

SDI Limited

Version No: 3.1.1.1 Safety Data Sheet (Conforms to Regulations (EC) No 2015/830)

Issue Date: 29/01/2016 Print Date: 24/03/2016 Initial Date: Not Available L.REACH.GBR.EN

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

1.1.Product Identifier			
Product name	Riva Light Cure HV Capsules		
Synonyms	Not Available		
Other means of identification	Not Available		
1.2. Relevant identified us	ses of the substance or mixture and u	ses advised against	
Relevant identified uses	Light-cured dental cement for dental restoration		
Uses advised against	Not Applicable	s by derital professionals.	
	1		
1.3. Details of the supplie	r of the safety data sheet		
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
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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			
Telephone	1279 Hamilton Parkway IL Itasca 60143 United S +1 630 361 9200 (Business hours)	tates	A SHORT OF THE STREET,
Fax	Not Available		
Website	Not Available		
Email	USA Canada@sdi.com.au		
1.4. Emergency telephone	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		and agreem among the continues and the continues of the c
Other emergency telephone numbers	Not Available		
numbers	A 6000 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 - 600 -		The first control to the control of
SECTION 2 HAZARDS IDE	ENTIFICATION		
PEOTION 2 TIAZANDO IDE	INTIFICATION		
.1.Classification of the su	bstance or mixture		
Considered a dangerou classified as Dangerous	s mixture according to directive 19 s Goods for transport purposes.	99/45/EC, Reg. (EC) No 1272/2008 (if	applicable) and their amendments. Not
DSD classification	In case of mixtures, classification has been prepa	red by following DPD (Directive 1999/45/EC) and CLP	Regulation (EC) No 1272/2008 regulations
Marie and the color of the Marie			TELEVINO IELEZOUS regulations
DPD classification [1]	R36/37/38 Irritating to eyes, respiratory syst  R43 May cause SENSITISATION by		

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1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI Legend: Classification according to Skin Corrosion/Imitation Category 2, Eye Imitation Category 2, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 3 regulation (EC) No (respiratory tract irritation) 1272/2008 [CLP] [1] 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC - Annex I; 3. Classification drawn from EC Directive 1272/2008 - Annex VI Legend: 2.2. Label elements CLP label elements SIGNAL WORD | WARNING Hazard statement(s) H315 Causes skin irritation H319 Causes serious eye imitation. H317 May cause an allergic skin reaction. May cause respiratory imitation. Supplementary statement(s) Not Applicable Precautionary statement(s) Prevention P271 Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. P280 P261 Avoid breathing dust/fume/gas/mist/vapours/spray. 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. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305+P351+P338 Call a POISON CENTER/doctor/physician/first aider/ff you feel unwell. P312 P333+P313 If skin imitation 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 in accordance with local regulations. 2.3. Other hazards Ingestion may produce health damage\*. Cumulative effects may result following exposure\*. REACh - Art.57-59: The mixture does not contain Substances of Very High Concern (SVHC) at the SDS print date. SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS 3.1.Substances See 'Composition on ingredients' in Section 3.2 3.2.Mixtures

1.CAS No 2.EC No 3.Index No 4.REACH No	%[weig		Classification according to directive 67/548/EEC [DSD]	Classification according to regulation (EC) No 1272/2008 [CLP]
		compartment 1 contains	1	The second secon
1.9003-01-4 2.Not Available 3.Not Available 4.Not Available	15-25	acrylic acid hornopolymer	R36/37/38, R51/53 <sup>[1]</sup>	Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Chronic Aquatic Hazard Category 2; H315, H319, H335, H411 [1]

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1.868-77-9 2.212-782-2 Eye Imitation Category 2, Skin Corrosion/Irritation Category 2, Skin Sensitizer 2-hydroxyethyl 15-25 R36/38, R43 [2] 3.607-124-00-X Category 1; H319, H315, H317 [3] 4.01-2119490169-29-XXXX 1.Not Available 2.Not Available dimethacrylate 10-25 Not Applicable 3.Not Available Not Applicable cross-linker 4. Not Available 1.Not Available 2.Not Available 10-20 acid monomer Not Applicable Not Applicable 4.Not Available 1.87-69-4 2.201-766-0 Skin Corrosion/Initation Category 2, Eye Initation Category 2, Specific target organ toxicity - single exposure Category 3 (respiratory tract initation); H315, H319, H335 [1] 1-5 tartaric acid R36/37/38 [1] 4.01-2119537204-47-XXXX. 01-2119851173-43-XXXX 01-2119851174-41-XXXX compartment 2 contains 1 Not Available 2.Not Applicable 93-100 glass powder Not Applicable 3. Not Applicable Not Applicable

4.Not Applicable

- 1. Classification by vendor; 2. Classification drawn from EC Directive 67/548/EEC Annex I; 3. Classification drawn from EC Directive 1272/2008 Annex VI 4. Classification drawn from C&L
- **SECTION 4 FIRST AID MEASURES**

#### 4.1. Description of first aid measures

General

If skin contact occurs

- Immediately remove all contaminated clothing, including footwe
- Flush skin and hair with running water (and soap if available). Seek medical attention in event of imitation.

If this product comes in contact with the eyes:

- Inis product comes in contact with the eyes:

  Wash out immediately with fresh running water.

  Ensure complete imgation 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.

- If fumes or combustion products are inhaled remove from contaminated area.
- Seek medical attention
  - allowed do NOT induce vomiting.
    - If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
    - Observe the patient carefully.
    - Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.

Eye Contact

- If this product comes in contact with the eyes:
  - Wash out immediately with fresh nunning 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

If skin contact occurs:

- In contact occurs.

  Immediately remove all contaminated clothing, including footwear.

  Flush skin and hair with running water (and soap if available).
- Flush skin and hair with running water (and soap if ava.)
   Seek medical attention in event of irritation.
- Inhalation
- If furnes or combustion products are inhaled remove from contaminated area.
- Seek medical attention.
- If swallowed do NOT induce vomiting
- If vomitting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.

  Observe the patient carefully.
- Ingestion
  - Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.

  - Seek medical advice.

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

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

#### **SECTION 5 FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

Foam is generally ineffective

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

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Fire Incompatibility

5.3. Advice for firefighters

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 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.

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 furnes of carbon monoxide (CO).

May emit acrid smoke.

Mists containing combustible materials may be explosive.

Combustion products include; carbon dioxide (CO2) nitrogen oxides (NOx) other pyrolysis products typical of burning organic materialMay emit poisonous furnes. May emit corrosive furnes.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

## 6.1. Personal precautions, protective equipment and emergency procedures

See section 8

#### 6.2. Environmental precautions

See section 12

## 6.3. Methods and material for containment and cleaning up

Clean up all spills immediately.Avoid contact with skin and eyes. Wear impervious gloves and safety goggles. Minor Spills Trowel up/scrape up. Place spilled material in clean, dry, sealed container. Flush spill area with water Clear area of personnel and move unwind. 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 Major Spills ▶ 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.

#### 6.4. Reference to other sections

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

## SECTION 7 HANDLING AND STORAGE

Safe handling	<ul> <li>Avoid all personal contact, including inhalation.</li> <li>Wear protective clothing when risk of exposure occurs.</li> <li>Use in a well-ventilated area.</li> <li>Prevent concentration in hollows and sumps.</li> <li>DO NOT enter confined spaces until atmosphere has been checked.</li> <li>DO NOT allow material to contact humans, exposed food or food utensils.</li> <li>Avoid contact with incompatible materials.</li> <li>When handling, DO NOT eat, drink or smoke.</li> <li>Keep containers securely sealed when not in use.</li> <li>Avoid physical damage to containers.</li> <li>Always wash hands with soap and water after handling.</li> <li>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li> <li>Use good occupational work practice.</li> <li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul>
Fire and explosion protection	See section 5
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.
7.2. Conditions for safe st	orage, 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>

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Storage incompatibility None known

#### 7.3. Specific end use(s)

See section 1.2

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1. Control parameters

DERIVED NO EFFECT LEVEL (DNEL)

Not Available

PREDICTED NO EFFECT LEVEL (PNEC)

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes	
Not Available	ble Not Available Not Available Not Available Not Available		Not Available	Not Available	Not Available	Not Available	
EMERGENCY LIMITS						the same of the same of the same	
Ingredient	Material name			TEEL-1	TEEL-2	TEEL-3	
acrylic acid homopolymer	Acrylic acid polyme	rs; (Acrylic polymer or resin)		7.5 mg/m3	83 mg/m3	500 mg/m3	
2-hydroxyethyl methacrylate	Hydroxyethyl methad	crylate, 2-		0.71 mg/m3	7.8 mg/m3	1000 mg/m3	
tartaric acid	Tartaric acid			1.6 mg/m3	17 mg/m3	100 mg/m3	
Ingredient	Original IDLH			Revised IDLH		The second secon	
acrylic acid homopolymer	Not Available		(No. 1)   Francis   10   Francis   1	Not Available		proved the second of the first open production of the configuration of t	
2-hydroxyethyl methacrylate	Not Available			Not Available			
dimethacrylate cross-linker	Not Available			Not Available			
acid monomer	Not Available			Not Available			
tartaric acid	Not Available			Not Available		40 74 AL - 1004 MACH	
glass powder	Not Available			Not Available	* * * * * * * * * * * * * * * * * * *		

#### MATERIAL DATA

NOTE D: Certain substances which are susceptible to spontaneous polymerisation or decomposition are generally placed on the market in a stabilised form. It is in this form that they are listed on

When they are placed on the market in a non-stabilised form, the label must state the name of the substance followed by the words "non-stabilised"

European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to

#### 8.2. 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. 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.

#### 8.2.1. Appropriate engineering controls

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, furnes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid furnes, 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.)
The state of the s	A COLUMN TO A COLU

Within each range the appropriate value depends on:

Upper end of the range
1: Disturbing room air currents
2: Contaminants of high toxicity
3: High production, heavy use
4: Small hood-local control only

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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 usualize from the content and the content and

# 8.2.2. Personal protection









Safety glasses with side shields. Chemical goggles

Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate imitants. 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 tenses or restrictions on use, should be created for each workplace or task. This should include a review of tens 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 infgation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or imitation - 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

- Wear chemical protective gloves, e.g. PVC.
  - Wear safety footwear or safety gumboots, e.g. Rubber
     Rubber Gloves

**Body protection** 

Eye and face protection

Hands/feet protection

See Other protection below

- Overalls.
- ▶ P.V.C. apron
- Other protection
- Barrier cream. Skin cleansing cream.
  - Eye wash unit.

Thermal hazards

#### 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 P3	-	A-PAPR-AUS / Class 1 P3
up to 50 x ES		A-AUS / Class 1 P3	
up to 100 x ES		A-2 P3	A-PAPR-2 P3 ^

^ - 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)

### 8.2.3. Environmental exposure controls

See section 12

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Smooth, pale-coloured paste with slightly characteristic odour.		
Physical state	Non Slump Paste	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not 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)	Not Available	pH as a solution (1%)	Not Available

Continued

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Vapour density (Air = 1)	ı
vapour density (Air = 1)	ı

Not Available

VOC g/L Not Available

9.2. Other information

Not Available

#### **SECTION 10 STABILITY AND REACTIVITY**

10.1.Reactivity 10.2.Chemical stability 10.3. Possibility of hazardous reactions 10.4. Conditions to avoid

10.5. Incompatible materials 10.6. Hazardous decomposition products Product is considered stable and hazardous polymerisation will not occur.

See section 7.2

See section 7.2

See section 7.2 See section 7.2

#### SECTION 11 TOXICOLOGICAL INFORMATION

#### 11.1. Information on toxicological effects

Inhaled

Evidence shows, or practical experience predicts, that the material produces imitation 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 imitant 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 imitation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.

Acute effects from inhalation of high concentrations of vapour are pulmonary imitation, including coughing, with nausea; central nervous system depression-characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination

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 Evidence exasts, or practical experience predicts, that the material enter produces illiminimation to the shift in a substitute of the inflammation when applied to the healthy intact skin of animats, 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.

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.

Long-term exposure to respiratory imitants may result in disease of the airways involving difficult breathing and related systemic problems.

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.

IRRITATION

IRRITATION

Nil reported

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. Sensitisation may give severe responses to very low levels of exposure, in situations where exposure may occur.

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TOXICITY IRRITATION Not Available Not Available TOXICITY

acrylic acid homopolyme

Oral (rat) LD50: 2500 mg/kgd<sup>[2]</sup> Nil reported IRRITATION

Dermal (rabbit) LD50: >3000 mg/kg<sup>[1]</sup> 2-hydroxyethyl methacrylate

\* Rohm & Haas Oral (rat) LD50: >4000 mg/kg<sup>[1]</sup> Eve (rabbit): SEVERE \* post-exposure

Skin (rabbit): non-irritating\*

TOXICITY dermal (rat) LD50: >2000 mg/kg<sup>[1]</sup> tartaric acid Oral (rat) LD50: ca.920 mg/kg<sup>[1]</sup>

TOXICITY IRRITATION Not Available

glass powder Legend:

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

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#### 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 Astimation symptoms may continue for mortans or event 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 imitating 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 imitating substance. Industrial bronchilis on the other hand is a discreter that occurs as result of exposure that to the concentration of and duration substance. intaing substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of imitating 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.

