Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

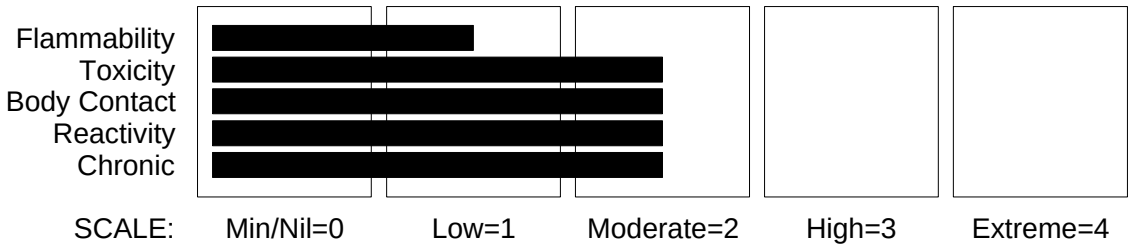
PRODUCT NAME
PERMATEX HIGH STRENGTH THREADLOCKER RED 10ML

SYNONYMS
"Product Code: 27110, 27120", "thread locker locking anaerobic adhesive"

PRODUCT USE
Anaerobic adhesive to lock and seal threaded fasteners.

SUPPLIER
Company: Australian Timken P/L (ABN: 91 004 379 444)
Address:
5 Daveyduke Road
Ballarat
VIC, 3350
AUS
Telephone: +61 3 5320 2700
Fax: +61 3 5338 1186

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

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

POISONS SCHEDULE
None

RISK
Harmful by inhalation, in contact with skin and if swallowed.
Irritating to eyes, respiratory system and skin.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

SAFETY
Do not breathe gas/fumes/vapour/spray.

continued...

Wear eye/face protection.
Use only in well ventilated areas.
Keep container in a well ventilated place.
Keep container tightly closed.
Take off immediately all contaminated clothing.
In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
polyethylene glycol dimethacrylate	25852-47-5	65-75
polyester resin mixture		20-30
cumyl hydroperoxide	80-15-9	<3
saccharin	81-07-2	<3

Section 4 - FIRST AID MEASURES

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- 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.
- Transport to hospital or doctor without delay.

EYE

If this product comes in contact with the eyes:

- Wash out immediately with fresh 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.
- If pain persists or recurs seek medical attention.
- 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

continued...

resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

NOTES TO PHYSICIAN

Treat symptomatically.
for poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 l/min.
- Monitor and treat, where necessary, for pulmonary oedema .
- Monitor and treat, where necessary, for shock.
- Anticipate seizures .
- DO NOT use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994.

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.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use water delivered as a fine spray to control fire and cool adjacent area.
- Avoid spraying water onto liquid pools.

continued...

- 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.

FIRE/EXPLOSION HAZARD
- Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- On combustion, may emit toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.
- Mists containing combustible materials may be explosive.

Combustion products include, carbon monoxide (CO), carbon dioxide (CO2), hydrogen chloride, phosgene, nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.
May emit clouds of acrid smoke.
May emit poisonous fumes.

FIRE INCOMPATIBILITY
Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result.

HAZCHEM
None

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
- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable labelled container for waste disposal.

MAJOR SPILLS
Chemical Class: peroxides

For release onto land: recommended sorbents listed in order of priority.

SORBENT TYPE	RANK	APPLICATION	COLLECTION	LIMITATIONS
LAND SPILL - SMALL				
cross-linked	1	shovel	shovel	R, W, SS

continued...

polymer - particulate				
cross-linked polymer - pillow	1	throw	pitchfork	R, DGC, RT
sorbent clay - particulate	2	shovel	shovel	R,I, P
foamed glass - pillow	2	throw	pitchfork	R, P, DGC, RT

LAND SPILL - MEDIUM

cross-linked polymer - particulate	1	blower	skiploader	R,W, SS
sorbent clay - particulate	2	blower	skiploader	R, I, P
polypropylene - particulate	2	blower	skiploader	W, SS, DGC
expanded mineral - particulate	3	blower	skiploader	R, I, W, P, DGC
polypropylene - mat	4	throw	skiploader	DGC, RT

Legend
DGC: Not effective where ground cover is dense
R; Not reusable
I: Not incinerable
P: Effectiveness reduced when rainy
RT:Not effective where terrain is rugged
SS: Not for use within environmentally sensitive sites
W: Effectiveness reduced when windy

Reference: Sorbents for Liquid Hazardous Substance Cleanup and Control; R.W Melvold et al: Pollution Technology Review No. 150: Noyes Data Corporation 1988.
Moderate hazard.
- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water course.
- No smoking, naked lights or ignition sources.
- Increase ventilation.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent runoff into drains.

continued...

- If contamination of drains or waterways occurs, advise emergency services.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Most acrylic monomers have low viscosity therefore pouring, material transfer and processing of these materials do not necessitate heating.
- Viscous monomers may require heating to facilitate handling. To facilitate product transfer from original containers, product must be heated to no more than 60 deg. C. (140 F.), for not more than 24 hours.
- Do NOT use localised heat sources such as band heaters to heat/ melt product.
- Do NOT use steam.
- Hot boxes or hot rooms are recommended for heating/ melting material. The hot box or hot room should be set a maximum temperature of 60 deg. C. (140 F.).
- Do NOT overheat - this may compromise product quality and /or result in an uncontrolled hazardous polymerisation.
- If product freezes, heat as indicated above and mix gently to redistribute the inhibitor. Product should be consumed in its entirety after heating/ melting; avoid multiple "reheats" which may affect product quality or result in product degradation.
- Product should be packaged with inhibitor(s). Unless inhibited, product may polymerise, raising temperature and pressure, possibly rupturing container. Check inhibitor level periodically, adding to bulk material if needed. In addition, the product's inhibitor(s) require the presence of dissolved oxygen. Maintain, at a minimum, the original headspace in the product container and do NOT blanket or mix with oxygen-free gas as it renders the inhibitor ineffective. Ensure air space (oxygen) is present during product heating / melting.
- Store product indoors at temperatures greater than the product's freeing point (or greater than 0 deg. C. (32 F).) if no freezing point available and below 38 deg. C (100 F.).
- Avoid prolonged storage (longer than shelf-life) storage temperatures above 38 deg. C (100 F.).
- Store in tightly closed containers in a properly vented storage area away from heat, sparks, open flame, strong oxidisers, radiation and other initiators.
- Prevent contamination by foreign materials.
- Prevent moisture contact.
- Use only non-sparking tools and limit storage time. Unless specified elsewhere, shelf-life is 6 months from receipt.

DO NOT allow clothing wet with material to stay in contact with skin.

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.
- DO NOT enter confined spaces until atmosphere has been checked.
- Avoid smoking, naked lights or ignition sources.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.

continued...

- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

SUITABLE CONTAINER

- Metal can or drum
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Exposure to light, free radical initiators, iron, rust and strong bases, and storage beyond expiration date, may initiate polymerisation.
Contamination with polymerisation catalysts - peroxides, persulfates, oxidising agents - also strong acids, strong alkalies, will cause polymerisation with exotherm - generation of heat.
Polymerisation of large quantities may be violent - even explosive.

STORAGE REQUIREMENTS

- Storage requires stabilising inhibitor content and dissolved oxygen content to be monitored. Refer to manufacturer's recommended levels.
- DO NOT overfill containers so as to maintain free head space above product.
- Blanketing or sparging with nitrogen or oxygen free gas will deactivate stabiliser.
- Store in original containers.
- Keep containers securely sealed.
- No smoking, naked lights or ignition sources.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

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	saccharin		10				

The following materials had no OELs on our record under the following CAS or Chemwatch (CW) numbers
Permatex High Strength Threadlocker Red 10ml: No data available for CW:5068-93
polyethylene glycol dimethacrylate: No data available for CAS:25852-47-5
cumyl hydroperoxide: No data available for CAS:80-15-9
saccharin: No data available for CAS:81-07-2

None assigned. Refer to individual constituents.

EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of vapour components/concentrations:

continued...

"Worst Case" computer-aided prediction of vapour components/concentrations:
Composite Exposure Standard for Mixture (TWA) (mg/m³): 6 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 (%)
cumyl hydroperoxide	1.00	6.0000	3.0

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): 3 mg/m³

INGREDIENT DATA

POLYETHYLENE GLYCOL DIMETHACRYLATE:
CEL TWA: 1 mg/m³ [compare WEEL-TWA* for multifunctional acrylates (MFAs)]
Exposure to MFAs has been reported to cause contact dermatitis in humans and serious eye injury in laboratory animals. Exposure to some MFA-resin containing aerosols has also been reported to cause dermatitis. As no assessment of the possible effects of long-term exposure to aerosols was found, a conservative Workplace Environmental Exposure Level (WEEL) was suggested by the American Industrial Hygiene Association (AIHA).

