Material Safety Data Sheet

Trade Name: POLYLITE 2080 LSE

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1. PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME	**POLYLITE 2080 LSE 25kg 101125**
PRODUCT	**Unsaturated polyester resin in styrene monomer**
RECOMMENDED USE	Manufacture of reinforced and/or filled plastic composites eg fiberglass products. Product may be repacked for sale to the public. All components are listed or meet requirements of NICNAS.
SUPPLIERS NCS COMPOSITES	
	Street address: 10 Pease CT Bethania QLD 4205
	Telephone:07 30404350

24 hour EMERGENCY TELEPHONE No.0416273283
Poison Information Centre 131126

2. HAZARD IDENTIFICATION

Health Hazard Classification:

This material is classified as hazardous according to the health criteria of NOHSC Australia

Hazard category

Xn Xi	Harmful, Irritant

Risk phrases(s)

R10	Flammable
R20	Harmful by inhalation
R36/38	Irritating to eyes and skin

Safety phrase(s)

S9	Keep container in a well ventilated place
S16	Keep away from sources of ignition – NO Smoking
S23	Do not breathe vapour or spray
S36/37	Wear suitable protective clothing and gloves
S29	Do not empty into drains
S33	Take precautionary measures against static discharge

Health hazard classification and labeling according to the criteria of NOHSC

Hazard categories: Xn (Harmful), Xi (Irritant)

New Zealand
Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2001

HSNO Classification Categories:
3.1C, 6.1C, 6.3B, 6.4A, 6.6B, 6.8B, 6.9B, 9.1D

Dangerous Goods Classification:
Classified as Dangerous Goods by the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code)

Class 3 Flammable liquid

Poison Schedule (Aust): 5

3. COMPOSITION & INFORMATION ON INGREDIENTS

Chemical Name	Unsaturated Polyester Resin
Chemical Family	Synthetic Resin
Chemical Abstracts Registry No. (CAS No.)	Mixture

Ingredients contributing to hazard.

Styrene	**25 - 55%**	**Xn, R10-20-36/38**	**CAS 100-42-5**

4. FIRST AID MEASURES

Swallowed:
If swallowed, give a glass of water. Do not induce vomiting. Lean victim forward to reduce the risk of aspiration. Never give drink to an unconscious person. Transport to a doctor or hospital quickly. For further advice call Poisons Information Center (Australia 13 1126: New Zealand 03 4747000).

Eye:
Immediately flush with plenty of water for at least 15 minutes, with eyelids held open. Seek immediate medical advice.

Skin:
Immediately remove contaminated clothing. Wipe resin off skin. Wash skin thoroughly with soap and water. Wash clothing before reuse.

Inhaled:
Remove to fresh air. Seek medical assistance. If not breathing give artificial respiration. If breathing difficult give oxygen.

First Aid Facilities:
Provide eye baths and safety showers close to areas where splashing may occur.

Medical Attention and Special Treatment:
Treat symptomatically. Effects may be delayed and include pulmonary oedema. Aspiration of this product during induce emesis may result in sever lung injury. If evacuation of stomach is necessary use method least likely to cause aspiration, such as gastric lavage after endotracheal intubation.

5. FIRE FIGHTING MEASURES

Flammable liquid Polymerisable if exposed to heat.

Suitable Extinguishing Media:
Foam, dry chemical and carbon dioxide extinguishers may be used. Use water spray to cool exposed closed containers.

Hazards from Combustion Products:
Thermal decomposition products include carbon monoxide and carbon dioxide styrene and acrid smoke.

Precautions for Fire Fighters and Special Protective Equipment:
Fire fighters and others exposed to the products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

Vapours are heavier than air and can accumulate in low areas; they may travel a considerable distance to a source of ignition and flash back. The liquid normally contains an inhibitor to prevent polymerisation.
At elevated temperatures, such as fire conditions, polymerisation may take place. If polymerisation takes place in a closed container, there is the possibility of a violent rupture of the container. Styrene vapours are unihibited and may form polymers in vents and flame arresters of storage tanks, resulting in vent blockages.

Hazchem Code: 3Y

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:
Flammable liquid. Vapour may form explosive mixtures with air. Avoid all ignition sources. Keep unprotected people away. Wear appropriate protective equipment to prevent eye and skin contact and inhalation of vapours (See “Personal Protection” section). Increase ventilation. For large spills wear self contained breathing apparatus and full protective clothing.

Methods and Materials for Containment and Clean Up Procedures:
Contain spill and absorb with inert absorbent such as sand, earth or vermiculite and seal in properly labeled containers for disposal. Alternatively, pump to salvage truck. Keep out of sewer, stormwater drains and waterways.

Containers:
Emptied containers retain vapour and product residue and may therefore present explosive vapour and toxic material hazards. Observe all safeguards on label and in this MSDS until container is cleaned, reconditioned or destroyed. DO NOT CUT OR WELD ON OR NEAR THIS CONTAINER. In all cases disposal should be in accordance with regulations.

