

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 1 of 7

## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### PRODUCT NAME

PF PRO PART B

### PROPER SHIPPING NAME

AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.(contains isophorone diamine)

### PRODUCT USE

Part B of a 2-part epoxy system. Compound mortar.

### SUPPLIER

Company: Powers Fasteners Australasia Pty Ltd

Address:

Factory 3, 205 Abbots Road

Dandenong South

VIC, 3175

Australia

Telephone: +61 3 8795 4600

Fax: +61 3 8787 5899

## Section 2 - HAZARDS IDENTIFICATION

### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. DANGEROUS GOODS. According to NOHSC Criteria, and ADG Code.**

#### RISK

- Harmful by inhalation, in contact with skin and if swallowed.
- Causes burns.
- Risk of serious damage to eyes.
- May cause SENSITISATION by skin contact.
- Harmful to aquatic organisms, may cause long- term adverse effects in the aquatic environment.
- Possible risk of irreversible effects.

#### SAFETY

- Keep locked up.
- Avoid contact with eyes.
- Wear suitable protective clothing.
- Use only in well ventilated areas.
- Keep container in a well ventilated place.
- To clean the floor and all objects contaminated by this material, use water and detergent.
- Take off immediately all contaminated clothing.
- In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).
- This material and its container must be disposed of as hazardous waste.

## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
isophorone diamine	2855-13-2	10-24
benzyl alcohol	100-51-6	1-9
2, 4, 6- tris[(dimethylamino)methyl]phenol	90-72-2	1-9
phenol	108-95-2	3-4
benzene- 1, 3- dimethanamine	1477-55-0	1-4
diethylenetriamine	111-40-0	1-4

## 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.

### 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

continued...

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 2 of 7  
Section 4 - FIRST AID MEASURES

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.

## SKIN

- If skin or hair contact occurs:
- Immediately flush body and clothes with large amounts of water, using safety shower if available.
- Quickly remove all contaminated clothing, including footwear.
- Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.
- Transport to hospital, or doctor.

## 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.

## NOTES TO PHYSICIAN

- For acute or short-term repeated exposures to highly alkaline materials:
- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.

---

## Section 5 - FIRE FIGHTING MEASURES

---

### EXTINGUISHING MEDIA

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

### 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 fire fighting procedures suitable for surrounding area.

When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 800 metres in all directions.

### FIRE/EXPLOSION HAZARD

- Combustible. Will burn if ignited.
- Combustion products include: carbon monoxide (CO), carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), other pyrolysis products typical of burning organic material.  
May emit corrosive fumes.  
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

2X

### Personal Protective Equipment

Breathing apparatus.  
Gas tight chemical resistant suit.  
Limit exposure duration to 1 BA set 30 mins.

---

## Section 6 - ACCIDENTAL RELEASE MEASURES

---

### MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours/ aerosols/ or dusts and avoid contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.

### MAJOR SPILLS

- Clear area of personnel and move upwind.
- 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.

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

continued...

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 3 of 7

## Section 7 - HANDLING AND STORAGE

### PROCEDURE FOR HANDLING

- Avoid all personal contact, including inhalation.
  - Wear protective clothing when risk of exposure occurs.
  - Use in a well-ventilated area.
  - Avoid contact with moisture.
- Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

### SUITABLE CONTAINER

- DO NOT use aluminium or galvanised containers.
- For low viscosity materials
- Drums and jerricans must be of the non-removable head type.
  - Where a can is to be used as an inner package, the can must have a screwed enclosure.

### STORAGE INCOMPATIBILITY

- Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.
- Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.
- Avoid contact with copper, aluminium and their alloys.
- Avoid reaction with oxidising agents.

### STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well-ventilated area.
- Store away from incompatible materials and foodstuff containers.
- DO NOT store near acids, or oxidising agents.
- No smoking, naked lights, heat or ignition sources.

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

### EXPOSURE CONTROLS

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	Peak mg/m <sup>3</sup>	Notes
Australia Exposure Standards	phenol (Phenol)	1	4		Sk
Australia Exposure Standards	benzene- 1, 3-dimethanamine (m-Xylene- a, a' -diamine)			0.1	Sk
Australia Exposure Standards	diethylenetriamine (Diethylene triamine)	1	4.2		Sk

The following materials had no OELs on our records

- isophorone diamine: CAS:2855- 13- 2
- benzyl alcohol: CAS:100- 51- 6
- 2, 4, 6- tris[(dimethylamino)methyl]phenol: CAS:90- 72- 2

### PERSONAL PROTECTION

#### RESPIRATOR

Type AK-P Filter of sufficient capacity

#### EYE

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes
- 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

- 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.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

#### OTHER

- Overalls.
- PVC Apron.

continued...

