1. Identification of the substance/mixture and of the Company/undertaking:

1.1 Product identifier:

Product Name: Stae

1.2 Relevant identified use:

Relevant use:

Dental Use: For bonding of composite to tooth surfaces by dental professionals.

1.3 Details of the supplier of the Safety Data Sheet:

Manufacturer / Supplier

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

Telephone:

+61 3 8727 7111 (Business hours)

SDI (North America) Inc.
1279 Hamilton Parkway
Itasca, IL 60143, USA

Telephone:

+1 630 361 9200 (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

Email: ray.cahill@sdi.com.au (Technical Director, SDI Limited)

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2. Hazard Identification

2.1 Classification of the substance/mixture:

GHS Classification:
Flammable liquids (Category 2)
Eye irritation (Category 2)
Specific target organ toxicity - single exposure (Category 3)
Skin Irritant (Category 2)
Skin sensitisation (Category 1)

Signal word: DANGER:

2. Hazard Identification…continued

Hazard statements:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H225	Highly flammable liquid and vapour.
H336	May cause drowsiness or dizziness.

Prevention:

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ eye protection/ face protection.
P102	Keep out of reach of children.
P103	Read instructions for use before use.

Response:

P303 + P361 + P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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 or doctor/ physician if you feel unwell.
P337 + P313	If eye irritation persists: Get medical advice/ attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P321	Specific treatment, refer to package insert.
P363	Wash contaminated clothing before reuse.
P333 + P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before re-use.

Storage:

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P235	Store in a well-ventilated place. Keep cool.

Disposal:

P501	Dispose of contents/ container to an approved waste disposal plant

Stae may be irritating to skin, eyes and mucous membranes and may cause skin allergies.
Stae contains acetone and therefore must be not be stored anywhere near naked flames.

3. Composition / Information on ingredients

Composition:	CAS No.	Wt. %
Acetone	67-64-1	50.0 – 55.0
Acrylic monomers	-	20.0 – 40.0

4. First Aid Measures

Eye (contact): Flush opened eye with running water for at least 5 minutes. Seek medical attention. Call a POISON CENTRE or doctor/physician if you feel unwell.

Skin (contact): Remove contaminated clothing. Wash skin with soap and water. In case of allergic reaction, seek medical attention.

Ingestion: Seek immediate medical attention.

Inhalation: Remove victim from exposure to fresh air and keep at rest in a comfortable position. Provide respiratory support if required and safe to do. If rapid recovery does not occur or if feeling unwell, seek medical attention.

Most important effects, acute and delayed:
The most important known symptoms and effects are described in section 2 and/or in section 11.

Indication of any immediate medical attention and special treatment needed: No data available.

5. Fire Fighting Measures

Suitable extinguishing media: Sand, dry chemical foam, carbon dioxide, dry chemicals, alcohol-resistant foam.

Unusual Fire & Explosion Hazards: Heat can cause polymerization with rapid release of energy which may melt the container. Highly flammable in presence of open flames and sparks, of heat. Hazardous/possible explosive with mixtures with hydrogen peroxide, oxidising materials, and acids due to acetone content. Will release Carbon oxides (CO, CO2).

Unsuitable extinguishing media: No data available.

Special protective equipment: Use water spray to cool container. No special measures required for small quantity, however good handling practices and wear gloves, glasses.
Wear approved respirator (eg. Half-Face Filter Respirator Class A1P2 (complying with AS/NZS 1715) for spills in excess of 2 litres) and protective gear.

Advice for firefighters: Wear self-contained breathing apparatus for fire fighting eg. approved respirator (eg. Half-Face Filter Respirator Class A1P2 (complying with AS/NZS 1715). Use explosion-proof electrical/ventilating equipment. Ground/bond container and receiving equipment. Use water spray to cool container. Remove all sources of ignition; product is highly flammable containing acetone.

6. Accidental Release Measures

Personal precautions: Use personal protective equipment.
Avoid breathing vapours. mist or gas.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
For personal protection, see section 8

Environmental precautions: Prevent any spillage from entering waterways, drains or sewage system.

Methods for cleaning up and containment: Dyke and absorb with inert material (saw dust, sand, diatomaceous earth) and transfer to containers for disposal as hazardous waste in accordance with local regulations.

Removal of ignition sources, provision of sufficient ventilation, control of dust:

- Remove all sources of ignition, product is highly flammable containing acetone.
- Wear self-contained breathing apparatus.

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7. Handling and storage

Precautions for safe handling: Store sealed containers away from heat and light. Keep in a cool place.

Conditions for safe storage, including any biocompatibilities:

Storage by the end user (Dental Clinic) is recommended to be at temperatures between 10^{o} - 25^{o} C (50^{o} - 77^{o}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^{o} to 25^{o} C. This product can also withstand temperatures up to 40^{o} C for short periods (2 to 3 days) and intermittent peaks up to 50^{o} C.

Specific end use: Apart from the use mentioned in section 1.2, there are no other uses for the product.

