# SAFETY DATA SHEETS

## This SDS packet was issued with item:

076207054

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

076207005 076207013 076207021 076207039 076207047 076207062 076209902 076209910 076209928 076209936 076209944 076209951 076209969

## 1. Substance / Preparation and Company Name

Product Name: seT Capsules and seT PP Syringes

Recommended use: Cementing of composite, ceramic and metallic indirect restorations.

**Manufacturer / Supplier**

SDI Limited
3-13 Brunsdon Street, Bayswater
Victoria, 3153, Australia

**Telephone:**

+61 3 8727 7111 (Business hours)

SDI Inc.
729 N.Route 83, Suite 315
Bensenville 60106 IL, USA

**Telephone:**

630 238 8300 (Business hours)

Southern Dental Industries Ltd
Block 8, St Johns Court
Swords Road
Santry, Dublin 9, Ireland

**Telephone:**

+353 1 886 9577 (Business Hours)

SDI Brasil Indústria e Comércio Ltda
Rua Dr. Virgílio de Carvalho Pinto, 612
Pinheiros, São Paulo, 05415-020
Brasil

**Telephone:**

+55 11 3092 7100 (Business Hours)

**Emergency contact number:** +61 3 8727 7111

## 2. Composition / Information on Ingredients

| Composition: | CAS No. | Wt. % |
|---|---|---|
| Fluoroaluminosilicate Glass | --- | 60-70 |
| Urethane Dimethacrylate | 72869-86-4 | <20 |
| Camphorquinone | 10373-78-1 | <1 |
| Acidic Monomer | --- | <20 |

## 3. Hazard Identification

Product is an irritant. Avoid contact with skin and eyes.

| | | |
|---|---|---|
| Risk Phrases: | **36** | Irritating to eyes. |
| | **38** | Irritating to skin. |
| Safety Phrases: | **25** | Avoid contact with eyes. |
| | **26** | In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. |
| | **28** | After contact with skin, wash immediately with water and soap. |

## 4. First Aid Measures

Eye (contact): Flush opened eye with running water for 15 minutes. Seek medical attention.

Skin (contact): Remove contaminated clothing. Wash skin with plenty of water. If irritation occurs seek medical attention.

Ingestion: Drink plenty of water. Seek medical attention if discomfort continues.

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## 5. Fire Fighting Measures

| | |
|---|---|
| Suitable Extinguishing Media: | None required. |
| Unusual Fire and Explosion Hazards: | None. |
| Special Protective Equipment: | No special protective equipment required. |

## 6. Accidental Release Measures

| | |
|---|---|
| Personal Precautions: | Do not get into eyes, on skin or clothing. |
| Environmental Precautions: | Prevent product from entering drains, surface water or ground water. |
| Method for Cleaning Spills: | Contain with absorbent material (e.g. sand, diatomaceous earth) and dispose of in accordance with regulations. |

## 7. Handling and storage - seT

Handling
Store sealed containers away from heat and light.

Storage
Storage by the end user (Dental Clinic) is recommended to be at temperatures between 2° - 8°C (35° - 45°F) and should be kept away from direct sunlight.

Distribution
During distribution, to our customers, this product can be transported in non-refrigerated conditions between 15° to 25° C. This product can also withstand temperatures up to 40°C for short periods (2 to 3 days) and intermittent peaks up to 50°C.

**Handling and storage – seT PP**

Handling
Store sealed containers away from heat and light.

Storage
Storage by the end user (Dental Clinic) is recommended to be at temperatures between 2° - 25° C (35° - 77° F) and should be kept away from direct sunlight.

Distribution
During distribution, to our customers, this product can be transported in non-refrigerated conditions between 15° to 25° C. This product can also withstand temperatures up to 40°C for short periods (2 to 3 days) and intermittent peaks up to 50°C.

