

AlloyBond Primer

SDI Limited

Version No: 7.1.1.1 Safety Data Sheet (Conforms to Regulations (EC) No 2015/830) Issue Date: 18/03/2016 Print Date: 23/03/2016 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	AlloyBond Primer
Synonyms	Not Available
Proper shipping name	FLAMMABLE LIQUID, N.O.S. (contains acetone)
Other means of identification	Not Available

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	For bonding of amalgam to tooth surfaces.	
Uses advised against	Not Applicable	

1.3. Details of the supplier 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	
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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	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			

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		
Other emergency telephone numbers	Not Available		

SECTION 2 HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Considered a dangerous mixture according to Directive 1999/45/EC, Reg. (EC) No 1272/2008 (if applicable) and their amendments. Classified as Dangerous Goods for transport purposes.

Version No: **7.1.1.1** Page 2 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AlloyBond Primer

	R11	Highly flammable.		
	R21	Harmful in contact with skin.		
	R25	Toxic if swallowed.		
[1]	R36/37/38	Irritating to eyes, respiratory system and skin.		
DPD classification [1]	R43	May cause SENSITISATION by skin contact.		
	R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.		
	R66	Repeated exposure may cause skin dryness and cracking.		
	R67	Vapours may cause drowsiness and dizziness.		
Legend:	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			
Classification according to regulation (EC) No 1272/2008 [CLP] [1]	Flammable Liquid Category 2, Acute Toxicity (Oral) Category 3, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 2, Eye Irritation Category 2, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 3 (respiratory tract irritation), Specific target organ toxicity - single exposure Category 3 (narcotic effects), Chronic Aquatic Hazard Category 3			
Legend:	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			

2.2. Label elements

CLP label elements





SIGNAL WORD

DANGER

Hazard statement(s)

Highly flammable liquid and vapour.
Toxic if swallowed.
Harmful in contact with skin.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Harmful to aquatic life with long lasting effects.
Ti H C N

Supplementary statement(s)

EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statement(s) Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
P330	Rinse mouth.
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam to extinguish.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Version No: **7.1.1.1** Page 3 of 13 Issue Date: 18/03/2016

AlloyBond Primer

Print Date: 23/03/2016

Precautionary statement(s) Storage

P403+P235	Store in a well-ventilated place. Keep cool.	
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

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	%[weight]	Name	Classification according to directive 67/548/EEC [DSD]	Classification according to regulation (EC) No 1272/2008 [CLP]
1.67-64-1 2.200-662-2 3.606-001-00-8 4.01-2119498062-37-XXXX, 01-2119471330-49-XXXX	54	<u>acetone</u>	R11, R36, R66, R67 ^[2]	Flammable Liquid Category 2, Eye Irritation Category 2, Specific target organ toxicity - single exposure Category 3 (narcotic effects); H225, H319, H336, EUH066 [3]
Not Available Not Available Not Available Not Available Not Available	44	acrylic monomer	Not Applicable	Not Applicable
Not Available Not Available Not Available Not Available Not Available	2	Ingredients determined not to be hazardous	Not Applicable	Not Applicable
Legend:	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	d measures
General	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. If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with 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. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. 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. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay. Seek medical attention.
Eye Contact	If this product comes in contact with the eyes: Immediately hold eyelids apart and flush the eye continuously with 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. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: 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.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.

Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if

Version No: 7.1.1.1 Page 4 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AlloyBond Primer

necessary. ► Transport to hospital, or doctor, without delay.

4.2 Most important symptoms and effects, both acute and delayed

Seek medical attention.

See Section 11

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

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Ingestion

5.1. Extinguishing media

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

5.2. Special hazards arising from the substrate or mixture

Fire Incompatibility	Avoid contact with incompatible materials.
5.3. Advice for firefighters	
Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves in the event of a fire. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). Fight fire from a safe distance, with adequate cover. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control the fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.
Fire/Explosion Hazard	 Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidisers. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include; carbon dioxide (CO2) other pyrolysis products typical of burning organic material

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

Minor Spills	 Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb small quantities with vermiculite or other absorbent material. Wipe up. Collect residues in a flammable waste container.
Major Spills	 Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. Consider evacuation (or protect in place). No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Water spray or fog may be used to disperse /absorb vapour. Contain spill with sand, earth or vermiculite. Use only spark-free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

6.4. Reference to other sections

Version No: **7.1.1.1** Page 5 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AlloyBond Primer

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

SECTION 7 HANDLING AND STORAGE

7.1 Precautions for safe handling

7.1. Precautions for safe h	andling
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. Avoid smoking, naked lights, heat or ignition sources. When handling, DO NOT eat, drink or smoke. Vapour may ignite on pumping or pouring due to static electricity. DO NOT use plastic buckets. Earth and secure metal containers when dispensing or pouring product. Use spark-free tools when handling. Avoid contact with incompatible materials. Keep containers securely sealed. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. 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.
Fire and explosion protection	See section 5
Other information	Store in a cool dry place. Do not store in direct sunlight.

7.2. Conditions for safe storage, including any incompatibilities

Store between 10 and 25 deg. C.

Suitable container	► DO NOT repack. Use containers supplied by manufacturer only.
Storage incompatibility	 Avoid storage with reducing agents. Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

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)

Not Available

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
UK Workplace Exposure Limits (WELs)	acetone	Acetone	1210 mg/m3 / 500 ppm	3620 mg/m3 / 1500 ppm	Not Available	Not Available
European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)	acetone	Acetone	1 210 mg/m3 / 500 ppm	Not Available	Not Available	Not Available
EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)	acetone	Acetone	1210 mg/m3 / 500 ppm	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
acetone	Acetone	Not Available	Not Available	Not Available
Ingredient	Original IDLH		Revised IDLH	
acetone	20,000 ppm		2,500 [LEL] ppm	
acrylic monomer	Not Available		Not Available	
Ingredients determined not to be hazardous	Not Available		Not Available	

MATERIAL DATA

8.2. Exposure controls

8.2.1. Appropriate 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 Version No: **7.1.1.1** Page **6** of **13** Issue Date: **18/03/2016**

AlloyBond Primer

Print Date: 23/03/2016

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.

For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.

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, 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.)

engineering controls

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.

8.2.2. Personal protection



Not Available









Eve 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 Wear chemical protective gloves, e.g. PVC. Wear safety footwear or safety gumboots, e.g. Rubber Rubber Gloves Body protection See Other protection below No special equipment needed when handling small quantities. OTHERWISE: Overalls. Barrier cream. Eyewash unit.

Respiratory protection

Thermal hazards

Type AX 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 5 x ES	Air-line*	AX-2	AX-PAPR-2 ^
up to 10 x ES	-	AX-3	-
10+ x ES	-	Air-line**	-

- * Continuous Flow; ** Continuous-flow or positive pressure demand
- ^ 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)

 Version No: 7.1.1.1
 Page 7 of 13
 Issue Date: 18/03/2016

AlloyBond Primer

Print Date: 23/03/2016

8.2.3. Environmental exposure controls

See section 12

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Clear, pale yellow low/ slightly viscous liquid with ester like odour, mixes with water.		
Physical state	Liquid	Relative density (Water = 1)	0.8-1.15
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Gels before boiling	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	*-20 (acetone)	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	HIGHLY FLAMMABLE.	Oxidising properties	Not Available
Upper Explosive Limit (%)	13	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	3	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

9.2. Other information

Not Available

SECTION 10 STABILITY AND REACTIVITY

10.1.Reactivity	See section 7.2
10.2.Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
10.3. Possibility of hazardous reactions	See section 7.2
10.4. Conditions to avoid	See section 7.2
10.5. Incompatible materials	See section 7.2
10.6. Hazardous decomposition products	See section 5.3

SECTION 11 TOXICOLOGICAL INFORMATION

11.1. 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. Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.
Ingestion	Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.
Skin Contact	Skin contact with the material may be harmful; systemic effects may result following absorption. The material produces mild skin irritation; evidence exists, or practical experience predicts, that the material either produces mild inflammation of the skin in a substantial number of individuals following direct contact, and/or produces significant, but mild, 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. Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. 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.

Version No: 7.1.1.1 Page 8 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AllovBond Primer

Evidence exists, or practical experience predicts, that the material may cause severe 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. Eye contact may cause significant inflammation with pain. Comeal injury may occur; permanent impairment of vision may result unless treatment is prompt and adequate. Repeated or Eve prolonged exposure to irritants may cause inflammation characterised by a 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. 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.

Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems.

AlloyBond Primer	TOXICITY Not Available	IRRITATION Not Available	
	TOXICITY Dermal (rabbit) LD50: 20000 mg/kg ^[2]	IRRITATION Eye (human): 500 ppm - irritant	
acetone	Inhalation (rat) LC50: 50.1 mg/L/8 hr ^[2]	Eye (rabbit): 20mg/24hr -moderate	
	Oral (rat) LD50: 5800 mg/kgE ^[2]	Eye (rabbit): 3.95 mg - SEVERE Skin (rabbit): 500 mg/24hr - mild	
		Skin (rabbit):395mg (open) - mild	
Legend:	Nalue 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		

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis

for acetone:

The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitiser but is a defatting agent to the skin. Acetone is an eye irritant. The subchronic toxicity of acetone has been examined in mice and rats that were administered acetone in the drinking water and again in rats treated by oral gavage. Acetoneinduced increases in relative kidney weight changes were observed in male and female rats used in the oral 13-week study. Acetone treatment caused increases in the relative liver weight in male and female rats that were not associated with histopathologic effects and the effects may have been associated with microsomal enzyme induction. Haematologic effects consistent with macrocytic anaemia were also noted in male rats along with hyperpigmentation in the spleen. The most notable findings in the mice were increased liver and decreased spleen weights. Overall, the no-observed-effect-levels in the drinking water study were 1% for male rats (900 mg/kg/d) and male mice (2258 mg/kg/d), 2% for female mice (5945 mg/kg/d), and 5% for female rats (3100 mg/kg/d). For developmental effects, a statistically significant reduction in foetal weight, and a slight, but statistically significant increase in the percent incidence of later resorptions were seen in mice at 15,665 mg/m3 and in rats at 26,100 mg/m3. The no-observable-effect level for developmental toxicity was determined to be 5220 mg/m3 for both rats and mice.

Teratogenic effects were not observed in rats and mice tested at 26,110 and 15,665 mg/m3, respectively. Lifetime dermal carcinogenicity studies in mice treated with up to 0.2 mL of acetone did not reveal any increase in organ tumor incidence relative to untreated control animals.

The scientific literature contains many different studies that have measured either the neurobehavioural performance or neurophysiological response of humans exposed to acetone. Effect levels ranging from about 600 to greater than 2375 mg/m3 have been reported. Neurobehavioral studies with acetone-exposed employees have recently shown that 8-hr exposures in excess of 2375 mg/m3 were not associated with any dose-related changes in response time, vigilance, or digit span scores. Clinical case studies, controlled human volunteer studies, animal research, and occupational field evaluations all indicate that the NOAEL for this effect is 2375 mg/m3 or greater.

Acute Toxicity	✓	Carcinogenicity	0
Skin Irritation/Corrosion	✓	Reproductivity	0
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	✓
Respiratory or Skin sensitisation	✓	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend:

— Data available but does not fill the criteria for classification

Data required to make classification available

N - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

ACETONE

12.1. Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
acetone	EC50	384	Crustacea	97.013mg/L	3
acetone	EC50	48	Crustacea	>100mg/L	4
acetone	EC50	96	Algae or other aquatic plants	20.565mg/L	4
acetone	LC50	96	Fish	>100mg/L	4
acetone	NOEC	96	Algae or other aquatic plants	4.950mg/L	4
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

Harmful to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

Version No: **7.1.1.1** Page 9 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AlloyBond Primer

12.2. Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
acetone	LOW (Half-life = 14 days)	MEDIUM (Half-life = 116.25 days)

12.3. Bioaccumulative potential

Ingredient	Bioaccumulation
acetone	LOW (BCF = 0.69)

12.4. Mobility in soil

Ingredient	Mobility
acetone	HIGH (KOC = 1.981)

12.5.Results of PBT and vPvB assessment

	P	В	T
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 / 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.
Waste treatment options	Not Available
Sewage disposal options	Not Available

SECTION 14 TRANSPORT INFORMATION

Labels Required



Land transport (ADR)					
14.1.UN number	1993				
14.2.Packing group	II				
14.3.UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (coi	FLAMMABLE LIQUID, N.O.S. (contains acetone)			
14.4.Environmental hazard	Not Applicable				
14.5. Transport hazard class(es)	Class 3 Subrisk Not Applicable				
14.6. Special precautions for user	Hazard identification (Kemler) Classification code Hazard Label Special provisions	33 F1 3 274 601 640C 640D			
	Limited quantity	1L			

Air transport (ICAO-IATA / DGR)

	,
14.1. UN number	1993
14.2. Packing group	
14.3. UN proper shipping name	Flammable liquid, n.o.s. * (contains acetone)
14.4. Environmental hazard	Not Applicable

Version No: **7.1.1.1** Page **10** of **13** Issue Date: **18/03/2016**

AlloyBond Primer

ICAO/IATA Class 14.5. Transport hazard ICAO / IATA Subrisk Not Applicable class(es) ERG Code ЗН Special provisions АЗ Cargo Only Packing Instructions 364 Cargo Only Maximum Qty / Pack 60 L 14.6. Special precautions for 353 Passenger and Cargo Packing Instructions Passenger and Cargo Maximum Qty / Pack 5 L Passenger and Cargo Limited Quantity Packing Instructions Y341 Passenger and Cargo Limited Maximum Qty / Pack 1 L Sea transport (IMDG-Code / GGVSee) 14.1. UN number 14.2. Packing group 14.3. UN proper shipping FLAMMABLE LIQUID, N.O.S. (contains acetone) name 14.4. Environmental hazard Not Applicable IMDG Class 3 14.5. Transport hazard class(es) IMDG Subrisk Not Applicable

Inland waterways transport (ADN)

