the offensive odour may forewarn, the smell sense may become fatigued. Aliphatic alcohols with more than 3-carbons cause headache, dizziness, drowsiness, muscle weakness and delirium, central depression, coma, seizures and behavioural changes. Secondary respiratory depression and failure, as well as low blood pressure and irregular heart rhythms, may follow. Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination. WARNING: Intentional misuse by concentrating/inhaling contents may be lethal. The acute toxicity of inhaled alkylbenzene is best described by central nervous system depression. These compounds may also act as general anaesthetics. Whole body symptoms of poisoning include light-headedness, nervousness, apprehension, a feeling of well-being, confusion, dizziness, drowsiness, ringing in the ears, blurred or double vision, vomiting and sensations of heat, cold or numbness, twitching, tremors, convulsions, unconsciousness, depression of breathing, and arrest. Heart stoppage may result from cardiovascular collapse. A slow heart rate and low blood pressure may also occur. Alkylbenzenes are not generally toxic except at high levels of exposure. Their breakdown products have low toxicity and are easily eliminated from the body.
Ingestion	<ul style="list-style-type: none"> Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual. Overexposure to non-ring alcohols causes nervous system symptoms. These include headache, muscle weakness and inco-ordination, giddiness, confusion, delirium and coma. Animal testing showed that a single dose of bisphenol A diglycidyl ether (BADGE) given by mouth, caused an increase in immature sperm. Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments

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Skin Contact	<ul style="list-style-type: none"> • The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering. • Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. • Bisphenol A diglycidyl ether (BADGE) may produce contact dermatitis characterized by redness and swelling, with weeping followed by crusting and scaling. A liquid resin with a molecular weight of 350 produced severe skin irritation when applied daily for 4 hours over 20 days. • Spray mist may produce discomfort • Most liquid alcohols appear to act as primary skin irritants in humans. Significant percutaneous absorption occurs in rabbits but not apparently in man. • 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. • Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.
Eye	<ul style="list-style-type: none"> • If applied to the eyes, this material causes severe eye damage. • The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with • possible permanent impairment of vision, if not promptly and adequately treated.
Chronic	<ul style="list-style-type: none"> • Long-term exposure to respiratory irritants may result in airways disease, involving difficulty breathing and related whole-body problems. • Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. • There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. • Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. • Bisphenol A diglycidyl ethers (BADGEs) produce a sensitization dermatitis (skin inflammation) characterized by eczema with blisters and • papules, with considerable itching of the back of the hand. This may persist for 10-14 days after withdrawal from exposure and recur immediately • on re-exposure. The dermatitis may last longer following each exposure, but is unlikely to become more intense. Lower molecular weight species produce sensitization more readily. Animal testing has shown an increase in the development of some tumours. • Main route of exposure to the gas in the workplace is by inhalation. • Glycidyl ethers can cause genetic damage and cancer. • Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS] • There is some evidence from animal testing that exposure to this material may result in reduced fertility. • There is some evidence from animal testing that exposure to this material may result in toxic effects to the unborn baby. • WARNING: Aerosol containers may present pressure related hazards.

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TOXICITY	IRRITATION
Not Available	Not Available

XYLENE

TOXICITY	IRRITATION
200mg / kg ^[2]	Eye (human): 200ppm - irritant
450mg / kg ^[2]	Eye (rabbit): 5mg / 24h - SEVERE
50mg / kg ^[2]	Eye (rabbit): 87mg - mild
Dermal (rabbit) LD50: >1700mg / kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
Inhalation (rat) LC50: 4994.295mg / l / 4h ^[2]	Skin (rabbit): 500mg / 24h - moderate
Oral (mouse) LD50: 2119mg / kg ^[2]	Skin: adverse effect observed (irritating) ^[1]
Oral (rat) LD50: 3523-8700mg / kg ^[2]	
Oral (rat) LD50: 4300mg / kg ^[2]	

N-BUTANOL

TOXICITY	IRRITATION
25mg/kg ^[2]	Eye (human): 50 ppm - irritant
Dermal (rabbit) LD50: 3400mg / kg ^[2]	Eye (rabbit): 1.6mg - SEVERE
Inhalation (rat) LC50: 24mg / l / 4h ^[2]	Eye (rabbit): 24mg / 24h - SEVERE
Oral (hamster) LD50: = 1200mg / kg ^[2]	Eye: adverse effect observed (irreversible damage) ^[1]
Oral (rat) LD50: 790mg / kg ^[2]	Skin (rabbit): 405mg / 24h - moderate
	Skin: adverse effect observed (irritating) ^[1]

