

POWERS POWERFLEX 310FC

Chemwatch Independent Material Safety Data Sheet
Issue Date: 15-Apr-2011
CC317SCP

CHEMWATCH 4729-97
Version No:2.0
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

POWERS POWERFLEX 310FC

PROPER SHIPPING NAME

FLAMMABLE LIQUID, N.O.S.(contains xylene)

PRODUCT USE

Sealant.

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

Website: <http://www.powers.com.au>

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

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

RISK

Risk Codes

R10

R20

R42/43

Risk Phrases

- Flammable.
- Harmful by inhalation.
- May cause SENSITISATION by inhalation and skin contact.

SAFETY

Safety Codes

S23

S24

S36

S37

S51

S09

S53

S401

S07

S13

S46

S60

S63

Safety Phrases

- Do not breathe gas/ fumes/ vapour/ spray.
- Avoid contact with skin.
- Wear suitable protective clothing.
- Wear suitable gloves.
- Use only in well ventilated areas.
- 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.
- If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre (show this container or label).
- This material and its container must be disposed of as hazardous waste.
- In case of accident by inhalation: remove casualty to fresh air and keep at rest.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME | CAS RN | % |
|--|-------------|-----|
| xylene | 1330-20-7 | 1-9 |
| isophorone diisocyanate | 4098-71-9 | <1 |
| 4, 4' - diphenylmethane diisocyanate (MDI) | 101-68-8 | <1 |
| naphtha petroleum, light aromatic solvent | 64742-95-6. | <1 |

Section 4 - FIRST AID MEASURES

SWALLOWED

- - 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.

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.
 - Seek medical attention without delay; 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.
- Prosthesis 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 sub-chronic and chronic exposures to isocyanates:
 - This material may be a potent pulmonary sensitiser which causes bronchospasm even in patients without prior airway hyperreactivity.
 - Clinical symptoms of exposure involve mucosal irritation of respiratory and gastrointestinal tracts.
 - Conjunctival irritation, skin inflammation (erythema, pain vesiculation) and gastrointestinal disturbances occur soon after exposure.
 - Pulmonary symptoms include cough, burning, substernal pain and dyspnoea.

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

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.
- Combustion products include: carbon monoxide (CO), carbon dioxide (CO₂), isocyanates, and minor amounts of, hydrogen cyanide, hydrogen chloride, phosgene, nitrogen oxides (NO_x), sulfur oxides (SO_x), other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

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

HAZCHEM

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Section 6 - ACCIDENTAL RELEASE MEASURES

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.

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.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- - 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 overexposure occurs.
- Use in a well-ventilated area.
- Prevent concentration in hollows and sumps.

SUITABLE CONTAINER

- - Packing as supplied by manufacturer.
 - Plastic containers may only be used if approved for flammable liquid.
 - Check that containers are clearly labelled and free from leaks.
- 310ml tube.

STORAGE REQUIREMENTS

- - Store in original containers in approved flammable liquid storage area.
- Store away from incompatible materials in a cool, dry, well-ventilated area.
- DO NOT store in pits, depressions, basements or areas where vapours may be trapped.
- No smoking, naked lights, heat or ignition sources.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

| Source | Material | TWA ppm | TWA mg/m ³ | STEL ppm | STEL mg/m ³ | Notes |
|------------------------------|---|---------|-----------------------|----------|------------------------|------------------|
| Australia Exposure Standards | xylene (Xylene (o-, m-, p- isomers)) | 80 | 350 | 150 | 655 | |
| Australia Exposure Standards | isophorone diisocyanate (Isocyanates, all (as- NCO)) | | 0.02 | | 0.07 | Sen |
| Australia Exposure Standards | naphtha petroleum, light aromatic solvent (Petrol (gasoline)) | | 900 | | | (see Chapter 16) |

PERSONAL PROTECTION

RESPIRATOR

- Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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 personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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], [AS/NZS 1336 or national equivalent].

HANDS/FEET

■ Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity.
- 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.
- PVC protective suit may be required if exposure severe.
- Eyewash unit.

ENGINEERING CONTROLS

■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Coloured viscous liquid with a solvent odour; does not mix with water.

PHYSICAL PROPERTIES

Does not mix with water.

Sinks in water.

| | | | |
|----------------------------------|---------------|---------------------------------|----------------|
| State | LIQUID | Molecular Weight | Not Applicable |
| Melting Range (°C) | Not Available | Viscosity | Not Available |
| Boiling Range (°C) | Not Available | Solubility in water (g/L) | Immiscible |
| Flash Point (°C) | 25 | pH (1% solution) | Not Available |
| Decomposition Temp (°C) | Not Available | pH (as supplied) | Not Available |
| Autoignition Temp (°C) | Not Available | Vapour Pressure (kPa) | