# **Granor Rubber & Engineering**

Chemwatch: 4602-21 Version No: 6.1 Chemwatch Hazard Alert Code: 2

Issue Date: **30/09/2022** Print Date: **30/09/2022** L.GHS.AUS.EN.E

# SECTION 1 Identification of the substance / mixture and of the company / undertaking

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Product	Identifier
Product	Identifier

Product name	Wabo Paste Adhesive w/w Resin - Part A	
Chemical Name	Not Applicable	
Synonyms	Not Available	
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ diglycidyl ether resin, liquid)	
Chemical formula	Not Applicable	
Other means of identification	Not Available	

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

Relevant identified uses Use according to manufacturer's directions.

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

Registered company name	Granor Rubber & Engineering	
Address	8 Reid Street Bayswater VIC 3153 Australia	
Telephone	+61 3 9762 9699	
Fax	+61 3 9762 9611	
Website	Not Available	
Email	Not Available	

#### Emergency telephone number

Emergency telephone number		
Association / Organisation	Poisons Information Centre	
Emergency telephone numbers	13 11 26	
Other emergency telephone numbers	Not Available	

#### **SECTION 2 Hazards identification**

#### Classification of the substance or mixture

Poisons Schedule	S5
Classification <sup>[1]</sup>	Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2A, Germ Cell Mutagenicity Category 2, Hazardous to the Aquatic Environment Long-Term Hazard Category 2
Legend:	1. Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

#### Label elements

Hazard pictogram(s)			¥2
---------------------	--	--	----

 Signal word
 Warning

 Hazard statement(s)
 Ha15

 Ha15
 Causes skin irritation.

 H317
 May cause an allergic skin reaction.

 H319
 Causes serious eye irritation.

 H314
 Suspected of causing genetic defects.

 H411
 Toxic to aquatic life with long lasting effects.

#### Precautionary statement(s) Prevention

P201	Obtain special instructions before use.
P280	Wear protective gloves, protective clothing, eye protection and face protection.

P261	Avoid breathing mist/vapours/spray.	
P273	Avoid release to the environment.	
P264	Wash all exposed external body areas thoroughly after handling.	
P272	2 Contaminated work clothing should not be allowed out of the workplace.	

#### Precautionary statement(s) Response

Treeautionary statement(s) ite		
P308+P313	IF exposed or concerned: Get medical advice/ attention.	
P302+P352	IF ON SKIN: Wash with plenty of water and soap.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.	
P337+P313	If eye irritation persists: Get medical advice/attention.	
P362+P364	Take off contaminated clothing and wash it before reuse.	
P391	Collect spillage.	

# Precautionary statement(s) Storage

P405 Store locked up.

#### Precautionary statement(s) Disposal

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

# SECTION 3 Composition / information on ingredients

P501

#### Substances

See section below for composition of Mixtures

# Mixtures

CAS No	%[weight]	Name
Not Available	40-70	silica, as
14808-60-7		silica crystalline - quartz
25068-38-6	20-30	bisphenol A/ diglycidyl ether resin, liquid
67762-90-7	10-30 silica. dimethylsiloxane treated	
2210-79-9	5-15	o-cresyl glycidyl ether
Legend:	1. Classified by Chernwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L * EU IOELVs available	

#### **SECTION 4 First aid measures**

#### Description of first aid measures

Eye Contact	<ul> <li>If this product comes in contact with the eyes:</li> <li>Wash out immediately with fresh running water.</li> <li>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li> <li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
Skin Contact	<ul> <li>If skin contact occurs:</li> <li>Immediately remove all contaminated clothing, including footwear.</li> <li>Flush skin and hair with running water (and soap if available).</li> <li>Seek medical attention in event of irritation.</li> </ul>
Inhalation	<ul> <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> </ul>
Ingestion	<ul> <li>Rinse mouth out with plenty of water.</li> <li>For advice, contact a Poisons Information Centre or a doctor.</li> <li>If swallowed do NOT induce vomiting.</li> <li>If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> <li>Observe the patient carefully.</li> <li>Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious</li> <li>Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.</li> <li>Seek medical advice.</li> </ul>

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

# **SECTION 5 Firefighting measures**

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

# Special hazards arising from the substrate or mixture

Fire Incompatibility       Avoid contamination with strong oxidising agents as ignition may result         • Avoid cross contamination between the two liquid parts of product (kit).         • If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and evolution of heat (exotherm) may occur.         • This excess heat may generate toxic vapour
---

# Advice for firefighters

· · · · · · · · · · · · · · · · · · ·	
Fire Fighting	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>Use water delivered as a fine spray to control fire and cool adjacent area.</li> <li>Avoid spraying water onto liquid pools.</li> <li>Do not approach containers suspected to be hot.</li> <li>Cool fire exposed containers with water spray from a protected location.</li> <li>If safe to do so, remove containers from path of fire.</li> </ul>
Fire/Explosion Hazard	<ul> <li>Combustible.</li> <li>Slight fire hazard when exposed to heat or flame.</li> <li>Heating may cause expansion or decomposition leading to violent rupture of containers.</li> <li>On combustion, may emit toxic fumes of carbon monoxide (CO).</li> <li>May emit acrid smoke.</li> <li>Mists containing combustible materials may be explosive.</li> <li>Other combustion products include: carbon dioxide (CO2) aldehydes</li> </ul>
HAZCHEM	•32

# **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

	<ul> <li>Environmental hazard - contain spillage.</li> <li>Clean up all spills immediately.</li> <li>Avoid contact with skin and eyes.</li> <li>Wear impervious gloves and safety goggles.</li> </ul>
Minor Spills	<ul> <li>Trowel up/scrape up.</li> <li>Place spilled material in clean, dry, sealed container.</li> <li>Flush spill area with water.</li> </ul>
Major Spills	<ul> <li>Environmental hazard - contain spillage.</li> <li>Moderate hazard.</li> <li>Clear area of personnel and move upwind.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Wear breathing apparatus plus protective gloves.</li> <li>Prevent, by any means available, spillage from entering drains or water course.</li> <li>No smoking, naked lights or ignition sources.</li> <li>Increase ventilation.</li> <li>Stop leak if safe to do so.</li> <li>Contain spill with sand, earth or vermiculite.</li> <li>Collect recoverable product into labelled containers for recycling.</li> <li>Absorb remaining product with sand, earth or vermiculite.</li> <li>Collect solid residues and seal in labelled drums for disposal.</li> <li>Wash area and prevent runoff into drains.</li> <li>After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li> <li>If contamination of drains or waterways occurs, advise emergency services.</li> </ul>

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

# **SECTION 7 Handling and storage**

Precautions for safe handling	
Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>Avoid smoking, naked lights or ignition sources.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> </ul>

	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.
	Avoid cross contamination between the two liquid parts of product (kit).
	If two part products are mixed or allowed to mix in proportions other than manufacturer's recommendation, polymerisation with gelation and
	evolution of heat (exotherm) may occur.
	This excess heat may generate toxic vapour
	Store in original containers.
	Keep containers securely sealed.
	No smoking, naked lights or ignition sources.
Other information	Store in a cool, dry, well-ventilated area.
	Store away from incompatible materials and foodstuff containers.
	Protect containers against physical damage and check regularly for leaks.
	Observe manufacturer's storage and handling recommendations contained within this SDS.

# Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>Metal can or drum</li> <li>Packaging as recommended by manufacturer.</li> <li>Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	Avoid storage with oxidisers , strong acids strong alkalis

# SECTION 8 Exposure controls / personal protection

# **Control parameters**

#### Occupational Exposure Limits (OEL)

Source	Ingradiant	Material name		TWA	STEL	Peak	Notes
Source	Ingredient	waterial name		IWA	SIEL	reak	Notes
Australia Exposure Standards	silica crystalline - quartz	Silica - Crystalline:	Quartz (respirable dust)	0.05 mg/m3	Not Available	Not Available	Not Available
Emergency Limits							
Ingredient	TEEL-1		TEEL-2		TEEL-3		
silica crystalline - quartz	0.075 mg/m3		33 mg/m3		200 mg	m3	
bisphenol A/ diglycidyl ether resin, liquid	90 mg/m3		990 mg/m3		5,900 m	g/m3	
silica, dimethylsiloxane treated	120 mg/m3		1,300 mg/m3 7,90		7,900 m	00 mg/m3	
Ingredient	Original IDLH	Original IDLH			sed IDLH		
silica crystalline - quartz	25 mg/m3 / 50 mg/m3	25 mg/m3 / 50 mg/m3		Not /	Available		
bisphenol A/ diglycidyl ether resin, liquid	Not Available			Not /	Not Available		
silica, dimethylsiloxane treated	Not Available			Not /	Available		
o-cresyl glycidyl ether	Not Available			Not	Available		

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit	
bisphenol A/ diglycidyl ether resin, liquid	E	≤ 0.1 ppm	
o-cresyl glycidyl ether	E	≤ 0.1 ppm	
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

None assigned. Refer to individual constituents.