The following information refers to contact allergens as a group and may not be specific to this product.

The following information refers to contact allergens as a group and may not be specific to this product.

Contact allergies quickly manifest themselves as contact eczema, more rarely as a 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 sensitisiation 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

#### 2-HYDROXYETHYL METHACRYLATE

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 tack of minimal lymphocytic inflammation, without ecsinophilia, 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 pattern) and its completely respectible after exposure or agrees. The disorder is characterized by dependence on the angle production of exposure due to high concentrations of irritating substance. Often particulate in nature) and is completely reversible after exposure ceases. The disorder is exposure due to right contentiations or immaing substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dysprea, cough and mucus production. Where no "official" classification for adviates and methadrylates exists, there has been cautious attempts to create classifications in the absence of contrary vidence. For example

Monalkyl or monoarylesters of acrylic acids should be classified as R36/37/38 and R51/53 Monoalkyl or monoaryl esters of methacrylic acid should be classified as R36/37/38

Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing. This position has now been revised and acrylates and methacrylates are no longer de facto carcinogens.

Dermal (rabbit): >5000 mg/kg\* Effects persist beyond 21 days

#### 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 imitating 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 initiant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperneactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the citeria for diagnosis of RADS. RADS (or asthma) following an imitating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the imitating 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.

Acute Toxicity
Skin Irritation/Corrosion
Serious Eye Damage/Irritation
Respiratory or Skin sensitisation
 Mutagenicity

Carcinogenicity			
Dear-death to			•
Reproductivity			
STOT - Single Exposure			•
Control of the State of the Sta			
STOT - Repeated Exposure			•
Aspiration Hazard			4

Legend:

X − 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**

1	2.	1	To	O	(i	C	i	ty

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
acrylic acid homopolymer	EC50	384	Crustacea	389.869mg/L	1 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
2-hydroxyethyl methacrylate	LC50	96	Fish	>100mg/L	2
2-hydroxyethyl methacrylate	EC50	48	Crustacea	210mg/L	2
2-hydroxyethyl methacrylate	EC50	504	Crustacea	90.1mg/L	2
2-hydroxyethyl methacrylate	NOEC	504	Crustacea	24.1mg/L	2
2-hydroxyethyl methacrylate	EC50	72	Algae or other aquatic plants	345mg/L	2
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

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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

#### 12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
acrylic acid homopolymer	LOW	LOW
2-hydroxyethyl methacrylate	LOW	LOW
tartaric acid	LOW	LOW

#### 12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
acrylic acid homopolymer	LOW (LogKOW = 0.4415)
2-hydroxyethyl methacrylate	LOW (BCF = 1.54)
tartaric acid	LOW (LogKOW = -1.0017)

#### 12.4. Mobility in soil

Ingredient	Mobility		
acrylic acid homopolymer	HIGH (KOC = 1.201)		
2-hydroxyethyl methacrylate	HIGH (KOC = 1.043)		
tartaric acid	HIGH (KOC = 1)		

#### 12.5.Results of PBT and vPvB assessment

	Р	В	т
Relevant available data	Not Available	Not Available	Not Available
PBT Criteria fulfilled?	Not Available	Not Available	Not Available

#### 12.6. Other adverse effects

No data available

#### **SECTION 13 DISPOSAL CONSIDERATIONS**

#### 13.1. Waste treatment methods

Product / Pa	ckaging
	di1

- 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.

