



MATERIAL SAFETY DATA SHEET



Hazardous according to criteria of NOHSC Australia

1. COMPANY DETAILS

Company Name: Australian Composites Pty.Ltd. (A.C.N. 102 705 751)
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POISONS INFORMATION CENTRE: Australia 13-11-26

2. PRODUCT IDENTIFICATION

Product Name: Ausprime Vinylester Derakane based
Synonyms: Bisphenol A Epoxy Vinyl ester resin
Correct Shipping Name: Ausprime Vinylester UV
Use: Composite fabrication.
U.N. Number: 1866
D.G. Class: 3
Packing Group: III
Hazchem Code: 3[Y]
Poisons Schedule: S5 (Victoria)

3. PRODUCT COMPOSITION

CHEMICAL ENTITY	CAS No.	PROPORTION
Bisphenol-A epoxy Resin	Proprietary	55 – 50%
Styrene Monomer	100-42-5	50 – 45%
Quinone and/or phenolic inhibitors	Proprietary	< 1%
UV initiators	Proprietary	< 1%
		To 100%

4. HAZARDS IDENTIFICATION

This material is classified as Hazardous according to health criteria of NOHSC Australia.

Hazard Category:

Xn Harmful
Xi Irritant

Hazchem:

3[Y] Flammable

Risk Phrase(s):

R20: Harmful by inhalation.
R36/R38: Irritating to eyes and skin.

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by road and rail.



5. FIRST-AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre
(Phone – Australia 131-126; New Zealand 03-474-7000)

Inhalation:

Vapour is irritating to mucous membranes and respiratory tract. Inhalation of high vapour concentrations can cause dizziness, impaired judgement, and if prolonged – unconsciousness. Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position, and keep warm.. Keep at rest until fully recovered. If breathing is laboured, and patient is cyanotic (blue), ensure that airways are clear, and have a qualified person give oxygen through a face mask. If breathing has stopped, apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.

Skin Contact:

If skin contact occurs, immediately remove contaminated clothing, and wash skin thoroughly. If swelling, redness, blistering or irritation occurs, seek medical assistance. A component of this material can be absorbed through the skin, with resultant toxic effects.

Eye Contact:

Immediately irrigate with copious quantities of water, for at least 15 minutes. Eyelids are to be held open during irrigation. Remove contaminated clothing and wash skin. Seek immediate medical assistance.

Ingestion:

Rinse mouth with water. Give plenty of water to drink. DO NOT induce vomiting.
NEVER give anything by mouth to an unconscious person. Seek immediate medical attention.

Notes to Physician: Treat symptomatically. Can cause corneal burns.

6. FIRE FIGHTING MEASURES

Specific Hazards:

Polymerisation may occur at elevated temperatures, such as a fire. If polymerisation occurs in a closed container, violent rupture may result. Avoid sunlight, open flames, contamination and prolonged storage above 38°C.

Hazardous Decomposition Products:

Fire induced decomposition products may include CO², CO and nitrogen oxides, fumes and smoke. Avoid inhalation of fumes. Fire fighters to wear self-contained breathing apparatus, and suitable protective clothing, if there is a risk of exposure to vapour or products of combustion.

Fire Fighting Further Advice:

If safe to do so, remove product from path of fire.

Suitable Extinguishing Media:

Foam, dry agent (carbon dioxide, dry chemical powder).



7. ACCIDENTAL RELEASE MEASURES

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Shut off all possible sources of ignition. Avoid accidents, clean up immediately. Collect and seal in properly labelled containers or drums for disposal.

8. HANDLING AND STORAGE

Handling:

Avoid direct skin and eye contact, and inhalation of vapour.

Storage:

Store in a cool, dry, well ventilated place, and out of direct sunlight or other U.V. (ultra-violet light) sources. Store away from foodstuffs. Store away from incompatible materials described in Section 11. Store away from sources of heat and ignition.

9. EXPOSURE CONTROLS – PERSONAL PROTECTION

National Occupational Exposure Limits:

No value has been assigned for this specific material by The National Occupational and Safety Commission (NOHSC) Australia.

However for;

Material	TWA		STEL		Carcinogen Category	NOTICES
	ppm	mg/m ³	ppm	mg/m ³		
Styrene Monomer	50	213	100	426	-	-

As published by The National Occupational Health and Safety Commission (NOHSC) Australia.

TWA – The time-weighted average airborne concentration, over an eight-hour working day, for a five day working week, over an entire working life.

STEL – Short-Term Exposure Limit – the average airborne concentration over a 15 minute period, which should not be exceeded at any time, during a normal, eight hour working day.

These exposure standards are guides, to be used in the control of occupational health hazards. All atmospheric contamination should be kept to a minimum, and as low a level as is workable. These exposure standards should not be used as a fine dividing line between safe and dangerous concentrations of chemical exposure. They are not a measure of relative toxicity.

**9. EXPOSURE CONTROLS – PERSONAL PROTECTION (Continued)****Engineering Measures:**

Ensure ventilation is adequate, and that air concentrations of components are controlled below quoted Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation, or whilst wearing appropriate respirator. Keep package closed when not in use.

Personal Protection Equipment:

OVERALLS, SAFETY SHOES, SAFETY GLASSES, GLOVES, RESPIRATOR.

