Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
POWERS HAMMER-CAPSULE

SYNONYMS

PROPER SHIPPING NAME
RESIN SOLUTION

PRODUCT USE
Chemical anchor system for fixing into solid base materials ranging from soft common brick to hard marble or granite. Sealed adhesive capsule is mixed inside hole during insertion of anchor rod.

SUPPLIER
Company: Powers Fasteners Australasia Pty Ltd
Address:
Factory 3, 205 Abbotts Road
Dandenong South
VIC 3175
Australia
Telephone: +61 3 8787 5888
Telephone: 1800 677 872 (freecall)
Fax: +61 3 8787 5899

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE
HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE
S5

RISK
Flammable.
Harmful by inhalation.
Irritating to eyes and skin.
May cause SENSITISATION by skin contact.
HARMFUL-May cause lung damage if swallowed.

SAFETY
Keep container in a well ventilated place.
Avoid exposure - obtain special instructions before use.
To clean the floor and all objects contaminated by this material, use water and detergent.
Keep container tightly closed.
Keep away from food, drink and animal feeding stuffs.
Take off immediately all contaminated clothing.
In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show

continued...

this container or label).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
Two-part glass capsule containing		
styrene	100-42-5	10-60
quartz granules, as		
graded sand	14808-60-7.	
epoxy acrylate resin		
dibenzoyl peroxide	94-36-0	<10
dicyclohexyl phthalate	84-61-7	

Section 4 - FIRST AID MEASURES

SWALLOWED

If poisoning occurs, contact a doctor or Poisons Information Centre.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

EYE

If this product comes in contact with the eyes:
- Immediately hold eyelids apart and flush the eye continuously with running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin contact occurs:
- Immediately remove all contaminated clothing, including footwear
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor.

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NOTES TO PHYSICIAN

For acute or short term repeated exposures to styrene:
INHALATION:
- Severe exposures should have cardiac monitoring to detect arrhythmia.
- Catecholamines, especially epinephrine (adrenaline) should be used cautiously (if at all).
- Aminophylline and inhaled beta-two selective bronchodilators (e.g. salbutamol) are the drugs of choice for treatment of bronchospasm.

INGESTION:
- Ipecac syrup should be given for ingestions exceeding 3ml (styrene)/kg.
- For patients at risk of aspiration because of obtundation, intubation should precede lavage.
- Pneumonitis is a significant risk. Watch the patient closely in an upright (alert patient) or left lateral head-down position (obtunded patient) to reduce aspiration potential. [Ellenhorn and Barceloux: Medical Toxicology]

BIOLOGICAL EXPOSURE INDEX - BEI
These represent the determinants observed in specimens collected from a healthy worker who has been exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Mandelic acid in urine	800 mg/gm creatinine	End of shift	NS
	300 mg/gm creatinine	Prior to next shift	NS
2. Phenylglyoxylic acid in urine	240 mg/gm creatinine	End of shift	NS
	100 mg/gm creatinine	Prior to next shift	
3. Styrene in venous blood	0.55 mg/L	End of shift	SQ
	0.02 mg/L	Prior to next shift	SQ

NS: Non-specific determinant; also seen after exposure to other materials.
SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.
B: Background levels occur in specimens collected from subjects NOT exposed.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

FIRE FIGHTING
- Alert Fire Brigade and tell them location and nature of hazard.
- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- If safe, switch off electrical equipment until vapour fire hazard removed.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.

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- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 metres in all directions.

FIRE/EXPLOSION HAZARD

- Liquid and vapour are flammable.
- Moderate fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Moderate explosion hazard when exposed to heat or flame.
- Vapour may travel a considerable distance to source of ignition.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).

Other combustion products include carbon dioxide (CO2).
May emit clouds of acrid smoke.

FIRE INCOMPATIBILITY

Avoid reaction with oxidising agents, strong acids, peroxides, ferrous salts, metal halides, alkalies and ultra-violet radiation.

HAZCHEM

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Personal Protective Equipment

Breathing apparatus.
Gas tight chemical resistant suit.
Limit exposure duration to 1 BA set30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

Not normally a hazard due to physical form of product.
Clean up all spills immediately.
Shut off all possible sources of ignition and increase ventilation.
Avoid breathing vapours and contact with skin and eyes.
Wear protective clothing, impervious gloves and safety glasses.
Trowel up/scrape up.
Place in suitable containers for disposal.
Wash spill area with detergent and water.

MAJOR SPILLS

Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.

- May be violently or explosively reactive.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.

No smoking, naked lights or ignition sources. Increase ventilation.
absorb vapour.
Contain spill with sand, earth or vermiculite.
Use only spark-free shovels and explosion proof equipment.
Collect residues and place in flammable waste container.
After clean up operations, decontaminate and launder all protective clothing and

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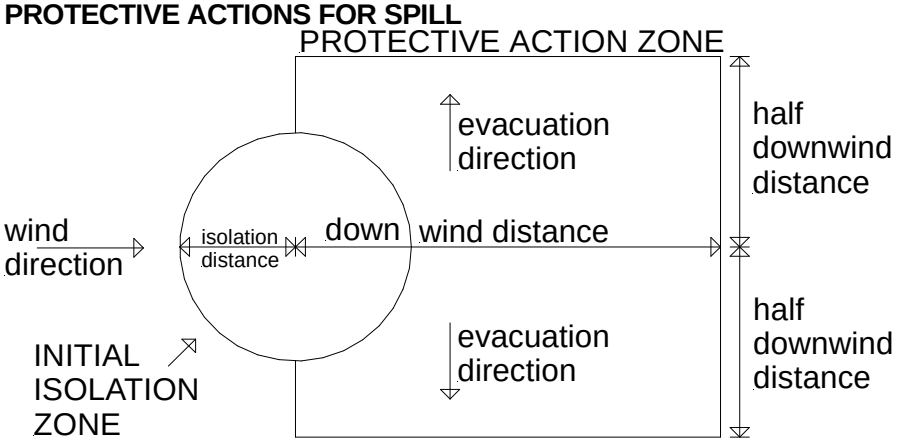
equipment before storing and re-using.
If contamination of drains or waterways occurs, advise emergency services.

PROTECTIVE ACTIONS FOR SPILL



From IERG (Canada/Australia)

Isolation Distance	25 metres
Downwind Protection Distance	300 metres
IERG Number	14

FOOTNOTES

1 PROTECTIVE ACTION ZONE is defined as the area in which people are at risk of harmful exposure. This zone assumes that random changes in wind direction confines the vapour plume to an area within 30 degrees on either side of the predominant wind direction, resulting in a crosswind protective action distance equal to the downwind protective action distance.
2 PROTECTIVE ACTIONS should be initiated to the extent possible, beginning with those closest to the spill and working away from the site in the downwind direction. Within the protective action zone a level of vapour concentration may exist resulting in nearly all unprotected persons becoming incapacitated and unable to take protective action and/or incurring serious or irreversible health effects.
3 INITIAL ISOLATION ZONE is determined as an area, including upwind of the incident, within which a high probability of localised wind reversal may expose nearly all persons without appropriate protection to life-threatening concentrations of the material.
4 SMALL SPILLS involve a leaking package of 200 litres (55 US gallons) or less, such as a drum (jerrican or box with inner containers). Larger packages leaking less than 200 litres and compressed gas leaking from a small cylinder are also considered "small spills".
LARGE SPILLS involve many small leaking packages or a leaking package of greater than 200 litres, such as a cargo tank, portable tank or a "one-tonne" compressed gas cylinder.
5 Guide 127 is taken from the US DOT emergency response guide book.
6 IERG information is derived from CANUTEC - Transport Canada.

EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:
styrene 1000 ppm

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:
styrene 250 ppm

continued...

other than mild, transient adverse effects
without perceiving a clearly defined odour is:
styrene 50 ppm

The threshold concentration below which most people.
will experience no appreciable risk of health effects:
styrene 50 ppm

American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Use good occupational work practice. Observe manufacturer's storing and handling recommendations.
Avoid physical damage to containers.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Avoid breathing vapours and contact with skin and eyes.
Wear protective clothing when risk of exposure occurs.
Avoid smoking, naked lights, heat or ignition sources.
Vapour may travel a considerable distance to source of ignition.
Use in a well-ventilated area.
until atmosphere has been checked.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use.
Always wash hands with soap and water after handling. Work clothes should be laundered separately.

SUITABLE CONTAINER

Packaging as recommended by manufacturer.
- Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

Segregate from strong acids, strong oxidisers, reducing agents, metals, metal oxides and amines.

STORAGE REQUIREMENTS

- Store in original containers in approved flammable liquid storage area.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- No smoking, naked lights, heat or ignition sources.
- Keep containers securely sealed.
- Store away from incompatible materials in a cool, dry, well-ventilated area.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³	Peak ppm	Peak mg/m³
Australia Exposure Standards	Styrene, monomer	50	213	100	426		
Australia Exposure Standards	Silica crystalline - Quartz		0.1				
Australia Exposure Standards	Benzoyl peroxide		5				
Australia Exposure Standards	Inspirable dust (Not specified)		10				

No data available: dicyclohexyl phthalate as (CAS: 84-61-7)

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (ppm)	Revised IDLH Value (mg/m3)
Styrene	700	
quartz		50
Benzoyl peroxide		1,500

None assigned. Refer to individual constituents.

ODOUR SAFETY FACTOR (OSF)

OSF=63 (STYRENE)
Exposed individuals are reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.
Odour Safety Factor (OSF) is determined to fall into either Class A or B.
The Odour Safety Factor (OSF) is defined as:
OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm
Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV-TWA for example) is being reached, even when distracted by working activities
B	26-550	As "A" for 50-90% of persons being distracted
C	1-26	As "A" for less than 50% of persons being distracted
D	0.18-1	10-50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As "D" for less than 10% of persons aware of being tested

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EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of vapour components/concentrations:
Composite Exposure Standard for Mixture (TWA) (mg/m³): 85 mg/m³
"Worst Case" computer-aided prediction of vapour components/concentrations:
Composite Exposure Standard for Mixture (TWA) (mg/m³):
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.
Component Breathing Zone ppm Breathing Zone mg/m³ Mixture Conc: (%).

Component	Breathing zone (ppm)	Breathing Zone (mg/m³)	Mixture Conc (%)
styrene	20.00	85.0000	60.0

"Worst Case" computer-aided prediction of vapour components/concentrations:
Composite Exposure Standard for Mixture (TWA) (mg/m³):
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.
Component Breathing Zone ppm Breathing Zone mg/m³ Mixture Conc: (%).
Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.
"Worst Case" computer-aided prediction of vapour components/concentrations:
Composite Exposure Standard for Mixture (TWA) (mg/m³):
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.
Component Breathing Zone ppm Breathing Zone mg/m³ Mixture Conc: (%).
Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.
If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.
At the "Composite Exposure Standard for Mixture" (TWA) (mg/m³): 60 mg/m³

Component	Breathing Zone (mg/m³)	Concentration (%)
dibenzoyl peroxide	14.1667	10.0
dicyclohexyl phthalate	0.1417	0.1

