

# Material Safety Data Sheet

## SHCP Unsaturated Polyester Resin

Issue Date March 2007

ISSUED by Kirkside Products

**Classified as hazardous according to criteria of NOHSC**

### COMPANY DETAILS

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**Company Name** Kirkside Products Pty. Ltd. 21 Roberts St. (West) Osborne Park W.A. 6017  
**Address**  
(08) 9242 2990 (Monday – Friday 8am – 5pm W.S.T.)  
**Emergency** Tel: (08) 9242 2990 Fax: (08) 9242 4867

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### IDENTIFICATION

**Product Code** SHCP 628 BQTN  
**Product Name** Unsaturated Polyester Resin  
**Proper Shipping Name** RESIN SOLUTION  
**Other Names** Not Available  
**UN Number** 1866  
**DG Class** 3  
**Packing Group** III  
**Hazchem Code** 3[Y]  
**Poisons Schedule** 55  
**Product Use** Composites fabrication.

### Physical Data

**Appearance** Clear to hazy liquid.  
**Boiling Point** 145°C \*  
**Vapour Pressure** 0.6 kPa at 20°C \*

<b>Specific Gravity</b>	0.95 - 1.15 (H <sub>2</sub> O = 1) Dependant on non-volatile content.
<b>Flash Point</b>	31°C TCC *
<b>Flamm. Limit</b>	
<b>LEL</b>	1.1% *
<b>Flamm. Limit UEL</b>	6.1% *
<b>Solubility in Water</b>	Insoluble.

### Other Properties

<b>Evaporation Rate</b>	0.49 (Butyl acetate = 1) *
<b>Vapour Density</b>	3.6 (Air = 1) *
<b>Odour</b>	Characteristic styrene.
<b>Colour</b>	May be tinted.
<b>Form</b>	Liquid
<b>Stability</b>	Stable under normal storage conditions.
<b>Haz.</b>	
<b>Polymerization</b>	May occur if contaminated, or at elevated temperatures.
<b>Materials to Avoid</b>	Alkylation catalysts and strong acids (H <sub>2</sub> SO <sub>4</sub> , H <sub>3</sub> PO <sub>4</sub> , BF <sub>3</sub> , AlCl <sub>3</sub> ), halogens and hydrogen halides. Contact with copper and copper alloys. Oxidising agents.
<b>Other Information</b>	* for Styrene.

### Ingredients

Ingredients	Name	CAS	Proportion
	Polyester resin	Proprietary	45-65 %
	Styrene Monomer	100-42-5	35-55 %
	Fumed silica	14808-60-7	0-1.5 %
	Metal Naphthenates and/or Octoates	Proprietary	0-1 %
	Quinone and/or phenolic inhibitors	Proprietary	0-0.5 %
	Amine and/or aniline derivatives	Proprietary	0-0.5 %

### HEALTH HAZARD INFORMATION

#### Health Effects

<b>Acute - Swallowed</b>	May result in irritation, vomiting and depression.
<b>Acute - Eye</b>	A severe eye irritant.
<b>Acute - Skin</b>	A severe skin irritant. Prolonged contact with skin may cause blistering, and repeated contact may have a defatting effect causing dryness and cracking.
<b>Acute - Inhaled</b>	Vapour can cause severe irritation to the respiratory tract. Styrene at 400 ppm is irritating to all parts of the respiratory tract. Styrene possesses narcotic-like properties; excessive exposure may result in headache, dizziness, incoordination, fatigue, nausea, loss of appetite and loss of consciousness.

#### Hazards Identification

**Chronic** Detailed toxicological information is available on request.

### First Aid

**Swallowed** DO NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

**Eye** Irrigate with copious quantity of water for at least 15 minutes. Seek medical assistance.

**Skin** Wash with plenty of soap and water. Remove contaminated clothing, including shoes. Seek medical assistance if symptoms persist.

**Inhaled** Using proper respiratory protection, immediately remove the affected person from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Seek immediate medical assistance.

**First Aid Facilities** Eye wash fountains and safety showers should be easily accessible.

### Advice to Doctor

**Advice to Doctor** Aspiration may cause pneumonitis. Administration of vegetable oil with or without activated charcoal is recommended for initial treatment of irritant effect on the alimentary canal.

### Other Health Hazard Information

**Carcinogenicity** Styrene is classified as 'possibly carcinogenic to humans' by the International Agency for Research on Cancer (IARC). Detailed toxicological information is available on request.

