

# SDI Limited

Version No: 11.1

Safety Data Sheet according to WHMIS 2015 requirements

Issue Date: 10/03/2023 Print Date: 20/11/2023 L.GHS.CAN.EN

#### **SECTION 1 Identification**

#### **Product Identifier**

Product name	Glacier, Wave, Wave MV, Wave HV, ROK, ICE, Luna, Aura, Aura Bulk Fill, Aura eASY, Aura Easyflow, LC Opaquer, Luna Flow, Luna Flow LV, Luna 2
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

#### Recommended use of the chemical and restrictions on use

Relevant identified uses	For filling of cavitated teeth by dental professionals.
--------------------------	---

#### Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	SDI Limited	SDI (North America) Inc.	SDI HOLDINGS PTY LTD DO
Address	3-15 Brunsdon Street Bayswater VIC 3153 Australia	1279 Hamilton Parkway Itasca IL 60143 United States	Rua Dr. Reinaldo Schmithausen 3141 – Cordeiros Itajaí – SC – CEP 88310-004 Brazil
Telephone	+61 3 8727 7111	+1 630 361 9200	+55 11 3092 7100
Fax	+61 3 8727 7222	Not Available	Not Available
Website	www.sdi.com.au	www.sdi.com.au	http://www.sdi.com.au/
Email	info@sdi.com.au	USA.Canada@sdi.com.au	Brasil@sdi.com.au
Registered company name	SDI Germany GmbH		
Address	Hansestrasse 85 Cologne D-51149 Germany		
Telephone	+49 0 2203 9255 0		
Fax	+49 0 2203 9255 200		
Website	www.sdi.com.au		
Email	germany@sdi.com.au		

#### Emergency phone number

Association / Organisation	SDI Limited	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	131126 Poisons Information Centre	+1 867 670 2867
Other emergency telephone numbers	+61 3 8727 7111	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

Une fois connecté et si le message n'est pas dans votre langue préférée alors s'il vous plaît cadran 07

## SECTION 2 Hazard(s) identification

#### Classification of the substance or mixture

NFPA 704 diamond



Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification

Skin Corrosion/Irritation Category 2, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2B, Specific Target Organ Toxicity - Single Exposure (Respiratory Tract Irritation) Category 3

#### Page 2 of 11

# Glacier, Wave, Wave MV, Wave HV, ROK, ICE, Luna, Aura, Aura Bulk Fill, Aura eASY, Aura Easyflow, LC Opaquer, Luna Flow, Luna Flow LV, Luna 2

Label elements	
Hazard pictogram(s)	
Signal word	Warning

#### Hazard statement(s)

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H320	Causes eye irritation.
H335	May cause respiratory irritation.

#### Physical and Health hazard(s) not otherwise classified

Not Applicable

#### Precautionary statement(s) Prevention

• • • • •	
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and protective clothing.
P261	Avoid breathing mist/vapours/spray.
P264	Wash all exposed external body areas thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.

#### Precautionary statement(s) Response

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.	
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.	
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.	
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.	

#### Precautionary statement(s) Storage

P405	Store locked up.
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.

# **SECTION 3 Composition / information on ingredients**

#### Substances

See section below for composition of Mixtures

#### Mixtures

CAS No	%[weight]	Name
72869-86-4	3-20	diurethane dimethacrylate
109-16-0	0.01-7	triethylene glycol dimethacrylate.
24448-20-2	15-18	2.2-bis[4-(2-methacryloxy)ethoxy)phenyl]propane

# **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	If skin contact occurs: <ul> <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, aerosols or combustion products are inhaled remove from contaminated area.</li> <li>Other measures are usually unnecessary.</li> <li>If irritation continues, seek medical attention.</li> </ul>
Ingestion	Seek medical attention.

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

Treat symptomatically.

# **SECTION 5 Fire-fighting measures**

#### Extinguishing media

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

#### Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

#### Special protective equipment and precautions for fire-fighters

	<ul> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> </ul>
	May be violently or explosively reactive.
	Wear full body protective clothing with breathing apparatus.
	Prevent, by any means available, spillage from entering drains or water course.
	Fight fire from a safe distance, with adequate cover.
Fire Fighting	If safe, switch off electrical equipment until vapour fire hazard removed.
	Use water delivered as a fine spray to control the fire and cool adjacent area.
	Avoid spraying water onto liquid pools.
	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.
	▶ Non combustible.
	Not considered a significant fire risk, however containers may burn.
<b>-</b>	May emit corrosive fumes.
Fire/Explosion Hazard	Decomposes on heating and produces:
	carbon dioxide (CO2)
	carbon monoxide (CO)

# **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	<ul> <li>Clean up all spills immediately.</li> <li>Avoid contact with skin and eyes.</li> <li>Wear impervious gloves and safety goggles.</li> <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>Minor hazard.</li> <li>Clear area of personnel.</li> <li>Alert Fire Brigade and tell them location and nature of hazard.</li> <li>Control personal contact with the substance, by using protective equipment as required.</li> <li>Prevent spillage from entering drains or water ways.</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 and place in appropriate containers for disposal.</li> <li>Wash area and prevent runoff into drains or waterways.</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 Note and the 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. DO NOT allow material to contact humans, exposed food or food utensils. Avoid contact with incompatible materials.

	When handling, DO NOT eat, drink or smoke.
	Keep containers securely sealed when not in use.
	Avoid physical damage to containers.
	Always wash hands with soap and water after handling.
	Work clothes should be laundered separately. Launder contaminated clothing before re-use.
	Use good occupational work practice.
	Observe manufacturer's storage and handling recommendations contained within this SDS.
	Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
	Store between 10 and 25 deg. C.
Other information	Do not store in direct sunlight.

# Conditions for safe storage, including any incompatibilities

Suitable container	<ul> <li>DO NOT repack. Use containers supplied by manufacturer only.</li> <li>Check that containers are clearly labelled and free from leaks</li> </ul>	
Storage incompatibility	Avoid storage with reducing agents.	

# **SECTION 8 Exposure controls / personal protection**

#### **Control parameters**

# Occupational Exposure Limits (OEL)

INGREDIENT DATA

# Not Available

# Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
diurethane dimethacrylate	120 mg/m3	1,300 mg/m3	7,900 mg/m3
triethylene glycol dimethacrylate	33 mg/m3	360 mg/m3	2,100 mg/m3

Ingredient	Original IDLH	Revised IDLH
diurethane dimethacrylate	Not Available	Not Available
triethylene glycol dimethacrylate	Not Available	Not Available
2,2-bis[4- (2-methacryloxy)ethoxy)phenyl]propane	Not Available	Not Available

Occupational Exposure Banding				
Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit		
diurethane dimethacrylate	E	≤ 0.1 ppm		
triethylene glycol dimethacrylate	E	≤ 0.1 ppm		
2,2-bis[4- (2-methacryloxy)ethoxy)phenyl]propane	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

# Exposure controls

	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure. General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances. If risk of overexposure exists, wear approved respirator. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Provide adequate ventilation in warehouses and enclosed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.		
Appropriate engineering	Type of Contaminant:		Air Speed:
controls	solvent, vapours, degreasing etc., evaporating from tank (in still air).		0.25-0.5 m/s (50-100 f/min)
	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)		0.5-1 m/s (100-200 f/min.)
	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)		1-2.5 m/s (200-500 f/min.)
	grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion)		2.5-10 m/s (500-2000 f/min.)
	Within each range the appropriate value depends on:		
	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 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 consideration 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.		
Individual protection measures, such as personal protective equipment			
Eye and face protection	<ul> <li>No special equipment for minor exposure i.e. when handling small quantities.</li> <li>OTHERWISE:</li> <li>Safety glasses with side shields.</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]</li> </ul>		
Skin protection	See Hand protection below		
Hands/feet protection	<ul> <li>Wear chemical protective gloves, e.g. PVC.</li> <li>Wear safety footwear or safety gumboots, e.g. Rubber</li> <li>Rubber Gloves</li> </ul>		
Body protection	See Other protection below		
Other protection	<ul> <li>Overalls.</li> <li>P.V.C apron.</li> <li>Barrier cream.</li> <li>Skin cleansing cream.</li> <li>Eye wash unit.</li> </ul>		

#### **Respiratory protection**

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

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

Required minimum protection factor	Maximum gas/vapour concentration present in air p.p.m. (by volume)	Half-face Respirator	Full-Face Respirator
up to 10	1000	A-AUS / Class1	-
up to 50	1000	-	A-AUS / Class 1
up to 50	5000	Airline *	-
up to 100	5000	-	A-2
up to 100	10000	-	A-3
100+			Airline**

\* - Continuous Flow \*\* - Continuous-flow or positive pressure demand

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

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

#### Information on basic physical and chemical properties

Appearance	Tooth coloured viscous/ flowable paste with ester-like odour, insoluble in water.			
Physical state	Free-flowing PasteRelative density (Water = 1)1.5-2.0			
Odour	Not Available	Partition coefficient n-octanol / water	Not Available	
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available	
pH (as supplied)	Not Available	Decomposition temperature (°C)	Not Available	
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available	
Initial boiling point and boiling range (°C)	Gel before boiling	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	

#### Page 6 of 11

# Glacier, Wave, Wave MV, Wave HV, ROK, ICE, Luna, Aura, Aura Bulk Fill, Aura eASY, Aura Easyflow, LC Opaquer, Luna Flow, Luna Flow LV, Luna 2

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 Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

## **SECTION 10 Stability and reactivity**

Reactivity	See section 7
Chemical stability	Product is considered stable and 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

## **SECTION 11 Toxicological information**

#### Information on toxicological effects

Inhaled	Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs. Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.
Ingestion	The material has <b>NOT</b> been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.
Skin Contact	Limited 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.
Eye	Limited evidence exists, or practical experience suggests, that the material may cause eye irritation in a substantial number of individuals and/or is expected to 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 consultation with an occupational health professional over the degree of risk and level of surveillance.

Glacier, Wave, Wave MV, Wave HV, ROK, ICE, Luna, Aura, Aura Bulk Fill, Aura eASY, Aura Easyflow, LC Opaquer, Luna Flow, Luna Flow LV, Luna 2	TOXICITY Not Available	IRRITATION Not Available
diurethane dimethacrylate	TOXICITY           dermal (rat) LD50: >2000 mg/kg <sup>[1]</sup> Oral (Rat) LD50: >2000 mg/kg <sup>[2]</sup>	IRRITATION Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
triethylene glycol dimethacrylate	TOXICITY           dermal (mouse) LD50: >2000 mg/kg <sup>[1]</sup> Oral (Mouse) LD50; 10750 mg/kg <sup>[2]</sup>	IRRITATION         Eye: no adverse effect observed (not irritating) <sup>[1]</sup> Skin: no adverse effect observed (not irritating) <sup>[1]</sup>
2,2-bis[4- (2-methacryloxy)ethoxy)phenyl]propane	TOXICITY Not Available	IRRITATION Not Available

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

DURETHANE DIMETHACRYLATE	<sup>1</sup> Possible caranogen, possible sensitizer, possible irreventible effectin <sup>1</sup> Polysiones MSDS The sin sensitiang potential of compliance with GLP (Vogel, 2004). The highest technically achievable test substance concentration was 50% (We) in concentration was incredited in a Local Lymph Mode Assay (LLNA) in the eacording to CoED Guideline 429 and in compliance with GLP (Vogel, 2004). The highest technically achievable test substance concentration in was 50% (We) in concentration was incredited in the concentrations of 10.25 and 50% (We) in dimethylormania or with vehicle along for three consecutive drays by open application on the cara (25 µL/en). Three drays after the isste eposure, all annihals were injected with the tested concentrations of 10.25 and 50% (We) in dimethylormania or with vehicle along for the consecutive drays by open application on the cara (25 µL/en). Three drays after the isste eposure, all annihals were injected with the strengt by mylicine and approximately after the hours the draining (surcului) µmylin house vere existed and the strengt house and the strengt house were existed and pooled for each test group. After possible to the base and activity measurements were performed. In 50 and 60% were 1.84, 1.70 and 4.44, respectively. The EC3 value was calculated to be 8.6%, Based on the results. Its set substance was respective and the strengt house and th
(2-METHACRYLOXY)ETHOXY)PHENYL]PROPANE	a bridging carbon. This class of endocrine disruptors that mimic oestrogens is widely used in industry, particularly in plastics.

