

121 Fibreglass Epoxy Repair System Part A

CRC Industries (CRC Industries New Zealand)

Chemwatch: 5295-84

Version No: 2.1.1.1 Safety Data Sheet according to HSNO Regulations Chemwatch Hazard Alert Code: 2

Issue Date: 27/02/2018 Print Date: 28/11/2018 S.GHS.NZL.EN

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

Product Identifier

Product name	121 Fibreglass Epoxy Repair System Part A	
Synonyms	ot Available	
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bisphenol A diglycidyl ether resin, solid)	
Other means of identification	Not Available	

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

Relevant identified uses	Resin component for two part epoxy adhesive.

Details of the supplier of the safety data sheet

Registered company name	CRC Industries (CRC Industries New Zealand)	
Address	hbrook Drive East Tamaki Auckland New Zealand	
Telephone	9 272 2700	
Fax	64 9 274 9696	
Website	www.crc.co.nz	
Email	customerservices@crc.co.nz	

Emergency telephone number

Association / Organisation	Not Available	
Emergency telephone numbers	NZ Poisons Centre 0800 POISON (0800 764 766)	
Other emergency telephone numbers	111 (NZ Emergency Services)	

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Classification ^[1]	Skin Corrosion/Irritation Category 3, Eye Irritation Category 2A, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 2, Specific target organ toxicity - repeated exposure Category 2, Acute Aquatic Hazard Category 2, Chronic Aquatic Hazard Category 2	
Legend:	sified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 008 - Annex VI	
Determined by Chemwatch using GHS/HSNO criteria	6.3B, 6.4A, 6.5B (contact), 6.9B (inhalation), 9.1B, 9.1D	

Label elements

Hazard pictogram(s)	
SIGNAL WORD	WARNING
Hazard statement(s)	
H316	Causes mild skin irritation.

H319	Causes serious eye irritation.	
H317	lay cause an allergic skin reaction.	
H371	May cause damage to organs.	
H373	May cause damage to organs through prolonged or repeated exposure.	
H411	Toxic to aquatic life with long lasting effects.	

Precautionary statement(s) Prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	
P270	Do not eat, drink or smoke when using this product.	
P273	Avoid release to the environment.	

Precautionary statement(s) Response

P302+P352	IF ON SKIN: Wash with plenty of water and soap.	
P305+P351+P338	IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. ontinue rinsing.	
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/physician/first aider.	
P314	Get medical advice/attention if you feel unwell.	

Precautionary statement(s) Storage

P405 Store locked up.

Precautionary statement(s) Disposal

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

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
25068-38-6	>60	bisphenol A diglycidyl ether resin, solid

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	 If this product comes in contact with the eyes: Wash out immediately 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. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. 			
Skin Contact	 If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation. 			
Inhalation	 If fumes, aerosols or combustion products are inhaled remove from contaminated area. Other measures are usually unnecessary. 			
Ingestion	 For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay. 			

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Extinguishing media

- ▸ Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Do not use water jets.

Special hazards arising from the substrate or mixture

Fire Incompatibility	 Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result
	-

Advice for firefighters

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	 Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO2) aldehydes other pyrolysis products typical of burning organic material.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	 Environmental hazard - contain spillage. Clean up all spills immediately. Avoid contact with skin and eyes. Wear impervious gloves and safety goggles. Trowel up/scrape up.
Major Spills	 Environmental hazard - contain spillage. Minor hazard. Clear area of personnel. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment as required.

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

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.
Other information	 Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	 Metal can or drum Packaging as recommended by manufacturer. Check all containers are clearly labelled and free from leaks.
Storage incompatibility	 Avoid reaction with amines, mercaptans, strong acids and oxidising agents 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,

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

Ingredient	Material name		TEEL-1	TEEL-2	TEEL-3
bisphenol A diglycidyl ether resin, solid	Epoxy resin includes EPON 1001, 1007, 820, ERL-2795		90 mg/m3	990 mg/m3	5,900 mg/m3
bisphenol A diglycidyl ether resin, solid	Polypropylene glycol, (chloromethyl) oxirane polymer		30 mg/m3	330 mg/m3	2,000 mg/m3
Ingredient	Original IDLH	Revis	ed IDLH		
bisphenol A diglycidyl ether resin, solid	Not Available Not Av		vailable		