CUMYL HYDROPEROXIDE:
CEL TWA: 1 ppm, 6 mg/m³ (SKIN) (compare WEEL TWA)
Exposure limits with "skin" notation indicate that vapour and liquid may be absorbed through intact skin. Absorption by skin may readily exceed vapour inhalation exposure. Symptoms for skin absorption are the same as for inhalation. Contact with eyes and mucous membranes may also contribute to overall exposure and may also invalidate the exposure standard.
Saturated vapour concentration: 2632 ppm at 20 C.
Cumene hydroperoxide is severely irritating to the eyes and skin and is moderately toxic by ingestion, inhalation and dermal absorption. A 3-month inhalation study in rats, established a no-effect level of 31 mg/m³ (5 ppm). Animals exposed to 16 ppm for 12 days experienced irritation. An environmental exposure level (WEEL) recommended by the AIHA is thought to be protective against irritation and systemic effects in workers. The skin notation was included to reflect dermal absorption data.

SACCHARIN:
Not available

PERSONAL PROTECTION

EYE

- 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

continued...

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

Suitability and durability of glove type is dependent on usage. Factors such a:
- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity,

are important in the selection of gloves.
Wear chemical protective gloves, eg. PVC.
Wear safety footwear or safety gumboots, eg. Rubber.
NOTE: The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

RESPIRATOR

Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half-face Respirator	Full-Face Respirator
1000	10	A-AUS P-	-
1000	50	-	A-AUS P-
5000	50	Airline *	-
5000	100	-	A-2 P-
10000	100	-	A-3 P-
	100+		Airline**

* - Continuous Flow ** - Continuous-flow or positive pressure demand.

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

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection.

continued...

Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.
An approved self contained breathing apparatus (SCBA) may be required in some situations.
Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed:
solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

continued...

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Red combustible liquid with a mild odour; does not mix with 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 available
Volatile Component (%vol): 40.8 (VOC - by wt)
Relative Vapour Density (air=1): >1
Lower Explosive Limit (%): Not available
Autoignition Temp (°C): Not available
State: Liquid

Boiling Range (°C): >150
Specific Gravity (water=1): >1.0
pH (as supplied): Not available
Vapour Pressure (kPa): Not Available
Evaporation Rate: Not available
Flash Point (°C): >93 (PMCC)
Upper Explosive Limit (%): Not available
Decomposition Temp (°C): Not available
Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Polymerisation may occur at elevated temperatures.
- Polymerisation may be accompanied by generation of heat as exotherm.
- Process is self accelerating as heating causes more rapid polymerisation.
- Exotherm may cause boiling with generation of acrid, toxic and flammable vapour.
- Polymerisation and exotherm may be violent if contamination with strong acids, amines or catalysts occurs.
- Polymerisation and exotherm of material in bulk may be uncontrollable and result in rupture of storage tanks.
- Polymerisation may occur if stabilising inhibitor becomes depleted by aging.
- Stabilising inhibitor requires dissolved oxygen to be present in liquid for effective action.
- Specific storage requirements must be met for stability on ageing and transport.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.

continued...

EYE

There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation. Severe inflammation may be expected with pain. There may be damage to the cornea. Unless treatment is prompt and adequate there may be permanent loss of vision. Conjunctivitis can occur following repeated exposure.
Eye contact with organic peroxides can cause clouding, redness, swelling and burns of the eye on prolonged contact.

SKIN

Skin contact with the material may be harmful; systemic effects may result following absorption.
The material may cause moderate inflammation of the skin either following direct contact or after a delay of some time. Repeated exposure can cause contact dermatitis which is characterised by redness, swelling and blistering.
Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
All organic peroxides are irritating to the skin and if allowed to remain on the skin, may produce inflammation; some are allergenic.

INHALED

Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be harmful.
The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.
Inhalation hazard is increased at higher temperatures.
No report of respiratory illness in humans as a result of exposure to multifunctional acrylates has been found.
Inhalation of quantities of liquid mist may be extremely hazardous, even lethal due to spasm, extreme irritation of larynx and bronchi, chemical pneumonitis and pulmonary oedema.
Acute effects from inhalation of high vapour concentrations may be chest and nasal irritation with coughing, sneezing, headache and even nausea.
The inhalation of organic peroxide dusts or vapours can produce throat and lung irritation and cause an asthma-like effect. Over-exposure can cause tears, salivation, lethargy, slow breathing, breathing difficulties, headache, weakness, tremor, stupor and swelling of the lung.

CHRONIC HEALTH EFFECTS

There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment. Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.
RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder

continued...

that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucous production. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Sensitisation may give severe responses to very low levels of exposure, i.e. hypersensitivity. Sensitised persons should not be allowed to work in situations where exposure may occur. Persistent exposure over a long period of time to peroxides produces allergic skin reactions (redness and scaling of the skin) and asthmatic wheezing.