14.6. Special precautions for

a.ia ii aioi ii ajo ii aiiopoi	- (/,			
14.1. UN number	1993			
14.2. Packing group	II			
14.3. UN proper shipping name	FLAMMABLE LIQUID, N	FLAMMABLE LIQUID, N.O.S. (contains acetone)		
14.4. Environmental hazard	Not Applicable	Not Applicable		
14.5. Transport hazard class(es)	3 Not Applicable			
	Classification code	F1		
	Special provisions	274; 601; 640C; 640D		
14.6. Special precautions for user	Limited quantity	1 L		
455.	Equipment required	PP, EX, A		
	Fire cones number	1		
	l			

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

EMS Number

Special provisions

Limited Quantities

Not Applicable

If packed as Chemical kits the following classification may be considered if all ICAO/IATA transport requirements are met: Chemical Kit UN3316 - Class 9. If packed in Chemical kits the following classification may be considered if all ICAO/IATA transport requirements are met: Chemical Kit UN3316 - Class 9.

SECTION 15 REGULATORY INFORMATION

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

F-E, S-E

274

1 L

ACETONE(67-64-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Print Date: 23/03/2016

Version No: **7.1.1.1** Page **11** of **13** Issue Date: **18/03/2016**Print Date: **23/03/2016**

AlloyBond Primer

EU Consolidated List of Indicative Occupational Exposure Limit Values (IOELVs)

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)

European Trade Union Confederation (ETUC) Priority List for REACH Authorisation

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) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Bulgarian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Czech)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Danish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs)
(Dutch)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (English)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Estonian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Finnish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (French)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (German)

CAS number

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Greek)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Hungarian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Italian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Latvian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Lithuanian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Maltese)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Polish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Portuguese)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Romanian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovak)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Slovenian)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Spanish)

European Union (EU) First List of Indicative Occupational Exposure Limit Values (IOELVs) (Swedish)

European Union (EU) Regulation (EC) No 1272/2008 on Classification, Labelling and Packaging of Substances and Mixtures - Annex VI

UK Workplace Exposure Limits (WELs)

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.

Index No

ECHA SUMMARY

Ingredient

acetone	67-64-1 606-001-00-8		01-2119498062-37-XXXX, 01-2119471330-49-XXXX	
Harmonisation (C&L Inventory)	Hazard Class and Category Code(s)		Pictograms Signal Word Code(s)	Hazard Statement Code(s)
1	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3		GHS07, GHS02, Dgr	H225, H319, H336
2	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3, Flam. Liq. 3, Not Classified, Eye Irrit. 2A		Dgr, GHS01, Wng, GHS08, GHS06	H225, H319, H336, H371, H228, H315, H335, H312, H332, H340, H302
1	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3		GHS07, GHS02, Dgr	H225, H319, H336
2	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3		GHS07, GHS02, Dgr	H225, H319, H336

ECHA Dossier

Harmonisation Code 1 = The most prevalent classification. Harmonisation Code 2 = The most severe classification.

National Inventory

Status

National Inventory	Status
Australia - AICS	Υ
Canada - DSL	Υ
Canada - NDSL	N (acetone)
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Υ
Korea - KECI	Y
New Zealand - NZIoC	Υ
Philippines - PICCS	Υ
USA - TSCA	Υ
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

Full text Risk and Hazard codes

H228	Flammable solid.
H302	Harmful if swallowed.
H332	Harmful if inhaled.
H340	May cause genetic defects.

Version No: 7.1.1.1 Page 12 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AlloyBond Primer

H371 May cause damage to organs. R36 Irritating to eyes.

Other information

DSD / DPD label elements



Relevant risk statements are found in section 2.1

Indication(s) of danger	Xi
	1 1
SAFETY ADVICE	
S01	Keep locked up.
S02	Keep out of reach of children.
S04	Keep away from living quarters.
S09	Keep container in a well ventilated place.
S13	Keep away from food, drink and animal feeding stuffs.
S16	Keep away from sources of ignition. No smoking.
S20	When using do not eat or drink.
S21	When using do not smoke.
S23	Do not breathe gas/fumes/vapour/spray.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S28	After contact with skin, wash immediately with plenty of water
S29	Do not empty into drains.
S33	Take precautionary measures against static discharges.
S35	This material and its container must be disposed of in a safe way.
S36	Wear suitable protective clothing.
S37	Wear suitable gloves.
S38	In case of insufficient ventilation, wear suitable respiratory equipment.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water.
S41	In case of fire and/or explosion, DO NOT BREATHE FUMES.
S43	In case of fire use the extinguishing media detailed in section 5 of this SDS.
S45	In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).
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

 ${\sf PC-STEL} : {\sf Permissible Concentration-Short Term Exposure Limit}$

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

Version No: **7.1.1.1** Page 13 of 13 Issue Date: 18/03/2016 Print Date: 23/03/2016

AlloyBond Primer

obtained from the use thereof.

Other information:

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Department issuing SDS: Research and Development

Contact: Technical Director