

SAFETY DATA SHEET

ISSUED DATE: 10th October 2016

Revision Date 25-Nov-2016

Version 1

Section 1: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Identifier

Product Name **Styrene Monomer**

Other means of identification

UN Number UN2055

Recommended use of the chemical and restrictions on use.

Recommended Use Recommended for Industrial and/or Professional use only

Details of Distributor

Fiberglass (A/Asia) Sales Pty. Ltd.
2 Lincoln Street,
Minto NSW 2566

For further information, please contact

Contact Point Phone: (02) 9820 1144

Email: info@fiberglass-sales.com.au

Emergency Phone: (02) 9820 1144 (Business Hours)

Section 2: HAZARD(S) IDENTIFICATION

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)
Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)

GHS Classification

Label elements

Flammable liquids	Category 3 - (H226)
Aspiration toxicity	Category 1 - (H304)
Acute toxicity - Oral	Category 4 - (H302)
Acute toxicity - Inhalation (Vapours)	Category 4 - (H332)
Acute toxicity - Inhalation (Dusts/Mists)	Category 4 - (H332)
Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Carcinogenicity	Category 2 - (H351)
Reproductive toxicity	Category 2 - (H361)
Specific target organ toxicity (single exposure)	Category 3 - (H335)
Specific target organ toxicity (repeated exposure)	Category 1 - (H372)

Label elements



Signal word

Danger

Hazard statements

H226 - Flammable liquid and vapour
H302 - Harmful if swallowed
H332 - Harmful if inhaled
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H351 - Suspected causing cancer
H361 - Suspected of damaging fertility or the unborn child
H335 - May cause respiratory irritation
H372 - Causes damage to organs through prolonged or repeated exposure
H304 - May be fatal if swallowed and enters airways

Precautionary Statements - Prevention

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace
 Wear protective gloves
 Do not breathe dust/fume/gas/mist/vapours/spray
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ ventilating/ lighting/ equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
 Specific treatment (see supplemental first aid instructions on this label)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 If skin irritation or rash occurs: Get medical advice/attention
 IF ON SKIN (or hair): Remove Take off immediately all contaminated clothing. Rinse skin with water/shower
 Wash contaminated clothing before re-use
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Rinse mouth
 IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician
 Do NOT induce vomiting
 In case of fire: Use CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other hazards

Harmful to aquatic life with long lasting effects

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance	Not applicable	
Chemical Name	CAS No	Weight%
Styrene	100-42-5	100

Section 4: FIRST AID MEASURES**Description of first aid Measures**

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention.
Emergency telephone number	Poisons Information Centre, Australia: 13 11 26
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention. Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Get immediate medical advice/attention. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.
Skin contact	Wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a doctor. Immediate medical attention is required. ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Self-protection of the first aider

Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed**Symptoms**

Difficulty in breathing. Coughing and/ or wheezing. Dizziness. Burning sensation.

Indication of any immediate medical attention and special treatment needed**Note to doctors**

Because of the danger of aspiration, emesis or gastric lavage should not be used unless the risk is justified by the presence of additional toxic substances

Section 5: FIRE FIGHTING MEASURES**Suitable extinguishing media**

Carbon dioxide (CO₂). Dry chemical. Alcohol resistant foam. Water spray.

Unsuitable extinguishing media

Do not use water jet stream.

Specific hazards arising from the chemical

Vapours may form explosive mixtures with air. Vapours may travel to source of ignition and flash back. Most vapours are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapour explosion hazard indoors, outdoors or in sewers. Those substances designated with a "P" may polymerise explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Substance may be transported hot. Flammable. Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective actions for fire-fighters

Wear self-contained breathing apparatus and protective suit. Use personal protective equipment as required.

Hazchem code

3Y.

Section 6: ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders

Use personal protection recommended in Section 8.

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up**Methods for containment**

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up.

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.

Precautions to prevent secondary hazards**Prevention of secondary hazards**

Clean contaminated objects and areas thoroughly observing environmental regulations.

Reference to other sections

See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE**Precautions for safe handling****Advice on safe handling**

Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapours or mists. Keep away from heat, hot surfaces,

sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before re-use. Remove contaminated clothing and shoes.