## 8. Exposure Controls / Personal Protection

| | |
|---|---|
| Respiratory Protection: | None required under normal conditions of use. |
| Hand Protection: | Latex or rubber gloves. |
| Eye Protection: | Safety glasses or goggles |
| General Safety and Hygiene Measures: | None |

## 9. Physical and Chemical Properties

| | |
|---|---|
| Appearance: | Slightly yellow liquid |
| Odour: | Slightly characteristic odour |
| Boiling Point: | Not available |
| Melting Point: | Not available |
| Specific Gravity: | 2.0 g / $cm^3$ |
| Flash Point: | Not applicable |
| Flammable: | Not flammable |
| Autoflammability: | Not applicable |
| Explosive Properties: | Does not present an explosion hazard |
| Oxidising Properties: | Not applicable |
| Vapour Pressure (@ 20°C): | Not applicable |
| Vapour Density: | <1.0 |
| Solubility: | Not miscible |

## 10. Stability and Reactivity

| | |
|---|---|
| Stability: | Stable under normal conditions. |
| Conditions to Avoid: | Avoid excessive heat |
| Materials to Avoid: | None |
| Hazardous Decomposition Products: | None when used as directed |
| Hazardous Reactivity (Polymerization): | No hazardous reactions known |

## 11. Toxicological Information

| | |
|---|---|
| Acute Toxicity: | Contact with skin and eyes may cause irritation. |
| Eye (contact): | Irritating to eyes. |
| Skin (contact): | Possible skin irritant. |
| Inhalation (powder) | May be irritating. |
| Ingestion: | Irritation not likely in small amounts. |

## 12. Ecological Information

| | |
|---|---|
| Self-Assessment: | Not readily biodegradable. Avoid large quantities entering drains, surface water or ground water. |

## 13. Disposal Considerations

Dispose in accordance with local official regulations.

## 14. Transport Information

This product is not considered to be a dangerous good within the meaning of transportation regulations.

## 15. Regulatory Information

This product is regulated by:

TGA
Medical Devices Directive 93/42/EEC
FDA
National regulations

## 16. Other Information

**Preparation of MSDS:**

**Prepared by:** SDI Limited
3-13 Brunsdon Street, Bayswater
Victoria, 3153, Australia

**Phone Number:**
+61 3 8727 7111

**Version:** 1

The information contained in the Material 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.

**Department issuing MSDS:** Research and Development
**Contact:** Technical Manager - Polymers

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# seT Capsules and seT PP Syringes

**SDI Limited**

Version No: **5.1.1.1**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **18/03/2016**
Print Date: **31/03/2016**
Initial Date: **Not Available**
L.GHS.USA.EN

## SECTION 1 IDENTIFICATION

### Product Identifier

| | |
|---|---|
| **Product name** | seT Capsules and seT PP Syringes |
| **Synonyms** | Not Available |
| **Other means of identification** | Not Available |

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

| | |
|---|---|
| **Relevant identified uses** | Professional dental use: Cementing of composite, ceramic and metallic indirect restorations. |

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

| **Registered company name** | **SDI Limited** | **SDI Brazil Industria E Comercio Ltda** | **SDI Germany GmbH** |
|---|---|---|---|
| **Address** | 3-15 Brunsdon Street VIC Bayswater 3153 Australia | Rua Dr. Virgilio de Carvalho Pinto, 612 São Paulo CEP 05415-020 Brazil | Hansestrasse 85 Cologne D-51149 Germany |
| **Telephone** | +61 3 8727 7111 (Business Hours) | +55 11 3092 7100 | +49 0 2203 9255 0 |
| **Fax** | +61 3 8727 7222 | +55 11 3092 7101 | +49 0 2203 9255 200 |
| **Website** | www.sdi.com.au | www.sdi.com.au | www.sdi.com.au |
| **Email** | info@sdi.com.au | brasil@sdi.com.au | germany@sdi.com.au |

| | |
|---|---|
| **Registered company name** | SDI (North America) Inc. |
| **Address** | 1279 Hamilton Parkway IL Itasca 60143 United States |
| **Telephone** | +1 630 361 9200 (Business hours) |
| **Fax** | Not Available |
| **Website** | Not Available |
| **Email** | USA.Canada@sdi.com.au |