Wear overalls, safety glasses and impervious gloves. Use with adequate ventilation. If inhalation risk exists, wear organic vapour/particulate respirator, meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Available information suggests that gloves made from polyvinyl alcohol (PVA) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Do not use gloves made of natural rubber, neoprene, nitrile rubber or polyvinyl chloride (PVC).

Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment with soap and water before storing or re-using.

10. PHYSICAL AND CHEMICAL PROPERTIES

Form, Colour, Odour: Clear to hazy liquid, characteristic styrene odour..

Solubility: (Polymeric component) Insoluble in water. Soluble in MEK (methyl ethyl ketone)

Specific Gravity (20°C): 1.02 – 1.28 (H₂O = 1) Dependant on non-volatile content.

Relative Vapour Density (air=1): 3.6 (for styrene monomer)

Vapour Pressure (20°C): 0.6 kPa @ 20 °C (for styrene monomer)

Flash Point (°C): 31.0°C (for styrene monomer)

Flammability Limits (%): 1.1 (LEL)– 6.1 (UEL)(for styrene monomer)

Auto-ignition Temperature (°C): Not Available

Free Monomer (%): 40% (styrene nominal)

Melting Point/Range (°C): Not Applicable – Polymerises with heat

Boiling Point/Range (°C): 145°C (for styrene monomer)

pH: Not Applicable

Evaporation Rate: 0.49 (n-Butyl acetate=1) (for styrene monomer)

These values are typical only – for further information, consult specification sheet.

In the reaction of the polymeric component of this product, styrene monomer is consumed.

As product is heated or exposed to ultraviolet radiation, polymerisation is accelerated and evolution of styrene volatiles is noticeably increased.



11. STABILITY AND REACTIVITY

Stability:

This material will undergo accelerated polymerisation if stored at elevated temperatures, or exposed to ultraviolet radiation or sunlight.

Incompatible with alkylation catalysts, oxidising agents, acids, halogens, hydrogen halides, copper and copper alloys.

12. TOXICOLOGICAL INFORMATION

No adverse health effects are expected if the product is handled in accordance with this Safety Data Sheet, and the product label. Symptoms or effects that may arise if the product is mishandled, where overexposure may occur, are;

ACUTE EFFECTS:

Inhalation:

Styrene vapour from this product is an irritant to the mucous membranes and respiratory tract. Inhalation of high concentrations can produce narcotic-like effects such as headaches, dizziness, loss of co-ordination, fatigue, nausea, loss of appetite and loss of consciousness.

Skin Contact:

Contact of resin component with skin will result in severe irritation. Repeated or prolonged skin contact may cause blistering. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Eye Contact:

Resin component in the prepreg form (as supplied) is a severe eye irritant.

Ingestion:

Swallowing may result in nausea, vomiting, irritation to the gastrointestinal tract, and depression.

Long Term Effects:

For the constituent, styrene;

Oral LD50 (Rat): 4,370mg/kg, slightly toxic.

Dermal LD50 (Rabbit): Greater than 5,010mg/kg, practically non-toxic.

Eye Irritation (Rabbit): (FHSA) 10.3 on a scale of 110, slightly irritating.

Skin Irritation (Rabbit): (FHSA) 2.4 on a scale of 8.0, slightly irritating.

Vapour inhalation (Rat): 4 out of 6 rats died during a 6 hour exposure to 3,290ppm.

This material has been classified by The International Agency for Research on Cancer (IARC) as a Group 2B, indicating that the material is possibly carcinogenic to humans.

13. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

14. DISPOSAL CONSIDERATIONS

Refer to State / Territory Land Waste Management Authority.

Product Name: F61042 ESCON ISO BASE Polyester Resin

Issue Date: 2 June 2008

Issue No.: 0001



15. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

Transport as UN-1866 Class 3 PG III in accordance with the Australian Dangerous Goods (ADG) Code and Regulations, the International Maritime Dangerous Goods (IMDG) Code or the International Air Transport Association (IATA) Dangerous Goods (DG) Regulations, as applicable to the mode of transport. Defined as Plastic Moulding Compound (in dough, sheet or extruded rope form) evolving flammable vapour.

16. REGULATORY INFORMATION

Hazardous according to criteria of NOHSC Australia.

Hazard Category:

Xn Harmful

Xi Irritant

Risk Phrase(s):

R10: Flammable

R20: Harmful by inhalation.

R36/38: Irritating to eyes and skin.

Safety Phrase(s):

S23: Do not breathe gas/fumes/vapour/spray.

S24/25: Avoid contact with skin and eyes.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S38: In case of insufficient ventilation, wear suitable respiratory equipment.

17. OTHER INFORMATION

Reference:

Resin Supplier Material Safety Data Sheet.

Reason for re-issue:

First Issue.

Disclaimer:

This MSDS summarises at the date of issue, our best knowledge of the health and safety information of the product, and in particular how to safely handle and use the product in the workplace. Since Australian Composites cannot anticipate or control the conditions under which the product may be used, prior to use, each user must review this MSDS in the context of how the user intends to handle and use the product in the workplace. If clarification or further information is needed, to ensure that an appropriate assessment can be made, the user should contact this company. Our responsibility for product as sold, is subject to our standard terms and conditions, a copy of which is sent to our customers, and is also available on request.