INGREDIENT DATA

STYRENE:
Odour Threshold: 0.017 to 1.9 with a geometric average threshold of 0.32 ppm.
NOTE:Detector tubes measuring styrene at greater than 10 ppm are available.
The recommended TLV-TWA and STEL is based on the influence of styrene exposure on the central and peripheral nervous systems At the TWA, total daily styrene exposure to the standard 70 kg medium-frame man who inhales 10 m³ and who retains 70% of the inspired compound is 21 mg/kg with 0.5 mg/kg absorbed through the skin. The total absorbed dose can be increased six-fold with physical work and increased respiration rate. Measurement of styrene and its metabolites in the urine can be an indication of recent exposure though this approach may be limited by factors such as the influence of alcohol consumption on styrene pharmodynamics. Exposure at or below the TLV-TWA is thought to protect the worker against the significant risks of narcosis, neuropathies and irritation although other findings suggest that neuro-optical effects ar

continued...

significant amongst workers exposed at 4 ppm.

GRADED SAND:
NOTE: This product contains negligible amount of respirable dust.

DIBENZOYL PEROXIDE:
The recommendation for the TLV-TWA is based on the absence of subjective symptoms of irritation of the nose and throat in humans exposed to 5.25 mg/m³. Whether this is sufficiently low to prevent cumulative effects in man is not known.

DICYCLOHEXYL PHTHALATE:
OES TWA: 5 mg/m³

PERSONAL PROTECTION

EYE
- Safety glasses.
- Safety glasses with side shields.
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET
- Barrier cream with polyethylene gloves or Neoprene rubber gloves.

Wear chemical protective gloves, eg. PVC.
Wear safety footwear.
- Skin cleansing cream.

OTHER
- Overalls.
- Barrier cream
- Eyewash unit.

GLOVE SELECTION INDEX
Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the computer-generated selection: styrene

Protective Material CPI *.

PE/EVAL/PE	A
PVA	A
TEFLON	A
SARANEX-23	C
NITRILE	C
NITRILE+PVC	C
NATURAL RUBBER	C
PVC	C

continued...

* CPI - Chemwatch Performance Index
A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

RESPIRATOR

Respiratory protection is required when ANY "Worst Case" vapour-phase concentration is exceeded (see Computer Prediction in "Exposure Standards").

Protection Factor (Min)	Half-Face Respirator	Full-Face Respirator
10 x ES	A-AUS	-
	A-PAPR-AUS	-
50 x ES	-	A-AUS
	-	A-PAPR-AUS
100 x ES	-	A-2
	-	A-PAPR-2

^ - Full-face.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.
For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions.
If inhalation risk of overexposure exists, wear SAA approved organic-vapour respirator.
Correct respirator fit is essential to obtain adequate protection.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Two-part glass capsule containing a mixture of dibenzoyl peroxide hardener and graded sand (quartz) in the upper portion and light tan coloured liquid comprising styrene and epoxy acrylate resin in the lower portion.
When broken has a typical aromatic odour and very little solubility in water.

PHYSICAL PROPERTIES

Liquid.
Does not mix with water.
Sinks in water.

Molecular Weight: Not applicable
Melting Range (C): Not available
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable.
Volatile Component (%vol): Not available

Boiling Range (C): 145 (styrene)
Specific Gravity (water=1): 1.04
pH (as supplied): Not applicable
Vapour Pressure (kPa): 0.67 @ 20 deg.C
Evaporation Rate: Not available

continued...

Relative Vapour Density (air=1): 3.6 (styrene)
Lower Explosive Limit (%): 1.1 (styrene)
Autoignition Temp (C): Not available.
State: Liquid

Flash Point (C): 32 Closed Cup
Upper Explosive Limit (%): 6.1 (styrene)
Decomposition Temp (℃): Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Product is considered stable under normal handling conditions.
Presence of incompatible materials.
Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Considered an unlikely route of entry in commercial/industrial environments.
The material is discomforting to the gastro-intestinal tract and harmful if swallowed.
Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.