ISOPROPANOL

TOXICITY	IRRITATION
223mg / kg ^[2]	Eye (rabbit): 10mg - moderate
Inhalation (rat) LC50: 72.6mg / l / 4h ^[2]	Eye (rabbit): 100mg SEVERE
Oral (dog) LD50: = 4828mg / kg ^[2]	Eye (rabbit): 100mg / 24hr - moderate
Oral (mouse) LD50: = 4475mg / kg ^[2]	Skin (rabbit): 500 mg - mild
Oral (mouse) LD50: 3600mg / kg ^[2]	
Oral (rabbit) LD50: 6410mg / kg ^[2]	
Oral (rat) LD50: = 4396mg / kg ^[2]	
Oral (rat) LD50: = 5045mg / kg ^[2]	
Oral (rat) LD50: = 5338mg / kg ^[2]	

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BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID

TOXICITY	IRRITATION
Dermal (mouse) LD50: >1270mg / kg ^[2]	Eye (rabbit): 100mg - mild
Dermal (rat) LD50: >1200mg / kg ^[2]	
Oral (mouse) LD50: >500mg / kg ^[2]	
Oral (mouse) LD50: 15600mg / kg ^[2]	
Oral (rat) LD50: >1000mg / kg ^[2]	
Oral (rat) LD50: 11400mg / kg ^[2]	
Oral (rat) LD50: 13600mg / kg ^[2]	

ZINC PHOSPHATE

TOXICITY	IRRITATION
Oral (rat) LD50: >5000mg / kg ^[2]	Eye: no adverse effect observed (not irritating) ^[1]
Oral (rat) LD50: 15000mg / kg ^[2]	Skin: no adverse effect observed (not irritating) ^[1]

DIMETHYL ETHER

TOXICITY	IRRITATION
Inhalation (rat) LC50: 308mg / l ^[2]	Not Available
Inhalation (rat) LC50: 309mg / l / 4h ^[2]	

PHOSPHORIC ACID

TOXICITY	IRRITATION
50-100mg / kg ^[2]	Eye (rabbit): 119mg - SEVERE
Dermal (rabbit) LD50: >1260mg / kg ^[2]	Eye: adverse effect observed (irritating) ^[1]
Inhalation (mouse) LC50: 0.0255mg / l / 4h ^[2]	Skin (rabbit): 595mg / 24h - SEVERE
Inhalation (rat) LC50: 0.0255mg / l / 4h ^[2]	Skin: adverse effect observed (corrosive) ^[1]
Oral (rat) LD50: 1250mg / kg ^[2]	
Oral (rat) LD50: 1530mg / kg ^[2]	
Oral (rat) LD50: 3500mg / kg ^[2]	

LEGEND

1. VALUE OBTAINED FROM EUROPE ECHA REGISTERED SUBSTANCES - ACUTE TOXICITY

2.* VALUE OBTAINED FROM MANUFACTURER'S SDS. UNLESS OTHERWISE SPECIFIED DATA EXTRACTED FROM RTECS - REGISTER OF TOXIC EFFECT OF CHEMICAL SUBSTANCES