### Emergency phone number

| **Association / Organisation** | **SDI Limited** | **Not Available** | **Not Available** |
|---|---|---|---|
| **Emergency telephone numbers** | +61 3 8727 7111 | Not Available | Not Available |
| **Other emergency telephone numbers** | ray.cahill@sdi.com.au | Not Available | Not Available |

| | |
|---|---|
| **Association / Organisation** | Not Available |
| **Emergency telephone numbers** | +61 3 8727 7111 |
| **Other emergency telephone numbers** | Not Available |

## 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, Serious Eye Damage Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation) |

### Label elements

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| | |
|---|---|
| **GHS label elements** | |
| SIGNAL WORD | DANGER |

### Hazard statement(s)

| | |
|---|---|
| **H315** | Causes skin irritation. |
| **H318** | Causes serious eye damage. |
| **H335** | May cause respiratory irritation. |

### Hazard(s) not otherwise specified

Not Applicable

### Precautionary statement(s) Prevention

| | |
|---|---|
| **P271** | Use only outdoors or in a well-ventilated area. |
| **P280** | Wear protective gloves/protective clothing/eye protection/face protection. |
| **P261** | Avoid breathing dust/fume/gas/mist/vapours/spray. |

### Precautionary statement(s) Response

| | |
|---|---|
| **P305+P351+P338** | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| **P310** | Immediately call a POISON CENTER or doctor/physician. |
| **P362** | Take off contaminated clothing and wash before reuse. |
| **P302+P352** | IF ON SKIN: Wash with plenty of soap and water. |
| **P304+P340** | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| **P332+P313** | If skin irritation occurs: Get medical advice/attention. |

### 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 in accordance with local regulations. |

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

### Substances

See section below for composition of Mixtures

### Mixtures

| CAS No | %[weight] | Name |
|---|---|---|
| Not Available | 60-70 | fluoroaluminosilicate glass |
| 72869-86-4 | <20 | diurethane dimethacrylate |
| Not Available | <20 | acidic monomer |
| 10373-78-1 | <1 | camphorquinone |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

## SECTION 4 FIRST-AID MEASURES

### Description of first aid measures

| | |
|---|---|
| **Eye Contact** | If this product comes in contact with the eyes:<br>▸ Immediately hold eyelids apart and flush the eye continuously with running water.<br>▸ 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.<br>▸ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.<br>▸ Transport to hospital or doctor without delay.<br>▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel. |
| **Skin Contact** | If skin contact occurs:<br>▸ Immediately remove all contaminated clothing, including footwear.<br>▸ Flush skin and hair with running water (and soap if available).<br>▸ Seek medical attention in event of irritation. |
| **Inhalation** | ▸ If fumes or combustion products are inhaled remove from contaminated area.<br>▸ Seek medical attention. |

| | |
|---|---|
| **Ingestion** | ▸ If swallowed do **NOT** induce vomiting.<br>▸ If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.<br>▸ Observe the patient carefully.<br>▸ Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.<br>▸ Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.<br>▸ Seek medical advice. |

### Most important symptoms and effects, both acute and delayed

See Section 11

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

Treat symptomatically.

## SECTION 5 FIRE-FIGHTING MEASURES

### Extinguishing media

Foam is generally ineffective.