TOXICITY AND IRRITATION
The material may produce severe skin irritation after prolonged or repeated exposure, and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) thickening of the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis. Prolonged contact is unlikely, given the severity of response, but repeated exposures may produce severe ulceration.
Oral LD50: > 5000 mg/kg (species not disclosed) *
Dermal LD50: > 2000 mg/kg (species not disclosed) *
*[Manufacturer]

POLYETHYLENE GLYCOL DIMETHACRYLATE:

TOXICITY	IRRITATION
Oral (rat) LD50: > 10000 mg/kg	Skin - SEVERE Irritant
	Eye - Severe irritant

Based on the available oncogenicity data and without a better understanding of the carcinogenic mechanism the Health and Environmental Review Division (HERD), Office of Toxic Substances (OTS), of the US EPA previously concluded that all chemicals that contain the acrylate or methacrylate moiety (CH2=CHCOO or CH2=C(CH3)COO) should be considered to be a carcinogenic hazard unless shown otherwise by adequate testing.
This position has now been revised and acrylates and methacrylates are no longer de facto carcinogens.

CUMYL HYDROPEROXIDE:

TOXICITY	IRRITATION
Oral (rat) LD50: 382 mg/kg	
Skin (rabbit): 500 mg - Mild	
Eye (rabbit): 1 mg	
Bacterial cell mutagen	
Equivocal tumorigen by RTECS criteria	

SACCHARIN:

TOXICITY	IRRITATION
Oral (mouse) LD50: 17000 mg/kg	
The substance is classified by IARC as Group 3:	
NOT classifiable as to its carcinogenicity to humans.	

continued...

Evidence of carcinogenicity may be inadequate or limited in animal testing.

CARCINOGEN
IARC: International Agency for Research on Cancer (IARC)
Carcinogens: saccharin Category: Group 3: Not classifiable as to carcinogenicity to humans

Section 12 - ECOLOGICAL INFORMATION

DO NOT discharge into sewer or waterways.
Refer to data for ingredients, which follows:

CUMYL HYDROPEROXIDE:
"Half-life Soil - High (hours):" 672
"Half-life Soil - Low (hours):" 168
"Half-life Air - High (hours):" 130
"Half-life Air - Low (hours):" 13
"Half-life Surface water - High (hours):" 672
"Half-life Surface water - Low (hours):" 168
"Half-life Ground water - High (hours):" 1344
"Half-life Ground water - Low (hours):" 336
"Aqueous biodegradation - Aerobic - High (hours):" 672
"Aqueous biodegradation - Aerobic - Low (hours):" 168
"Aqueous biodegradation - Anaerobic - High (hours):" 2688
"Aqueous biodegradation - Anaerobic - Low (hours):" 672
"Photolysis maximum light absorption - High (nano-m):" 264
"Photolysis maximum light absorption - Low (nano-m):" 242
"Photooxidation half-life air - High (hours):" 130
"Photooxidation half-life air - Low (hours):" 13

Effects on algae and plankton: non tox algae 1-2mg/L

SACCHARIN:
"Half-life Soil - High (hours):" 672
"Half-life Soil - Low (hours):" 168
"Half-life Air - High (hours):" 10
"Half-life Air - Low (hours):" 1
"Half-life Surface water - High (hours):" 672
"Half-life Surface water - Low (hours):" 168
"Half-life Ground water - High (hours):" 1344
"Half-life Ground water - Low (hours):" 336
"Aqueous biodegradation - Aerobic - High (hours):" 672
"Aqueous biodegradation - Aerobic - Low (hours):" 168
"Aqueous biodegradation - Anaerobic - High (hours):" 2688
"Aqueous biodegradation - Anaerobic - Low (hours):" 672
"Photooxidation half-life air - High (hours):" 10
"Photooxidation half-life air - Low (hours):" 1

log Kow : 0.91
Koc: 45-75
BCF: 1.58-2.1
Toxicity Fish: LC50(96)1.03mg/L
Bioacculmulation: not sig

continued...

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- Recycle containers if possible, or dispose of in an authorised landfill.

If container can not be cleaned sufficiently well to ensure none of the original product remains or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM

None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN,IATA,IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

polyethylene glycol dimethacrylate (CAS: 25852-47-5) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)

cumyl hydroperoxide (CAS: 80-15-9) 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

saccharin (CAS: 81-07-2) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
International Agency for Research on Cancer (IARC) Carcinogens

Section 16 - OTHER INFORMATION

Issue Date: 4-Jul-2006
Print Date: 4-Jul-2006