



## Safety Data Sheet Synthepol Topflow

Updated April 2021

### 1. Identification of the Material and Supplier

Product Name:	Synthepol Topflow
Product Code:	P712, with variations P712Wh, P712LG, P712 SP
HSNO Approval #:	HSR002495
UN Number:	1866
DG Class:	3
Shipping Name:	Resin Solution, Flammable
Packaging Group:	III
Hazchem Code:	3Y
Uses:	Finish coat for reinforced polyester composites
Company:	H S Composites
Address:	63 Hunua Road, Papakura, Auckland 2110, NZ
Telephone:	+64 (09) 295 2200
Email:	sales@hscomposites.co.nz
Website:	www.hscomposites.co.nz

### 2. Hazard Identification

Flammable Liquid	Category 3
Acutely Toxic (Oral)	Category 4
Acutely Toxic (Inhalation)	Category 4
Serious Eye Corrosion/Irritation	Category 2
Serious Eye Damage/Irritation	Category 2
Skin Sensitization	Category 1
Reproductive Toxicity	Category 2
Specific Target Organ Toxicity (Single & Repeated Exposure)	Category 1
Aquatic Toxicity (Chronic)	Category 2
Aquatic Toxicity (Chronic)	Category 3

Signal Word: **DANGER**



Flammable



Irritant



Harmful



Aquatic Hazard

H226	Flammable Liquid and vapour
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**HEALTH HAZARDS:**

H304	May be fatal if swallowed and enters airways.
H332	Harmful if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H355	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure

**ENVIRONMENT HAZARDS:**

H401	Toxic to aquatic life.
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**PRECAUTIONARY STATEMENTS:****PREVENTION:**

P210	Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233	Keep container tightly closed.
P243	Take precautionary measures against static discharged.
P260	Do not breathe dust/fume/gas/mist/ vapours/spray.
P264	Wash hands thoroughly after handling.
P27	1Use only in well-ventilated areas.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection

**RESPONSE:**

P304+P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with soapy water/shower.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P305+P351+P338	IF IN EYES: Rinse cautiously with water, remove contact lenses, if present and easy to do. Continue rinsing for 15 mins, seek medical advice if required.
P337+P313	If eye irritation persists, get medical attention.
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.

**DISPOSAL:**

P501	Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.
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**Other Hazards which do not result in classification.**

Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger. May form flammable/explosive vapour-air mixture.

Maintain dissolved oxygen and inhibitor at proper levels to prevent runaway polymerisation.

Repeated exposure may cause skin dryness or cracking, if symptoms persist seek medical advice.

Pre-existing medical conditions of the following organ(s) or organ system(s) may be aggravated by exposure to this material: Central nervous system (CNS). Auditory system. Respiratory system.

**3. Composition / Information on Ingredients**

Component	Cas No	Proportion
Styrene	100-42-5	45 - 50%
Polyester		50 - 55%

**4. First Aid**

**Ingestion:** Harmful if swallowed. Single dose oral toxicity is low. Do not induce vomiting.

Aspiration of material into the lungs could cause pneumonitis which can be fatal. Give milk or water.

**Seek medical attention.**

**Inhalation of Vapour:** Harmful. Effects may include headache, nausea, fatigue, central nervous system depression, pulmonary oedema. May be irritating to nose, throat and respiratory tract.

**Move victim to fresh air. Apply artificial respiration or give oxygen if necessary. Seek medical attention.**

**Eye Contact:** Irritant. Flush with copious amounts of water - lift eyelids repeatedly. Seek medical attention.

**Skin Contact:** Irritant. Wash thoroughly with soap and water. Remove contaminated clothing and launder before re-use. Seek medical advice if irritation persists.

**Advice to Doctor:** Treat symptomatically

**5. Fire Fighting Measures****EXTINGUISHING MEDIA.**

Foam, carbon dioxide, dry powder, water fog.

**FLAMMABLE LIQUIDS AND VAPOURS.**

Shut off product that may fuel the fire if safe to do so. Allow trained personnel to attend to fire in progress if safe to do so. Prevent extinguishing media from entering drains and waterways. Vapours are heavier than air and will sink to lowest point. Have SDS ready for firefighters.

**HAZARDS FROM BURNING PRODUCT.**

Thick black smoke, fumes, carbon dioxide and monoxide.

**PRECAUTIONS FOR FIREFIGHTERS AND PROTECTIVE EQUIPMENT.**

Full protective clothing and self-contained breathing apparatus.

**UNUSUAL FIRE AND EXPLOSION HAZARDS.**

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.

**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 before disposal as solid waste in accordance with appropriate local or national regulations.

**7. Storage and Handling**

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

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## 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:** Sweet or sharp aromatic odour of styrene.

**Boiling Point:** 145°C (Styrene)

**Specific Gravity:** 1.1 – 1.7

**Flammable Liquid Flash Point:** 31°C

**Flammable Limits:** LEL 1.1% UEL 6.1%

**Percent Volatiles:** 25 – 55w/w

**Water Miscibility:** Immiscible

## 10. Stability and Reactivity

**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** May occur as result of high temperature or contamination, if burned,

**Polymerisation:** 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 ventilation and 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: Product is irritating to the eyes.

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

Inhalation of Vapour: May cause headaches, nausea, irritation to the respiratory tract.

### 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, damaging fertility or to the unborn child, may cause cancer and is toxic to organs.

## 12. Ecological Data

Prevent these products from entering storm-water drains sewers or waterways. It is toxic to aquatic organisms.

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.

H401	Toxic to aquatic life.
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## 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 government 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**

Transport according to NZS5433 (Transport of Hazardous Substances on land), considered a dangerous good for transport.

UN Number:	1866
Proper Shipping Name:	Resin Solution, Flammable
Hazchem Code:	3Y
Dangerous Goods Class:	Class 3
Packing Group:	III
Environmental Hazard:	Marine Pollutant
Tunnel Restriction:	D
EMS Number	F-E, S-E
ERG Code	127

**15. Regulatory Information**

EPA New Zealand HSNO approval code HSR002495.

Additives, Process Chemicals and Raw Materials (Flammable) Group Standard 2020, October 2020

**SDS To be available within 10 minutes when required;**

**16. Other Information**

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

LEL	Lower explosive limit
UEL	Upper explosive limit
TWA	Time weighted average over 8 hr working day
STEL	Short term expose limit
Cas #	Unique registered number for chemicals
ppm	parts per million
UN number	Individual number assigned to hazardous materials
EMS	Emergency response for shipping
ERG	Emergency code for first responders
Other References	Supplier SDS's

Review: April 2021

Reason: Update to GHS and pictograms

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.

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