Safety Data Sheet Isophthalic Polyester Resin

Updated December 2023 MSDS Code: G.P.

1. Identification of the Material and Supplier

Product Name:	Synthepol Isophthalic Polyester Resin
Product Code:	P225 – range of different colours
HSNO Approval #:	HSR002502
UN Number:	1866
DG Class:	3
Shipping Name:	Resin Solution, Flammable
Packaging Group:	III
Hazchem Code:	3Y
Uses:	Infusion and RTM
Company:	H S Composites
Address:	63 Hunua Road, Papakura, Auckland 2110
Telephone:	+64 (09) 255 2200
Email:	sales@hscomposites.co.nz
Website:	www.hscomposites.co.nz

2. Hazard Identification

Regulatory Information	Classified as Hazardous according to the Hazardous
HSNO Approval Number	HSR 002502
Dangerous Goods Class	3

Hazardous Classifications

3.1C	Flammable Liquid
6.1D	Oral Toxicity
6.1D	Inhalation Toxicity
6.3A	Skin Irritant

6.4A	Eye Irritant
6.6B	Suspected Mutagen
6.7B	Suspected Carcinogen
6.8B	Suspected reproductive/development toxicity
6.9A	Toxic to organs
9.1B	Toxic to aquatic environment
9.3B	Toxic to terrestrial vertebrates

Signal Word: DANGER

Pictograms:

HEALTH HAZARDS:

H226	Flammable Liquid and Vapour
H302	Harmful if Swallowed
H315	Causes Skin Irritation
H319	Causes Serious eye irritation
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H355	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child
H372	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H432	Toxic to terrestrial vertebrates

ENVIRONMENT HAZARDS:

H401	Toxic to aquatic life.

PRECAUTIONARY STATEMENTS: Preventions

P103	Read Label/SDS before use
P210	Keep away from heat/sparks/open flame/hot surfaces. No smoking.
P233	Keep container tightly closed
P240	Ground/bond container and receiving equipment
P241	Use explosion proof equipment
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P260	Do not breathe vapours
P264	Wash hands and exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product

P271	Use only outdoors or well-ventilated areas
P273	Avoid release into the environment
P280	Wear protective clothing, gloves and eye protection
P281	Use personal protective equipment as required

RESPONSE:

P101	If medical advice is needed, have product container or label at hand
P301 + P312	If swallowed call POISON CENTRE or DOCTOR if you feel unwell
P330	Rinse out mouth
P302 + P352	If on skin, wash with plenty of soap and water
P332 + P313	If skin irritation occurs, get medical advice
P362	Take off contaminated clothing and wash before reuse
P304 + P340	If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so, continue to rinse
P337 + P313	If eye irritation persists seek medical advice
P308 + P313	If exposed or concerned seek medical advice
P314	Get medical advice if you feel unwell
P370 + P378	In case of fire use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish
P391	Collect any spillage
P301+P330 +P331	IF SWALLOWED: Rinse out mouth, do not swallow water, DO NOT induce vomiting.
P370+P378	In case of fire: Use appropriate media for extinction.

STORAGE:

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P235	Keep cool.
P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P405	Store in a locked area

DISPOSAL:

P501	Dispose of product and packaging in accordance with local and Governmental regulations

Dangerous Goods Classification	3
Packing Group	lll
Hazchem Code	3Y

3. Composition / Information on Ingredients

Component	Cas No	Proportion	Threshold Limit Value
Styrene	100-42-5	45 - 50%	50ppm
Polyester		50 - 55%	

4. First Aid

For advice, contact the National Poisons Centre
(Phone New Zealand: 0800 764 766) or a doctor.

Swallowed: If swallowed, do NOT induce vomiting. Rinse mouth. Get medical advice. Begin artificial respiration if the victim is not breathing. Use mouth to nose rather than mouth to mouth. Obtain immediate medical attention

Skin Contact: If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If skin irritation occurs, get medical advice. Launder contaminated clothing before re-use.

Eye Contact: Hold eyelids apart and flush the eye continuously with running water for 15 minutes. Remove contact lenses after 5 minutes if present, and easy to do. Continue flushing. Get immediate medical attention if irritation persists.

Inhalation: Move the person to fresh air immediately. Keep warm and at rest until recovered. Get medical advice if person feels unwell or is concerned.
Begin artificial respiration if breathing has stopped and get immediate medical assistance.

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

Note to Doctor/Physician: Treat symptomatically.

5. Fire Fighting Measures

Flammable liquids and vapours: Shut off product that may ‘fuel’ a fire if safe to do so. Allow trained personnel to attend a fire in progress, providing fire fighters with this Safety Data Sheet. Prevent extinguishing media from escaping to drains and waterways.

Suitable extinguishing media: Water fog, foam, dry chemical or carbon dioxide (CO2). DO NOT use straight streams of water.
Hazards from combustion products: Smoke, fume, carbon dioxide and carbon monoxide and incomplete combustion products.
Precautions for fire fighters and special protective equipment: Full protective clothing and self-contained breathing apparatus
Hazchem Code: 3Y
Styrene will polymerise at elevated temperatures. If this occurs in a closed container there is risk of violent rupture.

SPECIAL FIREFIGHTING PROCEDURES.

Fight like a fuel-oil fire. Water used in fire-fighting should not be allowed to enter drainage systems or contaminate soil. UFL 6.1%

LFL 1.1%

6. Accidental Release Measures

Steps to be taken if the material is released or spilled.

Eliminate all sources of ignition (flames, hot surfaces, electrical, static or frictional sparks). Ventilate the surrounding area.