#### Exposure controls

Appropriate engineering controls	Use in a well-ventilated area 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.		
	Type of Contaminant:		Air Speed:
	solvent, vapours, degreasing etc., evaporating from tank (in	0.25-0.5 m/s (50-100 f/min)	
	aerosols, fumes from pouring operations, intermittent conta drift, plating acid fumes, pickling (released at low velocity ir	0.5-1 m/s (100-200 f/min.)	
	direct spray, spray painting in shallow booths, drum filling, generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)	
	grinding, abrasive blasting, tumbling, high speed wheel ger very high rapid air motion)	2.5-10 m/s (500-2000 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		
	producing performance deficits within the extraction apparatumore when extraction systems are installed or used. Refer also to protective measures for the other component us		
Personal protection			
Eye and face protection	and adsorption for the class of chemicals in use and an a their removal and suitable equipment should be readily a remove contact lens as soon as practicable. Lens should	enses may absorb and concentrate irritants. A written policy eated for each workplace or task. This should include a revi account of injury experience. Medical and first-aid personnel vailable. In the event of chemical exposure, begin eye irriga be removed at the first signs of eye redness or irritation - le ds thoroughly. [CDC NIOSH Current Intelligence Bulletin 55	ew of lens absorption should be trained in tion immediately and ens should be removed in
Skin protection	See Hand protection below		
Hands/feet protection	<ul> <li>Barrier cream with polyethylene gloves Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear.</li> <li>DO NOT use solvent to clean the skin</li> <li>Skin cleansing cream</li> </ul>		
Body protection	See Other protection below		
Other protection	<ul> <li>Overalls.</li> <li>Eyewash unit.</li> </ul>		

#### **Respiratory protection**

Type A-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	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

#### **SECTION 9 Physical and chemical properties**

#### Information on basic physical and chemical properties

Appearance Light grey paste with a faint epoxy odour; does not mix with water.				
Physical state         Non Slump Paste         Relative density (Water = 1)         1.76				
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 (°C)	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)	>93 (CC)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Applicable	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 (Not Available%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

# **SECTION 10 Stability and reactivity**

Reactivity	See section 7		
Chemical stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.		
Possibility of hazardous reactions	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 hazard is increased at higher temperatures. Inhalation of vapour may result in nausea, headache			
Ingestion	Accidental ingestion of the material may be damaging to the health of the individual. Ingestion may result in nausea, abdominal irritation, pain and vomiting			
Skin Contact	Evidence exists, or practical experience predicts, that the material either produces inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant inflammation when applied to the healthy intact skin of animals, for up to four hours, such inflammation being present twenty-four hours or more after the end of the exposure period. Skin irritation may also be present after prolonged or repeated exposure; this may result in a form of contact dermatitis (nonallergic). The dermatitis is often characterised by skin redness (erythema) and swelling (oedema) which may progress to blistering (vesiculation), scaling and thickening of the epidermis. At the microscopic level there may be intercellular oedema of the spongy layer of the skin (spongiosis) and intracellular oedema of the epidermis. Epoxy materials may cause allergic and/or contact dermatitis responses, which may occur on exposure or may become apparent only after repeated exposures. Sensitisation is possible. Photoallergic dermatitis may result from contact with the material. This type of response can be elicited only in individuals who have been previously allergically sensitised to the chemical agent and appropriate radiation. Photoallergic dermatitis in sun-exposed areas. Bare unprotected skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition			
Eye	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.			
Chronic	Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals. Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive. Substances than can cuase occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers Wherever it is reasonably practicable, exposure to substances that can cuase occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive. Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate for all employees stopsed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.			
Wabo Paste Adhesive w/w	тохісіту	IRRITATION		