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 4 of 7

## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

- PVC protective suit may be required if exposure severe.
- Eyewash unit.

### ENGINEERING CONTROLS

- General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in special circumstances.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

### APPEARANCE

Black paste with an amine-like odour; partly mixes with water.

### PHYSICAL PROPERTIES

Corrosive.  
Alkaline.

State	Non Slump Paste	Molecular Weight	Not Applicable
Melting Range (°C)	Not Available	Viscosity	Not Available
Boiling Range (°C)	Not Available	Solubility in water (g/L)	Partly Miscible
Flash Point (°C)	Not Available	pH (1% solution)	Not Available
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	13.0	Specific Gravity (water=1)	Not Available
Lower Explosive Limit (%)	1.0	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available

phenol

- log Kow (Prager 1995): 1.46
- log Kow (Sangster 1997): 1.5

## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

*For incompatible materials - refer to Section 7 - Handling and Storage.*

## Section 11 - TOXICOLOGICAL INFORMATION

### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

- Causes burns.
- Risk of serious damage to eyes.
- Harmful by inhalation, in contact with skin and if swallowed.

#### CHRONIC HEALTH EFFECTS

- May cause SENSITISATION by skin contact.
- Possible risk of irreversible effects.

### TOXICITY AND IRRITATION

- unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

PHENOL:

2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL:

- 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.
- The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

ISOPHORONE DIAMINE:

2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL:

PHENOL:

PF PRO PART B:

- 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.

ISOPHORONE DIAMINE:

PF PRO PART B:

- Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

continued...

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 5 of 7  
Section 11 - TOXICOLOGICAL INFORMATION

PF PRO PART B:

## ISOPHORONE DIAMINE:

### TOXICITY

Oral (rat) LD50: 1030 mg/kg [Manufacturer HUE]

■ For isophorone diamine

Based on a limited skin irritation study with rabbits and rats, isophorone diamine is deemed to be a strong irritant (duration of the exposure not reported) and corrosive after repeated application. Isophorone diamine is corrosive to the eyes of rabbits when tested according to OECD TG 405. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may produce respiratory tract irritation. Symptoms of pulmonary irritation may include coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and a burning sensation.

Unlike most organs, the lung can respond to a chemical insult or a chemical agent, by first removing or neutralising the irritant and then repairing the damage (inflammation of the lungs may be a consequence).

The repair process (which initially developed to protect mammalian lungs from foreign matter and antigens) may, however, cause further damage to the lungs (fibrosis for example) when activated by hazardous chemicals.

The material may cause 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) and swelling epidermis.

## BENZYL ALCOHOL:

### TOXICITY

Oral (rat) LD50: 1230 mg/kg

Inhalation (rat) LCLo: 2000 ppm/4h

Inhalation (rat) LC50: 1000 ppm/8h

Inhalation (rat) LC50: >4178 mg/m<sup>3</sup>/4h

Dermal (rabbit) LD50: 2000 mg/kg

■ The material may cause 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) and swelling the epidermis.

For benzyl alkyl alcohols:

Unlike benzylic alcohols, the beta-hydroxyl group of the members of this cluster is unlikely to undergo phase II metabolic activation. Instead, the beta-hydroxyl group is expected to contribute to detoxification via oxidation to hydrophilic acid.

For benzoates:

Acute toxicity: Benzyl alcohol, benzoic acid and its sodium and potassium salt can be considered as a single category regarding human health, as they are all rapidly metabolised and excreted via a common pathway within 24 hrs. Systemic toxic effects of similar nature (e.g.

## 2,4,6-TRIS[(DIMETHYLAMINO)METHYL]PHENOL:

### TOXICITY

Oral (rat) LD50: 1200 mg/kg

Oral (rat) LD50: 2500 mg/kg \*

Dermal (rabbit) LD50: 1280 mg/kg [Rohm & Haas, Henkel]\*

Inhalation (rat) LC50: >0.5 mg/l/1 hr. [Ciba]

## PHENOL:

### TOXICITY

Oral (rat) LD50: 317 mg/kg

Oral (human) LDLo: 140 mg/kg

Inhalation (rat) LC50: 316 mg/m<sup>3</sup>

Dermal (rabbit) LD50: 850 mg/kg

■ 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.