Contain the area of spillage and pump material into drums for use or disposal. Absorb remainder on sand or perlite and place the saturated absorbent into closed containers and label for disposal.

Prevent contamination of storm-water drains and waterways.

Waste disposal method. Destroy by liquid incineration with off-gas scrubber.

Contaminated absorbent to be disposed of in accordance with appropriate local or governmental regulations.

Correctly label all material containers to be disposed of.

Liquid material mixed with peroxide initiators should be allowed to gel and cool before disposal as solid waste in accordance with appropriate local or national regulations.

7. Storage and Handling

Avoid inhalation of vapour and contact with skin, eyes and clothing. Launder contaminated clothing before re-use, wash skin with soapy water. Wash hands thoroughly before eating.

This product is flammable, do not open near open flame, sources of heat or ignition, NO SMOKING.

Store in a locked and bunded area or approved flammable goods store away from direct heat (ideally below 25°C to prevent spoilage). Keep containers closed when not in use. Open drums slowly in case of internal pressure. Isolate from all potential sources of ignition including flames and electrical sparks.

Store separate from oxidising materials, peroxides and metal salts.

Ground (earth) containers when using above flash point, 31°C.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Limit for Styrene is 20ppm TWA and 40ppm STEL.

Use general dilution or local exhaust ventilation to maintain vapour concentration below WES level.
If concentrations exceed exposure limit use organic vapour canister mask or approved air-line mask.

Skin Protection: Wear overalls or other work clothing providing arm and leg cover. Use protective gloves (Latex or Nitrile).

Eye Protection: Safety goggles or splash mask.

9. Physical / Chemical Properties

Physical Description & colour:	Clear, cloudy or coloured viscous liquid.
Odour:	Pungent aromatic odour of styrene.
Boiling Point:	145°C (Styrene)
Flammable Liquid Flash Point:	31°C

Flammable Limits:	LEL (lower explosive limit) 1.1%
	UEL (upper explosive limit) 6.1%
Specific Gravity:	1.1 – 1.7
Percent Volatiles:	25 – 55w/w
Water Miscibility:	Immiscible

10. Stability and Reactivity

Stability:	Generally this product has good stability.
	Potentially unstable – may polymerise producing heat if stored incorrectly.
Conditions to avoid:	Exposure to sunlight, open flames, contamination and prolonged storage above 25°C.
Materials to avoid:	Strong acids, peroxides, other oxidising agents, transition metals e.g. copper and zinc, their alloys and galvanised items.
Hazardous Polymerisation:	May occur as result of high temperature or contamination, if burned, these products will evolve black, acrid smoke along with carbon monoxide, carbon dioxide and various organic compounds.

11. Toxicological Information

When used under properly controlled conditions, within workplace exposure limits and with adequate protective equipment, no adverse health effects are to be expected.

Acute effects of over exposure.

If Swallowed: Harmful by ingestion. Possible irritation of mucous membranes, nausea, vomiting and gastric disturbance. Possible depression of central nervous system. Aspiration into lungs could cause pneumonitis which may damage lungs or may be fatal.

Eye Contact: Mild to moderate irritation. Reddening may occur if exposure is prolonged.

Skin Contact: Irritant. May cause itching and redness of skin.

Inhalation of Vapour: May cause headaches, nausea, irritation of the respiratory tract and depression of the central nervous system.

Chronic effects of overexposure:

Mild dermatitis may result from prolonged or repeated skin contact. Styrene can be absorbed through the skin. Seek medical advice

Excessive exposure to the liquid material or vapour may affect the central nervous system, the liver, kidneys and respiratory system.

12. Ecological Data

Prevent these products from entering storm-water drains sewers or waterways.

Styrene is the major contaminant hazard in these formulations and it will undergo slow (but near complete) biodegradation in contact with soil. Styrene vapour degrades rapidly in the atmosphere.

Styrene floats on water and will vaporise and biodegrade.

Toxic to aquatic organisms.

13. Disposal Considerations

Waste Disposal: Small quantities of these products may be mixed with appropriate amounts of polymerization initiators (catalyst) and allowed to solidify before disposal as solid waste. Recover or recycle if possible. This material and its container must be disposed of as hazardous waste. Any disposal must be labelled as such and comply with applicable local and national regulations. Ensure that these materials do not enter drains, sewers or waterways. Ensure that empty packaging is managed in accordance with Dangerous Goods and HSNO regulations.

P501	Dispose of product and packaging in accordance with local regulations
Dangerous Goods Classification	3
Packing Group	III
Hazchem Code	3Y

14. Transport Information

Dangerous according to Australian Dangerous Goods (ADG) Code, IATA and IMDG/IMSBC criteria.

UN Number:	UN1866
Proper Shipping Name:	Resin Solution, Flammable
Hazchem Code:	3Y
Dangerous Goods Class:	Class 3
Packing Group:	III
Tunnel Restriction:	D
Environmental Hazard:	Marine Pollutant
EMS Number	F-E, S-E
ERG Code	127

15. Regulatory Information

EPA New Zealand HSNO approval code HSR002495, Group standard additives, process chemicals and raw materials (Flammables) Group standard 2008.

SDS	To be available within 10 minutes when required.
Emergency Plan	Required if storage of over 100L.
Containment	Bunding required if over 100L.
Signage	If storing over 100L.
Location Certificate	Required if storing over 100L.

16. Other Information

This SDS contains only safety-related information. For other data see product literature.

Review: December 2023 Reason: Update part numbers

Disclaimer: The information given in this safety data sheet is given in good faith and is believed to be valid and accurate at the time of publication. However, no responsibility is accepted for accident or injury which may occur from omissions or from information contained in the data sheet.

12/23r