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protection	
Eye and face protection	 Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	 NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. When handling liquid-grade epoxy resins wear chemically protective gloves , boots and aprons. The performance, based on breakthrough times ,of: Ethyl Vinyl Alcohol (EVAL laminate) is generally excellent Butyl Rubber ranges from excellent to good Nitrile Butyl Rubber (NBR) from excellent to fair. Neoprene from excellent to fair Polyvinyl (PVC) from excellent to poor As defined in ASTM F-739-96 Excellent breakthrough time > 480 min Good breakthrough time > 20 min Fair breakthrough time > 20 min Poor glove material degradation Gloves should be tested against each resin system prior to making a selection of the most suitable type. Systems include both the resin and any hardener, individually and collectively) DO NOT use cotton or leather (which absorb and concentrate the resin), natural rubber (latex), medical or polyethylene gloves (which absorb the resin).
Body protection	See Other protection below
Other protection	 Overalls. P.V.C. apron. Barrier cream.

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
Required Minimum Froteotion Factor	nun ruoc neophator	i un i doc nospitator	i owcied All Respirator

up to 10 x ES	P1 Air-line*	-	PAPR-P1 -
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow

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

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	White paste with mild odour; insoluble in water.		
Physical state	Solid	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 and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Applicable
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	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur. 	
Possibility of hazardous reactions	pe 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

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC

	Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.			
Ingestion	Animal testing showed that a single dose of bisphenol A diglycidyl ether (BADGE) given by mouth, caused an increase in immature sperm.			
Skin Contact	The material may cause mild but significant 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. 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. 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.			
Eye	This material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.			
Chronic	population. Harmful: danger of serious damage to health by p This material can cause serious damage if one is substance which can produce severe defects.	use a sensitisation reaction in some persons compared to the general prolonged exposure through inhalation. Exposed to it for long periods. It can be assumed that it contains a a sensitization dermatitis (skin inflammation) characterized by eczema		
	withdrawal from exposure and recur immediately	ng of the back of the hand. This may persist for 10-14 days after on re-exposure. The dermatitis may last longer following each exposure, elecular weight species produce sensitization more readily.		
121 Fibreglass Epoxy	withdrawal from exposure and recur immediately	on re-exposure. The dermatitis may last longer following each exposure,		
121 Fibreglass Epoxy Repair System Part A	withdrawal from exposure and recur immediately but is unlikely to become more intense. Lower mo	on re-exposure. The dermatitis may last longer following each exposure, elecular weight species produce sensitization more readily.		
• • •	withdrawal from exposure and recur immediately but is unlikely to become more intense. Lower mo	on re-exposure. The dermatitis may last longer following each exposure, lecular weight species produce sensitization more readily.		
Repair System Part A bisphenol A diglycidyl	withdrawal from exposure and recur immediately but is unlikely to become more intense. Lower mo TOXICITY Not Available	on re-exposure. The dermatitis may last longer following each exposure, elecular weight species produce sensitization more readily.		
Repair System Part A	withdrawal from exposure and recur immediately but is unlikely to become more intense. Lower mo TOXICITY Not Available TOXICITY	on re-exposure. The dermatitis may last longer following each exposure, olecular weight species produce sensitization more readily. IRRITATION Not Available IRRITATION		
Repair System Part A bisphenol A diglycidyl	withdrawal from exposure and recur immediately but is unlikely to become more intense. Lower mo TOXICITY Not Available TOXICITY dermal (rat) LD50: >1200 mg/kg ^[2] Oral (rat) LD50: >1000 mg/kg ^[2] 1. Value obtained from Europe ECHA Registered	on re-exposure. The dermatitis may last longer following each exposure elecular weight species produce sensitization more readily. IRRITATION Not Available IRRITATION		

BISPHENOL A DIGLYCIDYL ETHER RESIN, SOLID 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.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

No significant acute toxicological data identified in literature search.

CAUTION: Epoxy resin products may contain sensitising glycidyl ethers, even when these are not mentioned in the information given for the product. The likely occurrence of these is greatly reduced in solid grades of the resin.