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XYLENE	Reproductive effector in rats
N-BUTANOL	<p>For n-butanol:</p> <ul style="list-style-type: none"> Acute toxicity: In animal testing, n-butanol (BA) was only slightly toxic, following exposure by swallowing, skin contact or irritation. Animal testing and human experience suggest that n-butanol is moderately irritating to the skin but severely irritating to the eye. Human studies show that BA is not likely to cause skin sensitization. Warning of exposure occurs before irritation of the nose, because n-butanol has an odour which can be detected below concentration levels cause irritation. Repeat dose toxicity: Animal testing showed temporarily reduction in activity and food intake following repeated exposure to BA, but otherwise there was no evidence of chronic toxicity. Reproductive toxicity: Several animal studies indicate BA does not possess reproductive toxicity, and does not affect fertility. Developmental toxicity: BA only caused developmental changes and toxic effects on the foetus near or at levels that were toxic to the mother. Genetic toxicity: Testing shows that BA does not possess genetic toxicity. Cancer-causing potential: Based on negative results from testing for potential of n-butanol to cause mutations and chromosomal aberrations, BA has a very small potential for causing cancer.
ISOPROPANOL	<p>Isopropanol is irritating to the eyes, nose and throat but generally not to the skin. Prolonged high dose exposure may also produce depression of the central nervous system and drowsiness. Few have reported skin irritation. It can be absorbed from the skin or when inhaled. Intentional swallowing is common particularly among alcoholics or suicide victims and also leads to fainting, breathing difficulty, nausea, vomiting and headache. In the absence of unconsciousness, recovery usually occurred. Repeated doses may damage the kidneys. A decrease in the frequency of mating has been found in among animals, and newborns have been found to have a greater incidence of low birth weight. Tumours of the testes have been observed in the male rat.</p>
BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID	<p>Foetotoxicity has been observed in animal studies Oral (rabbit, female) NOEL 180 mg/kg (teratogenicity; NOEL (maternal 60 mg/kg</p> <p>The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon.</p> <p>This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics Bisphenol A (BPA) and some related compounds exhibit oestrogenic activity in human breast cancer cell line MCF-7, but there were remarkable differences in activity. Several derivatives of BPA exhibited significant thyroid hormonal activity towards rat pituitary cell line GH3, which releases growth hormone in a thyroid hormone-dependent manner. However, BPA and several other derivatives did not show such activity. Results suggest that the 4-hydroxyl group of the A-phenyl ring and the B-phenyl ring of BPA derivatives are required for these hormonal activities, and substituents at the 3,5-positions of the phenyl rings and the bridging alkyl moiety markedly influence the activities.</p> <p>Bisphenols promoted cell proliferation and increased the synthesis and secretion of cell type-specific proteins. When ranked by proliferative potency, the longer the alkyl substituent at the bridging carbon, the lower the concentration needed for maximal cell yield; the most active compound contained two propyl chains at the bridging carbon. Bisphenols with two hydroxyl groups in the para position and an angular configuration are suitable for appropriate hydrogen bonding to the acceptor site of the oestrogen receptor. Animal testing over 13 weeks showed bisphenol A diglycidyl ether (BADGE) caused mild to moderate, chronic, inflammation of the skin.</p> <ul style="list-style-type: none"> Reproductive and Developmental Toxicity: Animal testing showed BADGE given over several months caused reduction in body weight but had no reproductive effects. Cancer-causing potential: It has been concluded that bisphenol A diglycidyl ether cannot be classified with respect to its cancer-causing potential in humans. Genetic toxicity: Laboratory tests on genetic toxicity of BADGE have so far been negative. Immunotoxicity: Animal testing suggests regular injections of diluted BADGE may result in sensitization. Consumer exposure: Consumer exposure to BADGE is almost exclusively from migration of BADGE from can coatings into food. Testing has not found any evidence of hormonal disruption.

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PHOSPHORIC ACID	<p>phosphoric acid (85%) No significant acute toxicological data identified in literature search.</p> <p>For acid mists, aerosols, vapours: Test results suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5.</p> <p>Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airway from direct exposure to inhaled acidic mists (which also protects the stomach lining from the hydrochloric acid secreted there).</p> <p>The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration.</p>
XYLENE & N-BUTANOL & PHOSPHORIC ACID	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
XYLENE & N-BUTANOL & ISOPROPANOL	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.
XYLENE & ISOPROPANOL & BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID	<p>The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.</p>
N-BUTANOL & ISOPROPANOL & PHOSPHORIC ACID	<p>Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.</p>

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

LEGEND



- DATA EITHER NOT AVAILABLE OR DOES NOT FILL THE CRITERIA FOR CLASSIFICATION



- DATA AVAILABLE TO MAKE CLASSIFICATION

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SECTION 12 ECOLOGICAL INFORMATION | TOXICITY

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Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

XYLENE

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	2.6mg/L	2
EC50	48	Crustacea	1.8mg/L	2
EC50	72	Algae or other aquatic plants	3.2mg/L	2
NOEC	73	Algae or other aquatic plants	0.44mg/L	2