### IRRITATION

### IRRITATION

Skin (man): 16 mg/48h- Mild

Skin (rabbit): 10 mg/24h open- Mild

Eye (rabbit): 0.75 mg Open SEVERE

### IRRITATION

Skin (rabbit): 2 mg/24h - SEVERE

Eye (rabbit): 0.05 mg/24h - SEVERE

### IRRITATION

Skin (rabbit): 500 mg/24hr - SEVERE

Skin (rabbit): 500 mg Open - SEVERE

Eye (rabbit): 5 mg - SEVERE

Eye (rabbit): 100 mg rinse - Mild

## Section 12 - ECOLOGICAL INFORMATION

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
This material and its container must be disposed of as hazardous waste.

### Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
isophorone diamine	HIGH		LOW	MED
benzyl alcohol	LOW		LOW	HIGH
2, 4, 6- tris[(dimethylamino)methyl]pheno l	HIGH		LOW	LOW
phenol	LOW	LOW	LOW	MED

continued...

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 6 of 7

## Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Treat and neutralise at an approved treatment plant. Treatment should involve: Mixing or slurring in water; Neutralisation followed by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or Incineration in a licenced apparatus (after admixture with suitable combustible material)
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

## Section 14 - TRANSPORTATION INFORMATION



Labels Required: CORROSIVE

**HAZCHEM:**  
2X (ADG7)

### ADG7:

Class or division:	8	Subsidiary risk:	None
UN No.:	3259	UN packing group:	III
Special provisions:	223; 274	Packing Instructions:	None
Limited quantities:	5 kg	Portable tanks and bulk containers - Instructions:	T1
Portable tanks and bulk containers - Special provisions:	TP33	Packagings and IBCs - Packing instruction:	P002; IBC08; LP02
Packagings and IBCs - Special packing provisions:	B3		

Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S. (contains isophorone diamine)

### Land Transport UNDG:

Class or division:	8	Subsidiary risk:	None
UN No.:	3259	UN packing group:	III

Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S. (contains isophorone diamine)

### Air Transport IATA:

ICAO/IATA Class:	8	ICAO/IATA Subrisk:	None
UN/ID Number:	3259	Packing Group:	III
Special provisions:	A3		

Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. \*(CONTAINS ISOPHORONE DIAMINE)

### Maritime Transport IMDG:

IMDG Class:	8	IMDG Subrisk:	None
UN Number:	3259	Packing Group:	III
EMS Number:	F- A , S- B	Special provisions:	223 274
Limited Quantities:	5 kg		

Shipping Name: AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.(contains isophorone diamine)

## Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE S5

### REGULATIONS

Regulations for ingredients

**isophorone diamine (CAS: 2855-13-2) is found on the following regulatory lists;**

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

**benzyl alcohol (CAS: 100-51-6) is found on the following regulatory lists;**

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

continued...

# PF PRO PART B

Chemwatch Independent Material Safety Data Sheet  
Issue Date: 19-Nov-2008  
C9317EC

CHEMWATCH 18-3724  
Version No:2.0  
CD 2010/3 Page 7 of 7  
Section 15 - REGULATORY INFORMATION

**2,4,6-tris[[dimethylamino)methyl]phenol (CAS: 90-72-2) is found on the following regulatory lists;**

"International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

**phenol (CAS: 108-95-2) is found on the following regulatory lists;**

"Australia - Australian Capital Territory - Environment Protection Regulation: Pollutants entering waterways taken to cause environmental harm (Aquatic habitat)", "Australia - Australian Capital Territory Environment Protection Regulation Ecosystem maintenance - Organic chemicals - Non-pesticide anthropogenic organics", "Australia Exposure Standards", "Australia High Volume Industrial Chemical List (HVICL)", "Australia National Pollutant Inventory", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk", "OECD Representative List of High Production Volume (HPV) Chemicals"

**No data for PF PRO Part B (CW: 18-3724)**

---

## Section 16 - OTHER INFORMATION

---

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net/references](http://www.chemwatch.net/references).

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings.

*This document is copyright. Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH. TEL (+61 3) 9572 4700.*

Issue Date: 19-Nov-2008  
Print Date: 21-Sep-2010

*This is the end of the MSDS.*