EYE

The material is highly discomforting to the eyes and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.
The vapour is discomforting to the eyes if exposure is prolonged.
The vapour when concentrated has pronounced eye irritation effects and this gives some warning of high vapour concentrations. If eye irritation occurs seek to reduce exposure with available control measures, or evacuate area.
The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

The material is highly to the skin if exposure is prolonged and may cause drying of the skin, which may lead to dermatitis.
The material is capable of causing skin sensitisation and allergic skin reactions.
Toxic effects may result from skin absorption.
Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation.
Bare unprotected skin should not be exposed to this material.
The material may accentuate any pre-existing skin condition.
The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

INHALED

The vapour is highly discomforting to the upper respiratory tract.
Inhalation hazard is increased at higher temperatures.
Not considered an irritant through normal use.

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During curing a small amount of vapour may be emitted from the small exposed surface of the hole.
Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.
Inhalation of vapour may aggravate a pre-existing respiratory condition such as asthma, bronchitis, emphysema.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by skin contact/absorption and inhalation of vapour i.e. styrene. Exposure occurs only when glass container is broken during initial mixing and application. Little vapour hazard during curing is likely from the small exposure surface of the hole. High vapour concentrations may have a toxic and anaesthetic effects, which may lead to unconsciousness or death. At 400-1000 ppm, the vapour may produce systemic effects such as dizziness, nausea and headache. Exposure at 1000 ppm can rapidly lead to unconsciousness. Exposure to styrene may aggravate central nervous system disorders, chronic respiratory disease, skin disease, kidney disease and liver disease.

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

STYRENE:

TOXICITY	IRRITATION
Oral (rat) LD50: 5000 mg/kg	Skin (human): 500 mg - no skin effects
Inhalation (human) TCLo: 0.02 mg/m³	Skin (rabbit): 100% - Moderate
Inhalation (human) TCLo: 600 ppm	Eye (rabbit): 18 mg
Inhalation (rat) LC50: 3750 ppm *	
Inhalation(human)LCLo: 10000 ppm/30m.	Skin (rabbit): 500 mg - Mild
Inhalation (rat): 24000 mg/m³/4h	Eye (rabbit): 100 mg/24h - Moderate

WARNING: This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.

GRADED SAND:
No data of toxicological significance identified in literature search.

DIBENZOYL PEROXIDE:

TOXICITY	IRRITATION
Oral (rat) LD50: 7710 mg/kg	Eye (rabbit): 500 mg/24h - Mild
Inhalation (human) TCLo: 12 mg/m³ (@ 50%)	Skin effects (MAK): very weak

The substance is classified by IARC as Group 3:
NOT classifiable as to its carcinogenicity to humans.
Evidence of carcinogenicity may be inadequate or limited in animal testing.

DICYCLOHEXYL PHTHALATE:

TOXICITY	IRRITATION
Oral (rat) LD50: 30000 mg/kg	Nil Reported

Section 12 - ECOLOGICAL INFORMATION

Marine Pollutant:Not Determined
No data for Powers Hammer-Capsule.
Refer to data for ingredients, which follows:

continued...

STYRENE:
Hazardous Air Pollutant: Yes
Fish LC50 (96hr.) (mg/l): 25.1-74.8
Algae IC50 (72hr.) (mg/l): 67-200
log Kow (Prager 1995): 2.95
log Kow (Sangster 1997): 3.05
BOD5: 0.55-1.95
ThOD: 3.07
Half-life Soil - High (hours): 672
Half-life Soil - Low (hours): 336
Half-life Air - High (hours): 7.3
Half-life Air - Low (hours): 0.9
Half-life Surface water - High (hours): 672
Half-life Surface water - Low (hours): 336
Half-life Ground water - High (hours): 5040
Half-life Ground water - Low (hours): 672
Aqueous biodegradation - Aerobic - High (hours): 672
Aqueous biodegradation - Aerobic - Low (hours): 336
Aqueous biodegradation - Anaerobic - High (hours): 2688
Aqueous biodegradation - Anaerobic - Low (hours): 1344
Aqueous biodegradation - Removal secondary treatment - High (hours): 99%
Aqueous biodegradation - Removal secondary treatment - Low (hours): 8%
Photooxidation half-life air - High (hours): 7.3
Photooxidation half-life air - Low (hours): 0.9