### 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 |

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

| | |
|---|---|
| **Fire Fighting** | ▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ May be violently or explosively reactive.<br>▸ Wear full body protective clothing with breathing apparatus.<br>▸ Prevent, by any means available, spillage from entering drains or water course.<br>▸ Fight fire from a safe distance, with adequate cover.<br>▸ If safe, switch off electrical equipment until vapour fire hazard removed.<br>▸ Use water delivered as a fine spray to control the fire and cool adjacent area.<br>▸ Avoid spraying water onto liquid pools.<br>▸ **Do not** approach containers suspected to be hot.<br>▸ Cool fire exposed containers with water spray from a protected location.<br>▸ If safe to do so, remove containers from path of fire. |
| **Fire/Explosion Hazard** | ▸ Combustible.<br>▸ Slight fire hazard when exposed to heat or flame.<br>▸ Heating may cause expansion or decomposition leading to violent rupture of containers.<br>▸ On combustion, may emit toxic fumes of carbon monoxide (CO).<br>▸ May emit acrid smoke.<br>▸ Mists containing combustible materials may be explosive.<br>Combustion products include; carbon dioxide (CO2) other pyrolysis products typical of burning organic materialMay emit poisonous fumes.May emit corrosive fumes. |

## SECTION 6 ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

| | |
|---|---|
| **Minor Spills** | ▸ Remove all ignition sources.<br>▸ Clean up all spills immediately.<br>▸ Avoid breathing vapours and contact with skin and eyes.<br>▸ Control personal contact with the substance, by using protective equipment.<br>▸ Contain and absorb spill with sand, earth, inert material or vermiculite.<br>▸ Wipe up.<br>▸ Place in a suitable, labelled container for waste disposal. |
| **Major Spills** | Moderate hazard.<br>▸ Clear area of personnel and move upwind.<br>▸ Alert Fire Brigade and tell them location and nature of hazard.<br>▸ Wear breathing apparatus plus protective gloves.<br>▸ Prevent, by any means available, spillage from entering drains or water course.<br>▸ No smoking, naked lights or ignition sources.<br>▸ Increase ventilation.<br>▸ Stop leak if safe to do so.<br>▸ Contain spill with sand, earth or vermiculite.<br>▸ Collect recoverable product into labelled containers for recycling.<br>▸ Absorb remaining product with sand, earth or vermiculite.<br>▸ Collect solid residues and seal in labelled drums for disposal.<br>▸ Wash area and prevent runoff into drains.<br>▸ If contamination of drains or waterways occurs, advise emergency services. |

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

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

| | |
|---|---|
| **Safe handling** | ▸ Avoid all personal contact, including inhalation.<br>▸ Wear protective clothing when risk of exposure occurs.<br>▸ Use in a well-ventilated area.<br>▸ Prevent concentration in hollows and sumps.<br>▸ **DO NOT** enter confined spaces until atmosphere has been checked.<br>▸ Avoid smoking, naked lights or ignition sources. |

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| | |
|---|---|
| | ▸ Avoid contact with incompatible materials.<br>▸ When handling, **DO NOT** eat, drink or smoke.<br>▸ Keep containers securely sealed when not in use.<br>▸ Avoid physical damage to containers.<br>▸ Always wash hands with soap and water after handling.<br>▸ Work clothes should be laundered separately.<br>▸ Use good occupational work practice.<br>▸ Observe manufacturer's storage and handling recommendations contained within this SDS.<br>▸ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions. |
| **Other information** | Store in a dry and well ventilated-area, away from heat and sunlight.<br>**Do not** store in direct sunlight.<br>Store between 5 and 25 deg. C.<br>Store between 2 and 8 deg C. |

### Conditions for safe storage, including any incompatibilities

| | |
|---|---|
| **Suitable container** | ▸ **DO NOT** repack. Use containers supplied by manufacturer only. |
| **Storage incompatibility** | ▸ Avoid storage with reducing agents.<br>▸ Avoid reaction with oxidising agents |

## 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 |
|---|---|---|---|---|
| diurethane dimethacrylate | Diurethane dimethacrylate | 60 mg/m3 | 660 mg/m3 | 4000 mg/m3 |

| Ingredient | Original IDLH | Revised IDLH |
|---|---|---|
| fluoroaluminosilicate glass | Not Available | Not Available |
| diurethane dimethacrylate | Not Available | Not Available |
| acidic monomer | Not Available | Not Available |
| camphorquinone | Not Available | Not Available |

**MATERIAL DATA**

### 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. 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 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 of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.