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: 🗙

 \mathbf{X} – Data either not available or does not fill the criteria for classification

Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

121 Eibraglass Epoyu	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
121 Fibreglass Epoxy Repair System Part A	Not Available	Not Available	Not Available	Not Available	Not Available

bisphenol A diglycidyl ether resin, solid	ENDPOINT TEST DURATION (HR)	SPECIES	VALUE SOURCE 3.349mg/L 3
			,
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA	Registered Substances - Ecotoxicologica	I Information - Aquatic
ç	Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity		
	Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) -		

Bioconcentration Data 8. Vendor Data

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, solid	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
bisphenol A diglycidyl ether resin, solid	LOW (LogKOW = 2.6835)

Mobility in soil

Ingredient	Mobility
bisphenol A diglycidyl ether resin, solid	LOW (KOC = 51.43)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

	Containers may still present a chemical hazard/ danger when empty.
	, , , , , , , , , , , , , , , , , , , ,
	Return to supplier for reuse/ recycling if possible.
	Otherwise:
	If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used
	to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
	Where possible retain label warnings and SDS and observe all notices pertaining to the product.
Product / Packaging	 DO NOT allow wash water from cleaning or process equipment to enter drains.
disposal	It may be necessary to collect all wash water for treatment before disposal.
	In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
	Where in doubt contact the responsible authority.
	 Recycle wherever possible or consult manufacturer for recycling options.
	 Consult State Land Waste Authority for disposal.
	Bury or incinerate residue at an approved site.
	Recycle containers if possible, or dispose of in an authorised landfill.

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package.

The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and it is no longer hazardous.

SECTION 14 TRANSPORT INFORMATION

Labels Required





2Z

HAZCHEM

Land transport (UN)

UN number	3077	
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bisphenol A diglycidyl ether resin, solid)	
Transport hazard class(es)	Class 9 Subrisk Not Applicable	
Packing group	III	
Environmental hazard	Environmentally hazardous	
Special precautions for user	Special provisions274; 331; 335; 375Limited quantity5 kg	

Air transport (ICAO-IATA / DGR)

UN number	3077			
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. * (contains bisphenol A diglycidyl ether resin, solid)			
Transport hazard	ICAO/IATA Class	9		
class(es)	ICAO / IATA Subrisk	Not Applicable		
	ERG Code	9L		
Packing group	III			
Environmental hazard	Environmentally hazardous			
	Special provisions		A97 A158 A179 A197	
	Cargo Only Packing Instructions		956	
	Cargo Only Maximum Qty / Pack		400 kg	
Special precautions for user	Passenger and Cargo Packing Instructions		956	
	Passenger and Cargo Maximum Qty / Pack		400 kg	
	Passenger and Cargo Limited Quantity Packing Instructions		Y956	
	Passenger and Cargo Limited Maximum Qty / Pack		30 kg G	

Sea transport (IMDG-Code / GGVSee)

UN number	3077		
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bisphenol A diglycidyl ether resin, solid)		
Transport hazard class(es)	IMDG Class 9 IMDG Subrisk Not Applicable		
Packing group	III		
Environmental hazard	Marine Pollutant		
Special precautions for user	EMS NumberF-A , S-FSpecial provisions274 335 966 967 969Limited Quantities5 kg		

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

This substance is to be managed using the conditions specified in an applicable Group Standard

HSR Number	Group Standard
HSR002544	Construction Products (Subsidiary Hazard) Group Standard 2017

BISPHENOL A DIGLYCIDYL ETHER RESIN, SOLID(25068-38-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

New Zealand Hazardous Substances and New Organisms (HSNO) Act -Classification of Chemicals New Zealand Inventory of Chemicals (NZIoC)

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers	
Not Applicable	Not Applicable	Not Applicable	

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Class of substance	Quantities
Not Applicable	Not Applicable

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (bisphenol A diglycidyl ether resin, solid)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Υ
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Revision Date	27/02/2018
Initial Date	Not Available

Other information

Ingredients with multiple cas numbers

Name	CAS No
bisphenol A diglycidyl ether resin, solid	25068-38-6, 25085-99-8

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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