DO NOT discharge into sewer or waterways.
log Kow: 2.95-3.05
Koc: 270-550
Half-life (hr) air: 3.5-9
Half-life (hr) H2O surface water: 3
Henry's atm m^3 /mol: 2.81E-03
BOD 5 if unstated: 0.55-2.45,65%
COD: 2.80-2.88
ThOD: 3.07
BCF: 13.5
Toxicity Fish: LC50(96)0.87-0.95ppm
Nitrif. inhib.: 75% inhib at 175mg/L

DIBENZOYL PEROXIDE:
Half-life Soil - High (hours): 48
Half-life Soil - Low (hours): 4
Half-life Air - High (hours): 510
Half-life Air - Low (hours): 51
Half-life Surface water - High (hours): 168
Half-life Surface water - Low (hours): 24
Half-life Ground water - High (hours): 336
Half-life Ground water - Low (hours): 48
Aqueous biodegradation - Aerobic - High (hours): 168
Aqueous biodegradation - Aerobic - Low (hours): 24
Aqueous biodegradation - Anaerobic - High (hours): 672
Aqueous biodegradation - Anaerobic - Low (hours): 96
Photolysis maximum light absorption - High (nano-m): 275
Photolysis maximum light absorption - Low (nano-m): 235
Photooxidation half-life air - High (hours): 510
Photooxidation half-life air - Low (hours): 51

continued...

Section 13 - DISPOSAL CONSIDERATIONS

Consult State Land Waste Management Authority for disposal.
Incinerate residue at an approved site or bury spilled dried material in an authorised landfill.
Bury damaged containers at an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

Labels Required
flammable liquid

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Land Transport UNDG:

Dangerous Goods Class:	3	Subrisk:	None
UN Number:	1866	Packing Group:	III

Shipping Name:RESIN SOLUTION, flammable

Air Transport IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None
UN/ID Number:	1866	Packing Group:	III
ERG Code:	3L		

Shipping Name: Resin solution flammable

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1866	Packing Group:	III
EMS Number:	F-E,S-E	Marine Pollutant:	Not Determined

Shipping Name: RESIN SOLUTION, flammable

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE
S5

REGULATIONS
styrene (CAS: 100-42-5) is found on the following regulatory lists;
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
Australia Poisons Schedule
International Agency for Research on Cancer (IARC) Carcinogens
OECD Representative List of High Production Volume (HPV) Chemicals

graded sand (CAS: 14808-60-7) is found on the following regulatory lists;

continued...

Australia - New South Wales Hazardous Substances Prohibited for Specific Uses
Australia - New South Wales Hazardous Substances Requiring Health Surveillance
Australia - South Australia Hazardous Substances Requiring Health Surveillance
Australia - Tasmania Hazardous Substances Prohibited for Specified Uses
Australia - Tasmania Hazardous Substances Requiring Health Surveillance
Australia - Western Australia Hazardous Substances Requiring Health Surveillance
Australia Hazardous Substances Requiring Health Surveillance
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
Australia Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations 1994 - Hazardous Substances Requiring Health Surveillance
International Agency for Research on Cancer (IARC) Carcinogens
OECD Representative List of High Production Volume (HPV) Chemicals

dibenzoyl peroxide (CAS: 94-36-0) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
Australia Poisons Schedule
International Agency for Research on Cancer (IARC) Carcinogens
OECD Representative List of High Production Volume (HPV) Chemicals

dicyclohexyl phthalate (CAS: 84-61-7) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
International Council of Chemical Associations (ICCA) - High Production Volume List
OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
dicyclohexyl phthalate	84-61-7	N;R50/53

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