N-BUTANOL

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	1-376mg/L	2
EC50	48	Crustacea	1-328mg/L	2
EC50	96	Algae or other aquatic plants	225mg/L	2
EC0	48	Crustacea	1-260mg/L	2
NOEC	504	Crustacea	4.1mg/L	2

ISOPROPANOL

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	9-640mg/L	2
EC50	48	Crustacea	12500mg/L	5
EC50	72	Algae or other aquatic plants	>1000mg/L	1
EC0	24	Crustacea	5-102mg/L	2
NOEC	504	Crustacea	30mg/L	1

BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID

Endpoint	Test Duration (hr)	Species	Value	Source
EC50	48	Crustacea	ca.2mg/L	2

ZINC PHOSPHATE

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	0.001-0.58mg/L	2
EC50	48	Crustacea	0.001-0.014mg/L	2
NOEC	384	Algae or other aquatic plants	0.001-0.071mg/L	2

DIMETHYL ETHER

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	1-783.04mg/L	2
EC50	48	Crustacea	>4400.0mg/L	2
EC50	96	Algae or other aquatic plants	154.917mg/L	2
NOEC	48	Crustacea	>4000mg/L	2

PHOSPHORIC ACID

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	75.1mg/L	2
EC50	48	Crustacea	>5.62mg/L	2
EC50	72	Algae or other aquatic plants	15.29mg/L	2
EC10	72	Algae or other aquatic plants	37.7mg/L	2
NOEC	72	Algae or other aquatic plants	3.71mg/L	2

LEGEND

EXTRACTED FROM 1. IUCLID TOXICITY DATA | 2. EUROPE ECHA REGISTERED SUBSTANCES - ECOTOXICOLOGICAL INFORMATION - AQUATIC TOXICITY | 3. EPIWIN SUITE | 3.12 (QSAR) - AQUATIC TOXICITY DATA (ESTIMATED) | 4. US EPA, ECOTOX DATABASE - AQUATIC TOXICITY DATA | 5. ECETOC AQUATIC HAZARD ASSESSMENT DATA | 6. NITE (JAPAN) - BIOCONCENTRATION DATA | 7. METI (JAPAN) - BIOCONCENTRATION DATA | 8. VENDOR DATA

TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT.

DO NOT DISCHARGE INTO SEWER OR WATERWAYS.

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PERSISTENCE AND DEGRADABILITY

Ingredient	Persistence: Water/Soil	Persistence: Air
xylene	HIGH (Half-life = 360 days)	LOW (Half-life = 1.83 days)
n-butanol	LOW (Half-life = 54 days)	LOW (Half-life = 3.65 days)
isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)
bisphenol A/ diglycidyl ether resin, liquid	HIGH	HIGH
dimethyl ether	LOW	LOW
phosphoric acid	HIGH	HIGH

BIOACCUMULATIVE POTENTIAL

Ingredient	Bioaccumulation
xylene	MEDIUM (BCF = 740)
n-butanol	LOW (BCF = 0.64)
isopropanol	LOW (LogKOW = 0.05)
bisphenol A/ diglycidyl ether resin, liquid	LOW (LogKOW = 2.6835)
dimethyl ether	LOW (LogKOW = 0.1)
phosphoric acid	LOW (LogKOW = -0.7699)

MOBILITY IN SOIL

Ingredient	Bioaccumulation
xylene	MEDIUM (KOC = 2.443)
n-butanol	HIGH (KOC = 1.06)
isopropanol	LOW (KOC = 51.43)
bisphenol A/ diglycidyl ether resin, liquid	LOW (LogKOW = 2.6835)
dimethyl ether	HIGH (KOC = 1.292)
phosphoric acid	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