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| | |
|---|---|
| **Personal protection** | |
| **Eye and face protection** | ▸ Safety glasses with side shields.<br>▸ Chemical goggles.<br>▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent] |
| **Skin protection** | See Hand protection below |
| **Hands/feet protection** | ▸ Wear chemical protective gloves, e.g. PVC.<br>▸ Wear safety footwear or safety gumboots, e.g. Rubber<br>▸ Rubber Gloves |
| **Body protection** | See Other protection below |
| **Other protection** | ▸ Overalls.<br>▸ P.V.C. apron.<br>▸ Barrier cream.<br>▸ Skin cleansing cream.<br>▸ Eye wash unit. |
| **Thermal hazards** | Not Available |

### Respiratory protection

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

^ - 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** | Slightly yellow liquid with slight characteristic odour, does not mix with water. |

| | | | |
|---|---|---|---|
| **Physical state** | Liquid | **Relative density (Water = 1)** | 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** | 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 Available |
| **Lower Explosive Limit (%)** | Not Available | **Volatile Component (%vol)** | Not Available |
| **Vapour pressure (kPa)** | Not Available | **Gas group** | Not Available |
| **Solubility in water (g/L)** | 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** | ▸ Unstable in the presence of incompatible materials.<br>▸ Product is considered stable.<br>▸ Hazardous polymerisation will not occur. |



Continued...

| | |
|---|---|
| **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** | Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system, in a substantial 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 **NOT** 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** | 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.<br>The material may accentuate any pre-existing dermatitis condition<br>Open cuts, abraded or irritated skin should not be exposed to this material<br>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected. |
| **Eye** | When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation. |
| **Chronic** | Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems.<br>Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. |

| | | |
|---|---|---|
| **seT Capsules and seT PP Syringes** | TOXICITY | IRRITATION |
| | Not Available | Not Available |
| **diurethane dimethacrylate** | TOXICITY | IRRITATION |
| | Oral (rat) LD50: >5000 mg/kg[1] | Not Available |
| **camphorquinone** | TOXICITY | IRRITATION |
| | Not Available | Not Available |

| | |
|---|---|
| ***Legend:*** | *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances* |

| | |
|---|---|
| **DIURETHANE DIMETHACRYLATE** | The following information refers to contact allergens as a group and may not be specific to this product.<br>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.<br><br>Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.<br>UV (ultraviolet)/ EB (electron beam) acrylates are generally of low toxicity<br>UV/EB acrylates are divided into two groups; "stenomeric" and "eurymeric" acrylates.<br>The first group consists of well-defined acrylates which can be described by a simple idealised chemical;they are low molecular weight species with a very narrow weight distribution profile.<br>The eurymeric acrylates cannot be described by an idealised structure and may differ fundamentally between various suppliers; they are of relatively high molecular weigh and possess a wide weight distribution.<br>Stenomeric acrylates are usually more hazardous than the eurymeric substances. Stenomeric acrylates are also well defined which allows comparison and exchange of toxicity data - this allows more accurate classification.<br>The stenomerics cannot be classified as a group; they exhibit substantial variation.<br>Where no "official" classification for acrylates and methacrylates exists, there has been cautious attempts to create classifications in the absence of contrary evidence. For example<br>Monalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53<br>Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38<br>* Possible carcinogen; possible sensitizer; possible irreversible effects * Polysciences MSDS |



Continued...

| | |
|---|---|
| **CAMPHORQUINONE** | The following information refers to contact allergens as a group and may not be specific to this product.<br>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.<br>No significant acute toxicological data identified in literature search. |

| | | | |
|---|---|---|---|
| **Acute Toxicity** | ⊘ | **Carcinogenicity** | ⊘ |
| **Skin Irritation/Corrosion** | ✔ | **Reproductivity** | ⊘ |
| **Serious Eye Damage/Irritation** | ✔ | **STOT - Single Exposure** | ⊘ |
| **Respiratory or Skin sensitisation** | ⊘ | **STOT - Repeated Exposure** | ⊘ |
| **Mutagenicity** | ⊘ | **Aspiration Hazard** | ⊘ |

