SAFETY DATA SHEETS

This SDS packet was issued with item:

076209811

N/A

1. Substance / Preparation and Company name

Product Name: riva silver capsules

Recommended use: For filling of cavitated teeth by dental professionals.

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. %
Compartment 1:		
Polyacrylic Acid	9003-01-4	30.0
Tartaric acid	87-69-4	10.0
Balance ingredient		60.0
Compartment2:		
Fluoro Aluminosilicate powder -	40 – 70	
Polyacrylic Acid	9003-01-4	<10.0
Silver Metal	7440-22-4	20 – 30
Tin Metal	7440-31-5	10 – 15
Copper Metal	7440-50-8	3 – 6

3. Hazard Identification

Materials in the two compartments are irritants. However, under normal conditions of use, contact with these materials is generally not expected.

Risk Phrases:	**36**	Irritating to eyes.
	37	Irritating to respiratory system.
	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.

Obtained by Global Safety Management, Inc. www.globalsafetynet.com (Tel: 1-813-435-5161)

4. First Aid Measures

Eye (contact): Flush opened eye with running water for at least 5 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.

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: Clear up spillages. Transfer to a container for disposal.

Methods for cleaning up: Wash the spillage area clean with water.

7. Handling and storage

Handling
Store sealed containers away from heat and light.

Storage
Storage by the end user (Dental Clinic) is recommended to be at temperatures between 4° - 20°C (39° - 68°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 and personal protection

Respiratory protection: None required.

Hand protection: Rubber, latex or PVC gloves.

Eye protection: Recommended.

General safety and hygiene measures: None.

Obtained by Global Safety Management, Inc. www.globalsafetynet.com (Tel: 1-813-435-5161)

9. Physical and chemical properties

Appearance:	Smooth, light-grey coloured paste
Odour:	Slightly characteristic odour
Boiling point:	Approx. 100°C (212°F)
Melting point:	Not applicable
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
Oxidizing properties:	Not applicable
Vapour pressure (@ 20°C):	Approx. 23 hPa
Relative density:	<1.0
Solubility:	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:	Not expected
Ingestion:	Irritant not likely in small amounts

12. Ecological information

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

Obtained by Global Safety Management, Inc. www.globalsafetynet.com (Tel: 1-813-435-5161)

13. Disposal considerations

Dispose of 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

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.

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

Phone Number:
+61 3 8727 7111

Department issuing MSDS: Research and Development
Contact: Operations Director

Riva Silver Capsules

SDI Limited

Version No: **4.1.1.1**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

Issue Date: **18/03/2016**
Print Date: **30/03/2016**
Initial Date: **Not Available**
L.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

Product name	Riva Silver Capsules
Synonyms	Not Available
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 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, Eye Irritation Category 2A, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation)

Label elements

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

Continued...

GHS label elements	
SIGNAL WORD	WARNING

Hazard statement(s)

H315	Causes skin irritation.
H319	Causes serious eye irritation.
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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s) Response

P362	Take off contaminated clothing and wash before reuse.
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.
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
		Compartment 1 contains
9003-01-4	30	acrylic acid homopolymer
87-69-4	10	tartaric acid
		Compartment 2 contains
Not Available	40-60	glass powder
9003-01-4	<10	acrylic acid homopolymer
Not Available	30-50	alloy powder

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: ▸ Wash out immediately with fresh running water. ▸ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. ▸ Seek medical attention without delay; if pain persists or recurs seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.

Continued...

Inhalation	▸ If fumes or combustion products are inhaled remove from contaminated area. ▸ Seek medical attention.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor. Seek medical attention.

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	None known.

Special protective equipment and precautions for fire-fighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves. ▸ Prevent, by any means available, spillage from entering drains or water courses. ▸ Use water delivered as a fine spray to control fire and cool adjacent area. ▸ **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. ▸ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. ▸ On combustion, may emit toxic fumes of carbon monoxide (CO). ▸ May emit acrid smoke. ▸ Mists containing combustible materials may be explosive. 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	▸ Clean up all spills immediately. ▸ Avoid contact with skin and eyes. ▸ Wear impervious gloves and safety goggles. ▸ Trowel up/scrape up. ▸ Place spilled material in clean, dry, sealed container. ▸ Flush spill area with water.
Major Spills	▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Stop leak if safe to do so. ▸ Contain spill with sand, earth or vermiculite. ▸ Collect recoverable product into labelled containers for recycling. ▸ Neutralise/decontaminate residue (see Section 13 for specific agent). ▸ Collect solid residues and seal in labelled drums for disposal. ▸ Wash area and prevent runoff into drains. ▸ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using. ▸ 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. ▸ Wear 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.