WASTE TREATMENT METHODS

Product / Packaging disposal	<ul style="list-style-type: none"> 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. <p>Removal of bisphenol A (BPA) from aqueous solutions was accomplished by adsorption of enzymatically generated quinone derivatives on chitosan beads. The use of chitosan in the form of beads was found to be more effective because heterogeneous removal of BPA with chitosan beads was much faster than homogeneous removal of BPA with chitosan solutions, and the removal efficiency was enhanced by increasing the amount of chitosan beads dispersed in the BPA solutions and BPA was completely removed by quinone adsorption in the presence of chitosan beads more than 0.10 cm³/cm³. In addition, a variety of bisphenol derivatives were completely or effectively removed by the procedure constructed in this study, although the enzyme dose or the amount of chitosan beads was further increased as necessary for some of the bisphenol derivatives used.</p> <p>M. SUZUKI, AND E MUSASHI J APPL POLYM SCI, 118(2):721 - 732; OCTOBER 2010</p> <ul style="list-style-type: none"> Consult State Land Waste Management Authority for disposal. Discharge contents of damaged aerosol cans at an approved site. Allow small quantities to evaporate. DO NOT incinerate or puncture aerosol cans. Bury residues and emptied aerosol cans at an approved site.
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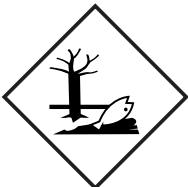
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SECTION 14 TRANSPORT INFORMATION

LABELS REQUIRED

	
Marine Pollutant	
HAZCHEM	Not Applicable

LAND TRANSPORT (ADG)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	Class 2.1
	Subrisk Not Applicable
Packing group	Not Applicable
Environmental hazard	Environmentally hazardous
Special precautions for user	Special provisions 63 190 277 327 344 381
	Limited quantity 1000ml

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AIR TRANSPORT (ICAO-IATA / DGR)

UN number	1950		
UN proper shipping name	Aerosols, flammable		
Transport hazard class(es)	ICAO/IATA Class	2.1	
	ICAO / IATA Subrisk	Not Applicable	
	ERG Code	10L	
Packing group	Not Applicable		
Environmental hazard	Environmentally hazardous		
Special precautions for user	Special provisions	A145 A167 A802	
	Cargo Only Packing Instructions	203	
	Cargo Only Maximum Qty / Pack	150kg	
	Passenger and Cargo Packing Instructions	203	
	Passenger and Cargo Maximum Qty / Pack	75kg	
	Passenger and Cargo Limited Quantity Packing Instructions	Y203	
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G	

SEA TRANSPORT (IMDG-CODE / GGVSEE)

UN number	1950		
UN proper shipping name	AEROSOLS		
Transport hazard class(es)	IMDG Class	2.1	
	IMDG Subrisk	Not Applicable	
Packing group	Not Applicable		
Environmental hazard	Marine Pollutant		
Special precautions for user	EMS Number	F-D , S-U	
	Special provisions	63 190 277 327 344 381 959	
	Limited Quantities	1000ml	

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SECTION 15 REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

XYLENE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

ZINC PHOSPHATE IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 4
Australian Inventory of Industrial Chemicals (AIIC)

N-BUTANOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6
Australian Inventory of Industrial Chemicals (AIIC)

DIMETHYL ETHER IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australian Inventory of Industrial Chemicals (AIIC)

ISOPROPANOL IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

PHOSPHORIC ACID IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australian Inventory of Industrial Chemicals (AIIC)

BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List

National Inventory	Status
Australia - AIIC	Yes
Australia Non-Industrial Use	No (xylene; n-butanol; isopropanol; bisphenol A/ diglycidyl ether resin, liquid; zinc phosphate; dimethyl ether; phosphoric acid)
Canada - DSL	Yes
Canada - NDSL	No (xylene; n-butanol; isopropanol; bisphenol A/ diglycidyl ether resin, liquid; dimethyl ether; phosphoric acid)
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	No (zinc phosphate)
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)

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SAFETY DATA SHEET ACCORDING TO WHS AND ADG REQUIREMENTS

CHEMWATCH:
VERSION NO:
ISSUE DATE:
PRINT DATE:

SECTION 16 OTHER INFORMATION

Revision Date	26/08/2020
Initial Date	5/11/2011

SDS VERSION SUMMARY

Version	Issue Date	Sections Updated
9.1.1.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification
10.1.1.1	26/08/2020	Acute Health (eye), Acute Health (inhaled), Acute Health (skin), Acute Health (swallowed), Advice to Doctor, Chronic Health, Classification, Disposal, Environmental, Exposure Standard, Fire Fighter (fire/explosion hazard), First Aid (swallowed), Ingredients, Personal Protection (other), Personal Protection (Respirator), Personal Protection (hands/feet), Physical Properties, Spills (major), Spills (minor), Storage (storage incompatibility), Supplier Information, Toxicity and Irritation (Other)

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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