***Legend:*** ✘ *– Data available but does not fill the criteria for classification*
✔ *– Data required to make classification available*
⊘ *– Data Not Available to make classification*

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

| Ingredient | Endpoint | Test Duration (hr) | Species | Value | Source |
|---|---|---|---|---|---|
| **diurethane dimethacrylate** | EC50 | 48 | Crustacea | >1.2mg/L | 2 |
| **diurethane dimethacrylate** | EC50 | 72 | Algae or other aquatic plants | >0.68mg/L | 2 |
| **diurethane dimethacrylate** | NOEC | 72 | Algae or other aquatic plants | >0.21mg/L | 2 |
| **camphorquinone** | EC50 | 384 | Crustacea | 53.788mg/L | 3 |
| **camphorquinone** | EC50 | 96 | Algae or other aquatic plants | 1054.236mg/L | 3 |
| **camphorquinone** | LC50 | 96 | Fish | 230.775mg/L | 3 |
| ***Legend:*** | *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - 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* | | | | |

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

### Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|---|---|---|
| camphorquinone | HIGH | HIGH |

### Bioaccumulative potential

| Ingredient | Bioaccumulation |
|---|---|
| camphorquinone | LOW (LogKOW = 1.52) |

### Mobility in soil

| Ingredient | Mobility |
|---|---|
| camphorquinone | LOW (KOC = 12.6) |

## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste treatment methods

| | |
|---|---|
| **Product / Packaging disposal** | ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains.<br>▸ It may be necessary to collect all wash water for treatment before disposal.<br>▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.<br>▸ Where in doubt contact the responsible authority.<br>Consult State Land Waste Management Authority for disposal.<br>Bury residue in an authorised landfill. |

## SECTION 14 TRANSPORT INFORMATION

### Labels Required

| | |
|---|---|
| **Marine Pollutant** | NO |

**Land transport (DOT): 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**

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

Not Applicable

## SECTION 15 REGULATORY INFORMATION

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

**DIURETHANE DIMETHACRYLATE(72869-86-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

**CAMPHORQUINONE(10373-78-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

### Federal Regulations

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**SECTION 311/312 HAZARD CATEGORIES**

| | |
|---|---|
| Immediate (acute) health hazard | YES |
| Delayed (chronic) health hazard | NO |
| Fire hazard | NO |
| Pressure hazard | NO |
| Reactivity hazard | NO |

**US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)**

None Reported

### State Regulations

**US. CALIFORNIA PROPOSITION 65**

None Reported

| National Inventory | Status |
|---|---|
| Australia - AICS | Y |
| Canada - DSL | N (diurethane dimethacrylate) |
| Canada - NDSL | Y |
| China - IECSC | Y |
| Europe - EINEC / ELINCS / NLP | Y |
| Japan - ENCS | N (diurethane dimethacrylate; camphorquinone) |
| Korea - KECI | N (camphorquinone) |
| New Zealand - NZIoC | Y |
| Philippines - PICCS | Y |
| USA - TSCA | Y |
| ***Legend:*** | *Y = All ingredients are on the inventory*<br>*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

### Other information

### Ingredients with multiple cas numbers

| Name | CAS No |
|---|---|
| diurethane dimethacrylate | 41137-60-4, 72869-86-4 |
| camphorquinone | 10334-26-6, 10373-78-1, 2767-84-2, 465-29-2 |

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
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level



Continued...

TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

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
Date of preparation/revision: 23rd September 2015
Department issuing SDS: Research and Development
Contact: Technical Director

Obtained by Global Safety Management, www.globalsafetynet.com, (877) 683-7460