### PRECAUTIONS FOR USE

Exposure Limits	Name	STEL	STEL	TWA	TWA	FootNote
		(mgm3)	(ppm)	(mgm3)	(ppm)	
	Styrene Monomer	426	100	213	50	
	Fumed silica			0.2		

**Other Exposure Info.** Exposure Standards for other ingredients not established.

**Eng. Controls** Use in well ventilated area only. Provide ventilation to control exposure limit below Exposure Standard.

### Personal Protection

**Respirator Type (AS 1716)** Where concentrations in air may exceed the recommended exposure limits, or work practice or other means of exposure reduction are not adequate, approved respirator may be necessary to prevent overexposure by inhalation.

**Eye Protection** Safety glasses or chemical goggles as appropriate.

**Glove Type** Chemical resistant gloves.

**Clothing** Long sleeved overalls.

**Footwear** Safety boots.

### Flammability

**Fire Hazards** Flammable. Keep away from heat, sparks or naked flames.

### SAFE HANDLING INFORMATION

#### Storage and Transport

**Storage Precautions** Store in well ventilated area, ideally below 27°C in a closed container and dry area to avoid spoilage. Open drums slowly to relieve any internal

pressure. In bulk storage check vents and flame arrestors for plugging and the formation of polymer. Ground all connections, containers etc when using. Store away from sources of heat or ignition. Store away from oxidising agents. Avoid prolonged storage over 38°C.  
Flammable liquid, Class 3.

**Transport Special Shipping Information** IMDG 3.3 Marine Pollutant.  
**Proper Shipping Name** RESIN SOLUTION  
**EPG Number** 3A1  
**IERG Number** 14  
**Packaging Method** 3.8.3RT1,RT7

### Spills and Disposal

**Spills & Disposal** Extinguish or remove all sources of ignition. Clear area of all unprotected personnel. Wear appropriate protection equipment. Do not contaminate streams, rivers or water courses. Do not flush drains or sewers. Inform local authority if liquid enters drains, sewers, streams etc. Shut off sources of leak if safe to do so. Dike and contain spill with sand or earth.  
MINOR: Absorb the liquid with sand, earth or other inert absorbent. Place used absorbent in suitable, sealable, labelled containers. Keep away from heat, naked flame or sparks.  
MAJOR: Take up liquid with vacuum truck or absorb with sand, earth or other inert absorbent. Place used absorbent in suitable, sealable, labelled containers. Keep away from heat, naked flame or sparks.  
**Disposal** Dispose of in accordance with Local, State and Federal regulations.  
**Other Disposal Info.** May be treated to convert to solid resin.

### Fire/Explosion Hazard

**Fire/Explos. Hazard** Polymerisation may occur at elevated temperatures, such as a fire. If polymerisation occurs in a closed container, violent rupture may result.  
**Hazardous Decomposition or Byproducts** Carbon monoxide, carbon dioxide, fumes and smoke.  
**Fire Fighting Procedures** Wear full body protective clothing, and self-contained breathing apparatus.  
**Fire Fighting Precautions** Water spray may be used to keep fire exposed containers cool.  
**Extinguishing Media** Foam, carbon dioxide or dry chemical.  
**Hazardous Reaction** Avoid sunlight, open flames, contamination and prolonged storage above 38°C.  
**Hazchem Code** 3[Y]

### OTHER INFORMATION

**Toxicology** for Styrene:  
Oral LD50 (Rat): 4,370mg/kg, slightly toxic  
Dermal LD50 (Rabbit): Greater than 5,010 mg/kg, practically non toxic  
Eye irritation (Rabbit): (FHSA) 10.3 on a scale of 110.0, 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 six hour exposure

to 3,290 ppm  
More extensive toxicological information is available on request.

**Environment Protection Risk Statement** Avoid contaminating waterways. Harmful to aquatic life.

**Safety Statement** R10 Flammable.  
R20 Harmful by inhalation.  
R36/38 Irritating to eyes and skin.

**Pkg. & Labelling** S23 Do not breathe gas/fumes/vapour/spray  
Class 3 labels in accordance with the Australian Code for the Transport of Dangerous Goods, including Schedule 5 Poison, Hazardous Substance and Marine Pollutant requirements.

**Hazard Category** Harmful, Irritant

CONTACT POINT

**Contact** For further information ask for: For specialist advice in emergencies: Australia (08) 9242 2990

IMPORTANT ADVICE: This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including its use in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact Kirkside Products Pty Ltd. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.

End of MSDS