Developmental and Reproductive Toxicity
Laboratory studies investigating human developmental and reproductive toxicity of styrene have indicated that styrene exposures either as vapour, oral or drinking water, do not result in any specific developmental or reproductive toxicity. Although some minor developmental effects were noted in some studies, these effects were either within the historical range for these effects or were secondary to maternal toxicity from exposure to relatively high levels of styrene.

Neurological (Nervous System) Effects
Some evidence of hearing loss was observed in rats repeatedly exposed to high concentrations of styrene vapour. Effects on human hearing are not expected from workplace exposures to styrene.

Slight effects on colour discrimination have been detected in workers exposed to styrene vapours. These subtle effects are unlikely to be noticed by those affected.

Other nervous system effects have been noted in humans exposed to styrene. However, these effects have not been consistently or reliably observed in animal studies.

Medical conditions generally aggravated by exposure

Because of styrene's defatting properties, prolonged and repeated skin contact may aggravate an existing dermatitis (skin condition). Repeated overexposure may aggravate or enhance existing nervous system dysfunction. Repeated overexposure may aggravate existing respiratory, liver or kidney disease.

12. ECOLOGICAL INFORMATION

No data available on product.

Ecotoxicity
Styrene is moderately toxic to fish and daphnia and highly toxic to algae.

Aquatic Toxicity

LC50-96hr	10mg/litre (Fathead minnow) moderately toxic
EC50-48hr	4.7mg/litre (Daphnia magna) moderately toxic
EC50-96hr	0.72mg/litre (Green algae) highly toxic (algistatic)

Mobility:
Styrene is expected to bind to soils and sediments and have low mobility. The estimated organic carbon/water partition co-efficient (log Koc)$^{=2.42 – 2.96}$

Persistence / Degradability
Persistence and Biodegradability
Styrene has been shown to undergo slow but nearly complete biodegradation in laboratory studies. Styrene released to soil will have low mobility (see above) and will biodegrade. Styrene released to water will float and volatilize (Henry's Law constant = 0.00275 atm m^3/mole at 25°C) and will biodegrade. Styrene vapour will degrade rapidly in the ambient atmosphere. Styrene is not expected to persist in the environment.

Potential to Bioaccumulate
Although the octanol/water partition co-efficient (log Kow) for styrene has been determined to be 2.95, indicating a moderate potential to bioaccumulate, the bioconcentration factor (log BCF) in goldfish has been determined to be 0.83 to 1.13 indicating a reduced bioconcentration potential in aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Disposal methods:
The product is considered to be a hazardous waste because of its flammability and toxicity. If feasible, recycle. Liquid waste resin may be solidified by heating in an approved heating chamber. The properly cured solid may be disposed of in a chemical landfill. Otherwise, dispose of by burning in an approved incinerator. In all cases, disposal should be in accordance with regulations.

Special precautions for landfill or incineration:
Emptied containers retain vapour and product residue and many therefore present explosive vapour and health hazards. Observe all safeguards on label and in this MSDS until container is cleaned, reconditioned or destroyed. **DO NOT CUT OR WELD ON OR NEAR THIS CONTAINER**. In all cases disposal should be in accordance with regulations.

14. TRANSPORT INFORMATION

Road and Rail Transport (ADG Code)

UN Number	1866
Proper Shipping Name	RESIN SOLUTION
Dangerous Goods Class	3
Subsidiary Risk	None allocated
Packing Group	III
Hazchem Code	3[Y]
Emergency Information	IERG 14 (SAA/NZS HB:76) or EPG 3A1(AS2931)

Marine Transport (IMDG Code)

UN Number	1866
Proper Shipping Name	RESIN SOLUTION
Dangerous Goods Class	3
Subsidiary Risk	None allocated
Packing Group	III

Air Transport (IATA Regulations)

UN Number	1866
Proper Shipping Name	RESIN SOLUTION
Dangerous Good Class	3
Subsidiary Risk	None allocated
Packing Group	III

Dangerous Goods Segregation (ADG Code)
Do not load and pack with Class 1 (Explosives). Class 2.1 (Flammable Gases – where flammable liquids/gases are in bulk). Class 2.3 (Toxic Gases). Class 4.2 (Spontaneously Combustible Substances). Class 5.1 (Oxidising Agents). Class 5.2 (Organic Peroxides). Class 7 (Radioactive Substances). Transport in accordance with State and Territory regulations for Dangerous Goods.

15. REGULATORY INFORMATION

Country / Region	Inventory	Status
Australia	AICS	All components are listed

Poisons schedule (Aust): 5

16. OTHER INFORMATION

Abbreviations:

AICS	Australian Inventory of Chemical Substances
IARC	International Agency for Research on Cancer
IATA Regulations	International Air Transport Association Regulations
IERG	Initial Emergency Response Guide (SAA/NZS HB 76)
IMDG Code	International Maritime Dangerous Goods Code
NOHSC	National Occupational Health and Safety Commission Australia

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