	ΤΟΧΙΟΙΤΥ	IRRITATION	
silica crystalline - quartz	Oral (Rat) LD50; 500 mg/kg <sup>[2]</sup>	Not Available	
	ΤΟΧΙΟΙΤΥ	IRRITATION	
bisphenol A/ diglycidyl ether	dermal (rat) LD50: >1200 mg/kg <sup>[2]</sup>	Eye (rabbit): 100mg - Mild	
resin, liquid	Oral (Mouse) LD50; >500 mg/kg <sup>[2]</sup>		
silica, dimethylsiloxane treated	Oral (Rat) LD50; >5000 mg/kg <sup>[2]</sup>	Eyes: 0.7/110 24hr Draize	
		non-irritating Skin: 0/8 non-irritating	
		okin. olo hori intating	
	ΤΟΧΙϹΙΤΥ	IRRITATION	
	dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup>	Eye (rabbit): non-irritating *	
o-cresyl glycidyl ether	Inhalation(Rat) LC50; >6.1 ppm4h <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>	
	Oral (Rat) LD50; >2000 mg/kg <sup>[2]</sup>	Skin (rabbit): irritating *	
		Skin: no adverse effect observed (not irritating) <sup>[1]</sup>	
Legend:	1. Value obtained from Europe ECHA Registered Substanc specified data extracted from RTECS - Register of Toxic Ef	ces - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise ffect of chemical Substances	
SILICA CRYSTALLINE - QUARTZ	<ul> <li>WARNING: For inhalation exposure <u>ONLY</u>: This substance has been classified by the IARC as Group 1: CARCINOGENIC TO HUMANS</li> <li>The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable (&lt;5 um) crystalline silica as being carcinogenic to humans . This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause silicosis, a non-cancerous lung disease.</li> <li>Intermittent exposure produces; focal fibrosis, (pneumoconiosis), cough, dyspnoea, liver tumours.</li> <li>* Millions of particles per cubic foot (based on impinger samples counted by light field techniques).</li> <li>NOTE : the physical nature of quartz in the product determines whether it is likely to present a chronic health problem. To be a hazard the material must enter the breathing zone as respirable particles.</li> </ul>		
BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID	<ul> <li>Feetoxicity has been observed in animal studies Oral (rabbit, female) NOEL 180 mg/kg (teratogenicity; NOEL (maternal 60 mg/kg The chemical structure of hydroxylated diphenylalkanes or bisphenols consists of two phenolic rings joined together through a bridging carbon. This class of endocrine disruptors that timic oestrogenis a widely used in industry, particularly in plastics.</li> <li>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 DPA exhibited significant thyroid hormonal activity towards rat plutiary cell line GH3, which releases growth hormone in a thyroid hormone-dependent manner. However, BPA and several other derivatives din othow such activity. Results suggest that the 4-hydroxyl group of the A-phenyl ring and the B-phenyl migr wardedly influence the activities.</li> <li>Bisphenola R promised 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. 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. In vitro cell models were used to evaluate the ability of 22 bisphenols (BPs) to induce or inhibit estrogenic and androgenic activity. BPA, Bisphenol AF (BPAF), bisphenol Z (BP2), bisphenol S (BPS), bisphenols (BPS), bisphenol S (BPS), bisphenol S (BPS), bisphenol F (BPAF), bisphenol E (BPE), tractical and/or ERAPA, bisphenol B (BPB), tetractical BPB, tractical activity. The substance is classified as the sarchogenic by NARC as Group 3:</li> <li>NOT classifiable as to its carcinogenicity to humans.</li> <li>EVidence of carcinogenicity may be inadequate or limited in animal testing.</li> <li>In mice, dermal application of bisphenol A (BpycA) tetra cabics formatis and dose. The accestr</li></ul>		