Waste treatment options Not Available Sewage disposal options Not Available

## SECTION 14 TRANSPORT INFORMATION

Marine Pollutant NO HAZCHEM

Labels	Red	wired

Not Applicable					
REGULATED FOR TRANSP	ORT OF DANGERO	US GOODS			
Not Applicable		-			
Not Applicable					
Not Applicable					
Not Applicable					
Class Not Applicable Subrisk Not Applicable			407		- 10 10 10 10 10 10 10 10 10 10 10 10 10
Hazard identification (Kemler) Classification code Hazard Label Special provisions	Not Applicable Not Applicable Not Applicable Not Applicable				# 100 A 100
	Not Applicable Not Applicable Not Applicable Not Applicable Class Not Applicable Subrisk Not Applicable Hazard identification (Kernler) Classification code Hazard Label Special provisions	REGULATED FOR TRANSPORT OF DANGERO Not Applicable Not Applicable Not Applicable Class Not Applicable Subrisk Not Applicable Hazard identification (Kemler) Not Applicable Classification code Not Applicable Hazard Label Not Applicable	REGULATED FOR TRANSPORT OF DANGEROUS GOODS  Not Applicable  Not Applicable  Not Applicable  Class Not Applicable  Subrisk Not Applicable  Hazard identification (Kemler)  Classification code  Not Applicable  Not Applicable  Not Applicable  Not Applicable  Not Applicable  Not Applicable  Not Applicable	REGULATED FOR TRANSPORT OF DANGEROUS GOODS  Not Applicable  Not Applicable  Not Applicable  Class Not Applicable  Subrisk Not Applicable  Hazard Identification (Kernler) Not Applicable  Classification code Not Applicable  Hazard Label Not Applicable  Special provisions Not Applicable	REGULATED FOR TRANSPORT OF DANGEROUS GOODS  Not Applicable  Not Applicable  Not Applicable  Class Not Applicable  Subrisk Not Applicable  Hazard identification (Kemler) Not Applicable  Classification code Not Applicable  Hazard Label Not Applicable  Special provisions Not Applicable

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Limited quantity Not Applicable	
DGR): NOT REGULATED FOR TRANSPORT OF DA	NGEROUS GOODS
	AND THE PERSON NAMED IN THE PERSON NAMED IN THE
Not Applicable	
Not Applicable	* 20 to 50 to 50 to common tensor in the same source times
Not Applicable	
ICAO/IATA Class Not Applicable ICAO / IATA Subrisk Not Applicable ERG Code Not Applicable	
Special provisions	Not Applicable
	Not Applicable
	and the second s
	Not Applicable  Not Applicable
The same of the sa	Not Applicable
The state of the s	
	Not Applicable
	OF DANGEROUS GOODS
Not Applicable	
Not Applicable	
Not Applicable	and the second s
IMDG Close Not Applicable	The second secon
TWID'S Subtisk Not Applicable	
EMS Number Not Applicable	
Special provisions Not Applicable	
Limited Quantities Not Applicable	
(ADAN) NOT DECIMATE TO THE	3 - KA - MA
144	DANGEROUS GOODS
The state of the s	
Not Applicable	
Not Applicable	
Not Applicable	The state of the s
Not Applicable Not Applicable	The second secon
Classification code Not Applicable	The state of the s
Fire cones number Not Applicable	
	Not Applicable ICAO/IATA Class ICAO / IATA Subrisk ICAO

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

Not Applicable

#### SECTION 15 REGULATORY INFORMATION

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

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

EU REACH Regulation (EC) No 1907/2006 - Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles European Customs Inventory of Chemical Substances ECICS (English)

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

2-HYDROXYETHYL METHACRYLATE(868-77-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

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## **Riva Light Cure HV Capsules**

EU European Chemicals Agency (ECHA) Community Rolling Action Plan (CoRAP) List of Substances

European Customs Inventory of Chernical Substances ECICS (English)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

European Union (EU) Annex I to Directive 67/548/EEC on Classification and Labelling of Dangerous Substances - updated by ATP: 31 European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

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

European Customs Inventory of Chemical Substances ECICS (English) European List of Notified Chemical Substances (ELINCS)

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS) (English)

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

This safety data sheet is in compliance with the following EU legislation and its adaptations - as far as applicable - : 67/548/EEC, 1999/45/EC, 98/24/EC, 92/85/EC, 94/33/EC, 91/689/EEC, 1999/13/EC, Commission Regulation (EU) 2015/830, Regulation (EC) No 1272/2008 and their amendments as well as the following British legislation: - The Control of Substances Hazardous to Health Regulations (COSHH) 2002 - COSHH Essentials - The Management of Health and Safety at Work Regulations 1999

#### 15.2. Chemical safety assessment

For further information please look at the Chemical Safety Assessment and Exposure Scenarios prepared by your Supply Chain if available.

#### **ECHA SUMMARY**

ngredient	CAS number		Index No	ECHA	Dossier	
crylic acid homopolymer	9003-01-4		Not Available	Not A	vailable	
farmonisation (C&L nventory)	Hazard Class and C	ategory Code(s)		Pictograms Signal Word Code(s)	Haza	rd Statement Code(s)
	Not Classified			Wng, GHS08, Dgr, GHS05, GHS09, GHS	H333	H335, H340, H350, H314, H317, H290, H226, H302,
	Not Classified, Skin Ir 1B, Aquatic Chronic 3 Aquatic Acute 1	rit. 2, Eye Irrit. 2, STo 3, Skin Corr. 1A, Acut	OT SE 3, Muta. 1B, Carc. 1A, Skin Corr. e Tox. 4, Met. Corr. 1, Flam. Liq. 3,	Wng, GHS08, Dgr, GHS05, GHS09, GHS	H319	H335, H340, H350, H314, H317, H290, H226, H302,
	Skin Corr. 1B, Eye Da	m. 1		GHS05, Dgr	H314	
larmonisation Code 1 = The n	nost prevalent classification	. Harmonisation Cod	le 2 = The most severe classification.			
ngredient	CAS number		Index No	ECHA Dossier		
hydroxyethyl methacrylate	868-77-9		607-124-00-X	01-2119490169-29-X	xxx	
armonisation (C&L eventory)	Hazard Class and C	ategory Code(s)		Pictograms Signal W	ord	Hazard Statement Code(s)
	Skin Imit. 2, Skin Sens	. 1, Eye Irrit. 2		GHS07, Wng		H315, H317, H319
	Skin Sens. 1, Eye Irrit. Classified	2, Skin Imit. 2, Skin S	Sens. 1B, Aquatic Chronic 4, Not	GHS07, Wng		H317, H319, H315
armonisation Code 1 = The m	nost prevalent classification	. Harmonisation Cod	e 2 = The most severe classification.			
gredient	CAS number	Index No	ECHA Dossier			
rtaric acid	87-69-4	Not Available	01-2119537204-47-XXXX, 01-21196	851173-43-XXXX, 01-21196	51174-41-XXX	X
armonisation (C&L ventory)	Hazard Class and Ca	ategory Code(s)		Pictograms S Code(s)	ignal Word	Hazard Statement Code(s)
	Acute Tox. 4, Skin Irrit.	2, Skin Sens. 1, Eye	Irrit. 2, STOT SE 3	GHS07, Wng		H302, H315, H317, H319 H335
	Eye Dam. 1, Skin Irrit. 3 Aquatic Chronic 3, Eye	2, Acute Tox. 4, Skin e Irrit. 2A	Sens. 1, Eye Irrit. 2, STOT SE 3, Not Class	sified, GHS05, Dgr, V	Vng, GHS06	H318, H315, H302, H317 H335
armonisation Code 1 = The m	ost prevalent classification.	Harmonisation Code	e 2 = The most severe classification.			
gredient	CAS number		Index No	ECH	Dossier	
ass powder			Not Applicable	Not A	pplicable	84 (1)
armonisation (C&L ventory)	Hazard Class and Ca	tegory Code(s)	Pictograms Signal Wor	d Code(s)	Hazard St	atement Code(s)
ot Available	Not Available		Not Available	- A	Not Availal	Ne
armonisation Code 1 = The mo	ost prevalent classification.	Harmonisation Code	2 = The most severe classification.			
tional Inventory	Status					
stralia - AICS	Υ			#		and the second state of the second second second
nada - DSL	Y				49.0	11 mm — m m m
nada - NDSL	N (acrylic acid homopol	lymer, tartaric acid: 2	hydroxyethyl methacrylate)			
ina - IECSC	Y	Santa Santa Santa	, , , , , , , , , , , , , , , , , , , ,			

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Korea - KECI New Zealand - NZIoC Philippines - PICCS USA - TSCA 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) Legend:

#### SECTION 16 OTHER INFORMATION

#### Full text Risk and Hazard codes

H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H411	Toxic to aquatic life with long lasting effects.
R36/38	Irritating to eyes and skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

#### Other information

#### DSD / DPD label elements



Relevant risk statements are found in section 2.1

indication(s) of danger	Xi
SAFETY ADVICE	
S02	Keep out of reach of children,
S24	Avoid contact with skin.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S35	This material and its container must be disposed of in a safe way.
S37	Wear suitable gloves.
S39	Wear eye/face protection.
\$40	To clean the floor and all objects contaminated by this material, use water and detergent.
S46	If swallowed, seek medical advice immediately and show this container or label.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

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.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

EN 166 Personal eye-protection
EN 340 Protective clothing
EN 374 Protective gloves against chemicals and micro-organisms

EN 13832 Footwear protecting against chemicals EN 133 Respiratory protective devices

#### 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

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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:

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Date of preparation/revision: 23rd September 2015
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