Glaciel, way		LC Opaquer, Luna Flow,	Luna Flow LV. Luna 2	Aor, Aura Lasynow,
		there were remarkable difference towards rat pituitary cell line GH2 and several other derivatives did the B-phenyl ring of BPA derivati phenyl rings and the bridging alk Bisphenols promoted cell prolifer by proliferative potency, the long maximal cell yield; the most acti hydroxyl groups in the para posii acceptor site of the oestrogen re In vitro cell models were used to activity. BPA, Bisphenol AF (BPA (BPS), bisphenol E (BPE), 4,4-bi (TCBPA), and benzylparaben (P exception of BPS, TCBPA, and F found to be ER antagonists. Bisp	es in activity. Several derivatives of BP, 3, which releases growth hormone in a 1 not show such activity. Results sugge ves are required for these hormonal ac yl moiety markedly influence the activit ration and increased the synthesis and er the alkyl substituent at the bridging we compound contained two propyl cha tion and an angular configuration are s ceptor. evaluate the ability of 22 bisphenol C (BI isphenol F (4,4-BPF), bisphenol C (BI isphenol F (4,4-BPF), bisphenol AP (B HBB) induced estrogen receptor (ER)a PHBB, these same BPs were also and nhenol P (BPP) selectively inhibited ER nylphenol (BPS-MPE) and 2,4-bisphen	secretion of cell type-specific proteins. When ranked carbon, the lower the concentration needed for ins at the bridging carbon. Bisphenols with two uitable for appropriate hydrogen bonding to the BPs) to induce or inhibit estrogenic and androgenic PC), tetramethyl bisphenol A (TMBPA), bisphenol S PAP), bisphenol B (BPB), tetrachlorobisphenol A Ilpha and/or ERbeta-mediated activity. With the rogen receptor (AR) antagonists. Only 3 BPs were
DIURETHANE DI	METHACRYLATE	Combined repeated dose toxicity	v study with the reproduction/developm	ental toxicity screening test, oral (OECD 422), rat:
DIURETHANE DIMETHACRYLATE &		The following information refers Contact allergies quickly manifes pathogenesis of contact eczema allergic skin reactions, e.g. conta allergen is not simply determined contact with it are equally import allergen than one with stronger s	to contact allergens as a group and ma st themselves as contact eczema, more involves a cell-mediated (T lymphocyt act urticaria, involve antibody-mediated d by its sensitisation potential: the distri ant. A weakly sensitising substance where sensitising potential with which few indi	
DIURETHANE DIMETHACRYLATE & TRIETHYLENE GLYCOL DIMETHACRYLATE & 2,2-BIS[4- (2-METHACRYLOXY)ETHOXY)PHENYL]PROPANE		non-allergic condition known as levels of highly irritating compour non-atopic individual, with sudde exposure to the irritant. Other cri moderate to severe bronchial hy inflammation, without eosinophili related to the concentration of ar a disorder that occurs as a result	reactive airways dysfunction syndrome nd. Main criteria for diagnosing RADS en onset of persistent asthma-like symp teria for diagnosis of RADS include a r perreactivity on methacholine challeng ia. RADS (or asthma) following an irrita an duration of exposure to the irritating t of exposure due to high concentration	posure to the material ends. This may be due to a (RADS) which can occur after exposure to high include the absence of previous airways disease in a otoms within minutes to hours of a documented eversible airflow pattern on lung function tests, e testing, and the lack of minimal lymphocytic ating inhalation is an infrequent disorder with rates substance. On the other hand, industrial bronchitis is ns of irritating substance (often particles) and is zed by difficulty breathing, cough and mucus
DIURETHANE DIMETHACRYLATE & 2,2-BIS[4- (2-METHACRYLOXY)ETHOXY)PHENYL]PROPANE		UV/EB acrylates are divided into The first group consists of well-d molecular weight species with a The eurymeric acrylates cannot I suppliers; they are of relatively h Stenomeric acrylates are usually which allows comparison and ex The stenomerics cannot be class Based on the available oncogeni Environmental Review Division ( chemicals that contain the acryla a carcinogenic hazard unless sh This position has now been revis Where no "official" classification classifications in the absence of Monalkyl or monoarylesters of ad	very narrow weight distribution profile. be described by an idealised structure igh molecular weigh and possess a wir v more hazardous than the eurymeric s change of toxicity data - this allows mo sified as a group; they exhibit substanti icity data and without a better understa HERD), Office of Toxic Substances (O tate or methacrylate moiety (CH2=CHC own otherwise by adequate testing, sed and acrylates and methacrylates exists,	and may differ fundamentally between various de weight distribution. ubstances. Stenomeric acrylates are also well defined ore accurate classification. ial variation. unding of the carcinogenic mechanism the Health and TS), of the US EPA previously concluded that all DO or CH2=C(CH3)COO) should be considered to be re no longer <i>de facto</i> carcinogens. there has been cautious attempts to create 5/37/38 and R51/53
A	~		<b>A</b>	
Acute Toxicity	× ~		Carcinogenicity	×
Skin Irritation/Corrosion	* *			~
Serious Eye Damage/Irritation	•		STOT - Single Exposure	