Continued...

	▸ 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.
Other information	Store between 5 and 25 deg. C. **Do not** store in direct sunlight. Store in a dry and well ventilated-area, away from heat and sunlight.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ **DO NOT** repack. Use containers supplied by manufacturer only. ▸ Check that containers are clearly labelled and free from leaks
Storage incompatibility	None known

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
acrylic acid homopolymer	Acrylic acid polymers; (Acrylic polymer or resin)	7.5 mg/m3	83 mg/m3	500 mg/m3
tartaric acid	Tartaric acid	1.6 mg/m3	17 mg/m3	100 mg/m3
acrylic acid homopolymer	Acrylic acid polymers; (Acrylic polymer or resin)	7.5 mg/m3	83 mg/m3	500 mg/m3

Ingredient	Original IDLH	Revised IDLH
acrylic acid homopolymer	Not Available	Not Available
tartaric acid	Not Available	Not Available
glass powder	Not Available	Not Available
acrylic acid homopolymer	Not Available	Not Available
alloy powder	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.

Continued...

Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. 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. ▸ Wear safety footwear or safety gumboots, e.g. Rubber ▸ Rubber Gloves
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ P.V.C. apron. ▸ Barrier cream. ▸ Skin cleansing cream. ▸ Eye wash unit.
Thermal hazards	Not Available

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Smooth, light-grey coloured paste with slightly characteristic odour, partially mixes with water.

Physical state	Non Slump Paste	**Relative density (Water = 1)**	1.0
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)	Partly miscible	**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	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.

Continued...

Ingestion	Accidental ingestion of the material may be damaging to the health of the individual.
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. The material may accentuate any pre-existing dermatitis condition Open cuts, abraded or irritated skin should not be exposed to this material 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	Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals. Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.
Chronic	Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

	TOXICITY	IRRITATION
Riva Silver Capsules	Not Available	Not Available
acrylic acid homopolymer	Oral (rat) LD50: 2500 mg/kgd[2]	Nil reported
tartaric acid	dermal (rat) LD50: >2000 mg/kg[1]	Nil reported
	Oral (rat) LD50: ca.920 mg/kg[1]	
glass powder	Not Available	Not Available
acrylic acid homopolymer	Oral (rat) LD50: 2500 mg/kgd[2]	Nil reported

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*

TARTARIC ACID	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. Convulsions, haemorrhage recorded.
ACRYLIC ACID HOMOPOLYMER	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. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.

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
acrylic acid homopolymer	EC50	384	Crustacea	389.869mg/L	3
acrylic acid homopolymer	EC50	96	Algae or other aquatic plants	8596.446mg/L	3
acrylic acid homopolymer	LC50	96	Fish	1684.686mg/L	3
tartaric acid	EC50	96	Algae or other aquatic plants	434.65983mg/L	3
tartaric acid	LC50	96	Fish	>100mg/L	2
tartaric acid	EC50	48	Crustacea	93.313mg/L	2
tartaric acid	EC50	72	Algae or other aquatic plants	51.4043mg/L	2
tartaric acid	NOEC	72	Algae or other aquatic plants	3.125mg/L	2
acrylic acid homopolymer	EC50	384	Crustacea	389.869mg/L	3
acrylic acid homopolymer	EC50	96	Algae or other aquatic plants	8596.446mg/L	3
acrylic acid homopolymer	LC50	96	Fish	1684.686mg/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
acrylic acid homopolymer	LOW	LOW
tartaric acid	LOW	LOW
acrylic acid homopolymer	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
acrylic acid homopolymer	LOW (LogKOW = 0.4415)
tartaric acid	LOW (LogKOW = -1.0017)
acrylic acid homopolymer	LOW (LogKOW = 0.4415)

Mobility in soil

Ingredient	Mobility
acrylic acid homopolymer	HIGH (KOC = 1.201)
tartaric acid	HIGH (KOC = 1)
acrylic acid homopolymer	HIGH (KOC = 1.201)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Where in doubt contact the responsible authority. 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 (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

Continued...

ACRYLIC ACID HOMOPOLYMER(9003-01-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

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

TARTARIC ACID(87-69-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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

GLASS POWDER(NOT APPLICABLE) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Not Applicable

ACRYLIC ACID HOMOPOLYMER(9003-01-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

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	Y
Canada - NDSL	N (acrylic acid homopolymer; tartaric acid)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	N (acrylic acid homopolymer)
Japan - ENCS	Y
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	*Y = All ingredients are on the inventory* *N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 OTHER INFORMATION

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
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

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.

Continued...

Other information:
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Date of preparation/revision: 23rd September 2015
Department issuing SDS: Research and Development
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end of SDS