General Hygiene Considerations

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection. Avoid contact with skin, eyes or clothing.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e. pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations. Keep out of the reach of children. Store locked up. Store away from other materials. Hazardous polymerisation may take place during a fire due to heat. Closed containers could violently rupture. Do not store at temperatures above 27C.

Incompatible materials

Strong acids. Strong bases. Strong oxidising agents.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits This product, as supplied, contains hazardous materials with occupational exposure limits.

Chemical Name	Australia
Styrene 100-42-5	50 ppmTWA 213 mg/m ³ TWA 100 ppm STEL 426 mg/m ³ STEL

Biological occupational exposure limits

An occupational medicine specialist familiar with national and regional regulations and standards must be consulted to establish a program of medical examinations for workers exposed to substances with biological limit values

Chemical Name	Australia	ACGIH	United Kingdom	European Union
Styrene 100-42-5	-	Mandelic acid plus phenylglyoxylic acid: 400 mg/g creatinine urine end of shift Styrene: 40 µg/L urine end of shift	-	

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles. Face protection shield.

Skin and body protection Antistatic footwear. Wear fire flame resistant/retardant clothing. Gloves made of plastic or rubber. Suitable protective clothing. Apron.

Respiratory protection Where respiratory protection is required, use a respirator selected and in accordance with AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls Do not allow into any sewer, on the ground or into any body of water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear Hazy
Colour	Colourless to yellow
Odour	Characteristic
Odour threshold	No information available

Property	Values	Remarks • Method
pH		No information available
Melting point / freezing point	-31 °C	
Boiling point / boiling range	145 °C	

Flash point	31 °C	
Evaporation rate		No information available
Flammability (solid, gas)		No information available
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapour pressure	6.67	hPa, 20°C Derived from solvent
Vapour density		No information available
Relative density		No information available
Water solubility	0.32 g/L	
Solubility(ies)	-	No information available
Partition coefficient	2.96	@ 25 °C
Autoignition temperature	490 °C	
Decomposition temperature		No information available
Kinematic viscosity		No information available
Dynamic viscosity 0.49		
Oxidising properties	No information available	
<u>Other Information</u>		
VOC Content (%)	No information available	
Density	No information available	

Section 10: STABILITY AND REACTIVITY

<u>Reactivity</u>	No Data Available.
<u>Chemical stability</u>	Stable under normal conditions.
<u>Explosion data</u>	
Sensitivity to Mechanical Impact	None
Sensitivity to Static Discharge	May be ignited by heat, sparks or flames.

Possibility of Hazardous Reactions

HAZARDOUS POLYMERISATION MAY OCCUR UPON DEPLETION OF INHIBITOR.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong acids. Strong bases. Strong oxidising agents.

Hazardous Decomposition Products

Decomposition products can include and are not limited to: Styrene.

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. Aspiration into lungs can produce severe lung damage. May cause pulmonary edema. Pulmonary edema can be fatal.
Eye contact	Specific test data for the substance or mixture is not available. Irritating to eyes. (based on components). Causes serious eye irritation.
Skin contact	Specific test data for the substance or mixture is not available. Causes skin irritation. (based on components). May cause sensitisation by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Repeated exposure may cause skin dryness or cracking.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Potential for aspiration if swallowed. May cause lung damage if swallowed. Aspiration may cause pulmonary edema and pneumonitis.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document
 Converted acute toxicity point estimates may have been used when only acute toxicity hazard classification is available.

ATEmix (oral)	1,000.00
ATEmix (inhalation-vapour)	11.00
ATEmix (inhalation-dust/mist)	1.50
0% of the mixture consists of ingredient(s) of unknown toxicity	

Chemical Name	Oral <i>W50</i>	Dermal LD50	Inhalation LC50
Styrene	= 1000 mg/kg (Rat)	-	= 11.7 mg/L (Rat)4 h

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

Classification based on data available for ingredients. Irritating to skin.

Serious eye damage/eye irritation

Classification based on data available for ingredients. Irritating to eyes.