	three-week incubation period and a challenge dose prod	luced sensitisation in 19 of 20 guinea	ı pigs		
	three-week incubation period and a challenge dose produced sensitisation in 19 of 20 guinea pigs - Consumer exposure to BADGE is almost exclusively from migration of BADGE from can coatings into food. Using a worst-case scenario that assumes BADGE migrates at the same level into all types of food, the estimated per capita daily intake for a 60-kg individual is approximately 0.16 ug/kg body weight/day. A review of one- and two-generation reproduction studies and developmental investigations found no evidence of reproductive or endocrine toxicity, the upper ranges of dosing being determined by maternal toxicity. The lack of endocrine toxicity in the reproductive and developmental toxicological tests is supported by negative results from both in vivo and in vitro assays designed specifically to detect oestrogenic and androgenic properties of BADGE. An examination of data from sub-chronic taxicological studies support a NOAEL of 50 mg/ kg/body weight day from the 90-day study, and a NOAEL of 15 mg/kg body weigh/day (male rats) from the 2-year carcinogenicity study. Both NOAELS are considered appropriate for risk assessment. Comparing the estimated daily human intake of 0.16 ug/kg body weight/day with the NOAELS of 50 and 15 mg/kg body weight/day shows human exposure to BADGE from can coatings is between 250,000 and 100,000-fold lower than the NOAELs from the most sensitive toxicology tests. These large margins of safety together with lack of reproductive, developmental, endocrine and carcinogenic effects supports the continued use of BADGE for use in articles intended to come into contact with foodstuffs.				
SILICA, DIMETHYLSILOXANE TREATED	For silica amorphous: Derived No Adverse Effects Level (NOAEL) in the range of 1000 mg/kg/d. In humans, synthetic amorphous silica (SAS) is essentially non-toxic by mouth, skin or eyes, and by inhalation. Epidemiology studies show little evidence of adverse health effects due to SAS. Repeated exposure (without personal protection) may cause mechanical irritation of the eye an drying/cracking of the skin. When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated. If swallowed, it vast majority of SAS is excreted in the faeces and there is little accumulation in the body. Following absorption across the gut, SAS is eliminate via urine without modification in animals and humans. SAS is not expected to be broken down (metabolised) in mammals. After ingestion, there is limited accumulation of SAS in body tissues and rapid elimination occurs. Intestinal absorption has not been calculated but appears to be insignificant in animals and humans. SASs injected subcutaneously are subjected to rapid dissolution and removal. There is indication of SAS in animals or humans based on chemical structure and available data. In contrast to crystalline silica. SAS is soluble in physiological media and the soluble chemical species that are formed are eliminated via the urinary tract without modification. Both the mammalian and environmental toxicology of SASs are significantly influenced by the physical and chemical properties, particularly the of solubility and partice size. SAS has no acute intrinsic toxicity by inhalation. Adverse effects, including suffocation, that have been reported were caused by the presence of high numbers of respirable particles generated to meet the required test atmosphere. These results are not representative of exposure to commercial SASs and should not be used for human risk assessment. Though repeated exposure of the skin ma cause dryness and cracking, SAS is not a skin or eye iritant, and it is not a sensitiser. Repeated-dose and				
O-CRESYL GLYCIDYL ETHER	o-CGE is a direct-acting mutagen in in-vitro test systems. Studies in vivo, including micronucleus tests and assays in transgenic animals, showed no mutagenic activity. Causes sensitisation * Huntsman Araldite DY-K/ CH SDS Exposure to the material may result in a possible risk of irreversible effects. The material may produce mutagenic effects in man. This concern is raised, generally, on the basis of appropriate studies using mammalian somatic cells in vivo. Such findings are often supported by positive results from in vitro mutagenicity studies. Oxiranes (including glycidyl ethers and alkyl oxides, and epoxides) exhibit many common characteristics with respect to animal toxicology. One such oxirane is ethyloxirane; data presented here may be taken as representative. for 1,2-butylene oxide (ethyloxirane): Ethyloxirane increased the incidence of tumours of the respiratory system in male and female rats exposed via inhalation. Significant increases in nasal papillary adenomas and combined alveolar/bronchiolar adenomas and carcinomas were observed in male rats exposed to 1200 mg/m3 ethyloxirane via inhalation for 103 weeks. There was also a significant positive trend in the incidence of combined alveolar/bronchiolar adenomas and carcinomas. Nasal papillary adenomas were also observed in 2/50 high-dose female rats with none occurring in control or low-dose animals. In mice exposed chronically via inhalation, one male mouse developed a squamous cell papilloma in the nasal carvity (300 mg/m3) but other tumours were not observed. Tumours were not observed in mice exposed chronically via dermal exposure. When trichloroethylene containing 0.8% ethyloxirane was administered orally to mice for up to 35 weeks, followed by 0.4% from weeks 40 to 69, squamous-cell carcinomas of the forestomach occurred in 3/49 males (p=0.029, age-adjusted) and 1/48 females at week 106. Trichloroethylene administered alone did not induce these tumours and they were not observed in control animals . Two structurally related substances, oxirane				
BISPHENOL A/ DIGLYCIDYL ETHER RESIN, LIQUID & O-CRESYL GLYCIDYL ETHER	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.				
	×	Carcinogenicity	×		
Acute Toxicity					
Acute Toxicity					
Skin Irritation/Corrosion	×	Reproductivity	×		
	✓				

Mutagenicity -

Aspiration Hazard Legend:

X

🗙 – Data either not available or does not fill the criteria for classification 🖊 – Data available to make classification

# **SECTION 12 Ecological information**

Toxicity

Webs Deste Adhesive whe	Endpoint	Test Duration (hr)	Species	Value	Source
Wabo Paste Adhesive w/w Resin - Part A	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
silica crystalline - quartz	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	~2mg/l	2
isphenol A/ diglycidyl ether resin, liquid	EC50(ECx)	24h	Crustacea	3mg/l	Not Availabl
	LC50	96h	Fish	2.4mg/l	Not Availabl
	Endpoint	Test Duration (hr)	Species	Value	Source
silica, dimethylsiloxane treated	Not Available	Not Available	Not Available	Not Available	Not Availabl
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	~5.1mg/l	2
	EC50	48h	Crustacea	~3.3mg/l	2
o-cresyl glycidyl ether	EC50(ECx)	24h	Crustacea	1-10mg/l	Not Availabl
	LC50	96h	Fish	1-10mg/l	Not Availabl

CETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) icity - 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.

# Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
bisphenol A/ diglycidyl ether resin, liquid	HIGH	HIGH
o-cresyl glycidyl ether	HIGH	HIGH

#### **Bioaccumulative potential**

Ingredient	Bioaccumulation		
bisphenol A/ diglycidyl ether resin, liquid	LOW (LogKOW = 2.6835)		
o-cresyl glycidyl ether	LOW (LogKOW = 2.1609)		

# Mobility in soil

•	
Ingredient	Mobility
bisphenol A/ diglycidyl ether resin, liquid	LOW (KOC = 51.43)
o-cresyl glycidyl ether	LOW (KOC = 67.93)

# **SECTION 13 Disposal considerations**

Waste treatment methods				
Product / Packaging disposal	<ul> <li>Recycle wherever possible or consult manufacturer for recycling options.</li> <li>Consult State Land Waste Management Authority for disposal.</li> <li>Material may be disposed of by controlled burning in an approved incinerator or buried in an approved landfill.</li> <li>Prior to disposal in a landfill the material should be mixed with the other component and reacted to render the material inert.</li> <li>Extreme caution should be taken when heating the resin/curing agent mix.</li> <li>Recycle containers where possible, or dispose of in an authorised landfill.</li> </ul>			

# **SECTION 14 Transport information**

Labels Required		
Marine Pollutant		
HAZCHEM	•3Z	

# Land transport (ADG)

UN number	3082		
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ diglycidyl ether resin, liquid)		
Transport hazard class(es)	Class     9       Subrisk     Not Applicable		
Packing group	III		
Environmental hazard	Environmentally hazardous		
Special precautions for user	Special provisions274 331 335 375 AU01Limited quantity5 L		

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082

are not subject to this Code when transported by road or rail in; (a) packagings;(b) IBCs; or

(c) any other receptacle not exceeding 500 kg(L).
 Australian Special Provisions (SP AU01) - ADG Code 7th Ed.

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

UN number	3082			
UN proper shipping name	Environmentally hazardo	ous substance, liquid, n.o.s. * (contains b	oisphenol A/ diglycidyl ethe	r resin, liquid)
Transport hazard class(es)	ICAO/IATA Class9ICAO / IATA SubriskNot ApplicableERG Code9L			
Packing group				
Environmental hazard	Environmentally hazardous			
Special precautions for user	Special provisions         Cargo Only Packing Instructions         Cargo Only Maximum Qty / Pack         Passenger and Cargo Packing Instructions         Passenger and Cargo Maximum Qty / Pack         Passenger and Cargo Limited Quantity Packing Instructions         Passenger and Cargo Limited Maximum Qty / Pack		A97 A158 A197 A215 964 450 L 964 450 L Y964 30 kg G	

# Sea transport (IMDG-Code / GGVSee)

UN number	3082		
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains bisphenol A/ diglycidyl ether resin, liquid)		
Transport hazard class(es)	IMDG Class 9 IMDG Subrisk No	ot Applicable	
Packing group	III		
Environmental hazard	Marine Pollutant		
Special precautions for user	EMS Number Special provisions Limited Quantities	F-A, S-F 274 335 969 5 L	

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

Product name	Group
silica crystalline - quartz	Not Available
bisphenol A/ diglycidyl ether resin, liquid	Not Available
silica, dimethylsiloxane treated	Not Available
o-cresyl glycidyl ether	Not Available
	·

## Transport in bulk in accordance with the ICG Code

Product name	Ship Type	
silica crystalline - quartz	Not Available	
bisphenol A/ diglycidyl ether resin, liquid	Not Available	
silica, dimethylsiloxane treated	Not Available	
o-cresyl glycidyl ether	Not Available	

#### **SECTION 15 Regulatory information**

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

#### silica crystalline - quartz is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals Australia Model Work Health and Safety Regulations - Hazardous chemicals (other than lead) requiring health monitoring

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 5 Australian Inventory of Industrial Chemicals (AIIC)

#### silica, dimethylsiloxane treated is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

#### o-cresyl glycidyl ether is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Group 1: Carcinogenic to humans

Chemical Footprint Project - Chemicals of High Concern List

Chemical Footprint Project - Chemicals of High Concern List International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

International WHO List of Proposed Occupational Exposure Limit (OEL) Values for Manufactured Nanomaterials (MNMS)

#### Australian Inventory of Industrial Chemicals (AIIC)

#### **National Inventory Status**

National Inventory	Status		
Australia - AIIC / Australia Non-Industrial Use	Yes		
Canada - DSL	Yes		
Canada - NDSL	No (silica crystalline - quartz; bisphenol A/ diglycidyl ether resin, liquid; silica, dimethylsiloxane treated; o-cresyl glycidyl ether)		
China - IECSC	Yes		
Europe - EINEC / ELINCS / NLP	No (silica, dimethylsiloxane treated)		
Japan - ENCS	Yes		
Korea - KECI	Yes		
New Zealand - NZIoC	Yes		
Philippines - PICCS	Yes		
USA - TSCA	Yes		
Taiwan - TCSI	Yes		
Mexico - INSQ	No (o-cresyl glycidyl ether)		
Vietnam - NCI	Yes		
Russia - FBEPH	No (silica, dimethylsiloxane treated; o-cresyl glycidyl ether)		
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.		

## **SECTION 16 Other information**

Revision Date	30/09/2022
Initial Date	26/06/2001

#### SDS Version Summary

Version

Date of

Update

Continued...

Version	Date of Update	Sections Updated
5.1	25/08/2016	Environmental, Fire Fighter (fire/explosion hazard), First Aid (eye), Ingredients, Personal Protection (hands/feet), Storage (storage incompatibility)
6.1	01/11/2019	One-off system update. NOTE: This may or may not change the GHS classification

#### 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 ES: Exposure Standard 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** AIIC: Australian Inventory of Industrial Chemicals DSL: Domestic Substances List NDSL: Non-Domestic Substances List IECSC: Inventory of Existing Chemical Substance in China EINECS: European INventory of Existing Commercial chemical Substances ELINCS: European List of Notified Chemical Substances NLP: No-Longer Polymers ENCS: Existing and New Chemical Substances Inventory KECI: Korea Existing Chemicals Inventory NZIoC: New Zealand Inventory of Chemicals PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act TCSI: Taiwan Chemical Substance Inventory INSQ: Inventario Nacional de Sustancias Químicas NCI: National Chemical Inventory FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

This document is copyright.

Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH.

TEL (+61 3) 9572 4700.