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8. Exposure controls and personal protection

Control parameters:
Occupational exposure limits: Not aware of any national exposure limit.

For acetone:

OHSA:

Chemical name	Cas No	PEL (ppm)	PEL (mg/m^3)	PEL (ceiling)	STEL (ppm)	STEL (mg/m^3)
Acetone	67-64-1	500	1200	3000ppm	750	1780

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8. Exposure controls and personal protection

NOHSC:

Chemical name	Cas No	TWA (ppm)	TWA (mg/m^3)	STEL (ppm)	STEL (mg/m^3)	Carcinogen Category
Acetone	67-64-1	500	1,185	1000	2375	-

NOHSC – National Occupation Health and Safety Commission
NIOSH – National Institute for Occupation Safety and Health
OHSA – Occupational Health and Safety Authority
PEL – Permissible exposure limit
STEL – Short term exposure limit
TWA – Time weighted average

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at end of workday.

Personal protective equipment:
Respiratory Protection: None required under normal conditions of use. Avoid inhalation of vapours and use in a well-ventilated area. Wear respirator for larger exposure.

Hand Protection: Rubber, latex or PVC gloves.

Eye Protection: Safety glasses or goggles

General Safety and Hygiene Measures: Follow good housekeeping practices and good industrial hygiene in handling this material. Remove any naked lights or strong heat sources.

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9. Physical and chemical properties

Appearance: Clear, pale yellow low/ slightly viscous liquid.

Odour: Ester like.

Boiling point: Gels before boiling.

Melting point: Not established.

Specific gravity: 0.8 - 1.15

Flash point: Not established (- 20^{o}C (for pure acetone)

Flammable: Approximately 3 - 13% in air.

Auto flammability: Does not self-ignite.

Explosive properties: Does not present an explosion hazard.

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9. Physical and chemical properties

Oxidizing properties:	Not established.
Vapour pressure (@ 20°C):	Not established.
Relative density:	Not established.
Solubility:	Miscible in water
Auto-ignition temperature:	Not established.
Decomposition temperature:	Not established.
pH:	Not established.

10. Stability and Reactivity

Reactivity:	No data available.
Chemical Stability:	Stable under normal conditions.
Conditions to avoid:	Avoid heat, ignition sources, aging, contamination and intense visible light.
Materials to avoid:	Free radical formers, e.g. peroxides, reducing substances and / or heavy metals ions. Reacts violently with bromoform and chloroform in the presence of alkalis or in contact with alkaline surfaces. Decomposes violently in contact with nitric / sulfuric acid mixtures.
Hazardous decomposition products:	None under normal conditions; oxides of carbon when burned.
Hazardous reactivity (Polymerization):	Heat and intense light can cause polymerization. Spontaneous polymerization may occur in the presence of radical formers. May polymerize under these conditions with heat evolution. May ignite in the presence of sparks or naked flame.

11. Toxicological information

ACETONE Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 3000 mg/kg [Mouse]. Acute toxicity of the vapor (LC50): 44000 mg/m3 4 hours [Mouse].

Acute toxicity:	Irritating to skin, eye and mucous membrane. May cause skin sensitisation.
Skin corrosion/irritation:	Irritating to skin and may cause skin allergies.

11. Toxicological information

Serious eye damage/eye irritation: Irritating to eyes.

Respiratory or skin sensitisation: May cause skin sensitisation.
May cause respiratory irritation and/or dizziness/drowsiness.

Germ cell mutagenicity: No data available

Carcinogenicity: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

(IARC: International Agency for Research on Cancer, by the World Health Organisation (WHO)).

Reproductive toxicity: No data available.

Specific target organ toxicity – single exposure: May cause irritation to eyes, skin &inhalation.

Specific target organ toxicity – repeated exposure: No data available.

Aspiration Hazard: No data available.

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12. Ecological information

Self-assessment: Slightly hazardous for water. Do not allow large quantities to reach sewage system and waterways.

Ecotoxicity: No data available.

Persistence and biodegradeability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Results of PBT and VPvB assessment: PBT/VPvB assessment not available as chemical safety assessment not required/not conducted.

Other adverse effects: No data available.

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13. Disposal considerations

Dispose of as hazardous waste to an approved hazard disposal plant in accordance with local official regulations.

Contaminated packaging: Dispose of contaminated packaging as hazardous waste to an approved hazard disposal plant in accordance with local official regulations.

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14. Transport information

Stae aqueous solution. Proper shipping name: Flammable liquid N.O.S. (Acetone solution) UN1993 Packing Group II Class 3.

If packed as Chemical kit the following classification may be considered if all ICAO/IATA transport requirements are met:

- Chemical Kit UN3316 - Class 9.

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15. Regulatory information

This product is regulated by: TGA
Medical Devices Directive 93/42/EEC
FDA
National regulations for medical devices.

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16. Other information

The information provided herein is given in good faith, but no warranty expressed or implied is made.

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Department issuing MSDS: Research and Development

Contact: R&D Director