 STOT - Repeated Exposure
 X

 Aspiration Hazard
 X

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

 V - Data available to make classification

# **SECTION 12 Ecological information**

Respiratory or Skin

sensitisation

Mutagenicity

~

×

Glacier, Wave, Wave MV, Wave HV, ROK,	Endpoint	Test Duration (hr)	Species	Value	Source
ICE, Luna, Aura, Aura Bulk Fill, Aura eASY, Aura Easyflow, LC Opaquer, Luna Flow, Luna Flow LV, Luna 2	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	>0.68mg/l	2
diurethane dimethacrylate	EC50	48h	Crustacea	>1.2mg/l	2

		LC50	96h	Fish	10.1mg/l	Not Available
		NOEC(ECx)	72h	Algae or other aquatic plants	0.21mg/l	2
		Endpoint	Test Duration (hr)	Species	Value	Source
triethylene glycol dimethacrylate		EC50	72h	Algae or other aquatic plants	72.8mg/l	2
	rylate	LC50	96h	Fish	16.4mg/l	2
		NOEC(ECx)	72h	Algae or other aquatic plants	18.6mg/l	2
		Endpoint	Test Duration (hr)	Species	Value	Source
2,2-bis[4- (2-methacryloxy)ethoxy)phenyl]propane		Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EP Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (J - Bioconcentration Data 8. Vendor Data					

#### DO NOT discharge into sewer or waterways.

#### Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
triethylene glycol dimethacrylate	LOW	LOW
Bioaccumulative potential		
Ingredient	Bioaccumulation	
triethylene glycol dimethacrylate	LOW (LogKOW = 1.88)	

#### Mobility in soil

wobility in soli	
Ingredient	Mobility
triethylene glycol dimethacrylate	LOW (KOC = 10)

#### **SECTION 13 Disposal considerations**

Waste treatment methods		
Product / Packaging disposal	Consult State Land Waste Management Authority for disposal. Bury residue in an authorised landfill.	

# **SECTION 14 Transport information**

Labels Required	
Marine Pollutant	NO

#### Land transport (TDG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

#### Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

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

Product name	Group
diurethane dimethacrylate	Not Available
triethylene glycol dimethacrylate	Not Available
2,2-bis[4- (2-methacryloxy)ethoxy)phenyl]propane	Not Available

#### 14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
diurethane dimethacrylate	Not Available
triethylene glycol dimethacrylate	Not Available
2,2-bis[4- (2-methacryloxy)ethoxy)phenyl]propane	Not Available

## **SECTION 15 Regulatory information**

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

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

#### diurethane dimethacrylate is found on the following regulatory lists

Canada Non-Domestic Substances List (NDSL)

#### triethylene glycol dimethacrylate is found on the following regulatory lists

Canada Categorization decisions for all DSL substances Canada Domestic Substances List (DSL)

#### 2,2-bis[4-(2-methacryloxy)ethoxy)phenyl]propane is found on the following regulatory lists

Canada Categorization decisions for all DSL substances Canada Domestic Substances List (DSL)

#### Additional Regulatory Information

Not Applicable

#### **National Inventory Status**

National Inventory	Status	
Australia - AIIC / Australia Non-Industrial Use	Yes	
Canada - DSL	No (diurethane dimethacrylate)	
Canada - NDSL	No (triethylene glycol dimethacrylate; 2,2-bis[4-(2-methacryloxy)ethoxy)phenyl]propane)	
China - IECSC	Yes	
Europe - EINEC / ELINCS / NLP	Yes	
Japan - ENCS	No (diurethane dimethacrylate)	
Korea - KECI	Yes	
New Zealand - NZIoC	Yes	
Philippines - PICCS	Yes	
USA - TSCA	Yes	
Taiwan - TCSI	Yes	
Mexico - INSQ	No (diurethane dimethacrylate)	
Vietnam - NCI	Yes	
Russia - FBEPH	No (diurethane dimethacrylate; 2,2-bis[4-(2-methacryloxy)ethoxy)phenyl]propane)	
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	10/03/2023
Initial Date	02/11/2015

#### SDS Version Summary

Version	Date of Update	Sections Updated
10.1	10/12/2021	Classification change due to full database hazard calculation/update.
11.1	10/03/2023	Classification change due to full database hazard calculation/update.

#### Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by SDI Limited 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
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration

- ▶ 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 ٠
- ۲ NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances TSCA: Toxic Substances Control Act ٠
- 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

The information contained in the Safety Data Sheet is based on data considered to be accurate, however, no warranty is expressed or implied regarding the accuracy of the data or the results to be obtained from the use thereof.

#### Other information:

Prepared by: SDI Limited 3-15 Brunsdon Street, Bayswater Victoria, 3153, Australia Phone Number: +61 3 8727 7111 Department issuing SDS: Research and Development Contact: Technical Director