Sensitisation

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Reproductive toxicity

Contains a known or suspected reproductive toxin

STOT - single exposure

May cause respiratory irritation.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

May be fatal if swallowed and enters airways.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Unknown Aquatic Toxicity 0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical Name	Fish
Styrene	19.03 - 33.53 mg/L LC50 96 h <i>Lepomis macrochirus</i> static 6.75 - 14.5 mg/L LC50 96 h <i>Pimephales promelas</i> static 3.24 - 4.99 mg/L LC50 96 h <i>Pimephales promelas</i> flow-through 58.75 - 95.32 mg/L LC50 96 h <i>Poecilia reticulata</i> static

Chemical Name	Crustacea
Styrene	3.3 - 7.4 mg/L EC50 48 h <i>Daphnia magna</i>

Chemical Name	Algae/aQuatic plants
Styrene	0.46 - 4.3 mg/L EC50 72 h <i>Pseudokirchneriella subcapitata</i> static 0.15 - 3.2 mg/L EC50 96 h <i>Pseudokirchneriella subcapitata</i> static 1.4 mg/L EC50 72 h <i>Pseudokirchneriella subcapitata</i> 0.72 mg/L EC50 96 h <i>Pseudokirchneriella subcapitata</i>

Persistence and degradability

No information available.

Bioaccumulative potential

Chemical Name	Partition coefficient
Styrene	2.95

Mobility

Mobility in soil

No information available.

Mobility

No information available.

Other adverse effects

Endocrine Disruptor Information.

Chemical Name	EU-Endocrine Disruptors Candidate List	EU-Endocrine Disruptors – Evaluated Substances	Endocrine Disrupting potential
Styrene	Group 1 Chemical	High Exposure Concern	-

Section 13: DISPOSAL CONSIDERATIONS**Waste treatment methods****Waste from residues/unused products**

Hazardous wastes must be transported by a licensed hazardous waste transporter and disposed of or treated in a licensed hazardous waste treatment, storage, disposal or recycling facility.

Contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations. Observe all label precautions until container is cleaned, reconditioned or destroyed. Refer to all federal, state and local regulations prior to disposal of container and unused contents by reuse, recycle or disposal.

Section 14: TRANSPORT INFORMATION**ADG**

UN Number	UN2055
Proper shipping name	Styrene monomer, stabilized
Description	UN2055, Styrene monomer, stabilized, 3, III
Hazard Class	3
Packing Group	III
Special Provisions	223, 274
Hazchem code	3Y.
IERG	19P

IMDG

UN/ID no	UN2055
Proper shipping name	Styrene monomer, stabilized
Description	UN2055, Styrene monomer, stabilized, 3, III, (31°C c.c.)
Hazard Class	3
Packing Group	III
EmS-No	F-E, S-D

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

IATA

UN/ID no	UN2055
Proper shipping name	Styrene monomer, stabilized
Description	UN2055, Styrene monomer, stabilized, 3, III, (31°C c.c.)
Hazard Class	3
Packing Group	III
ERG Code	3L

Section 15: REGULATORY INFORMATION**Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations**

Australia Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail

(ADG). Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonised System (GHS)

See section 8 for national exposure control parameters

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Classified as a scheduled poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Poison Schedule Number S5

Major hazard (accident/incident planning) regulation Verify that license requirements are met

<u>Hazardous chemical category</u>	<u>Threshold quantity (T)</u>
Liquids that meet the criteria for Class 3 Packing Group II or III	50 000
Liquids with flash points <61°C kept above their boiling points at ambient conditions	200

**National Pollutant Inventory
International Inventories**

AICS - Australian Inventory of Chemical Substances	Listed or exempt
DSL - Canadian Domestic Substances List	Listed or exempt
IECSC - China Inventory of Existing Chemical Substances	Listed or exempt
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European Notified Chemical Substances	List of Listed or exempt
ENCS - Japan Existing and New Chemical Substances	
KECL - Korean Existing and Evaluated Chemical Substances	Listed or exempt
NZIoC - New Zealand Inventory of Chemicals	Listed or exempt
PICCS - Philippines Inventory of Chemicals and Chemical Substances	Listed or exempt
CICR - Turkey Chemical Inventory Control Regulation	Not Listed
NCSR - Taiwan National Chemical Substance Registry	No information available
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory	Listed or exempt

For confirmation on the European Reach status contact the FGA Regional Compliance group for additional information

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

Section 16: ANY OTHER RELEVANT INFORMATION

Revision Date 25-Nov-2016

Revision Note The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet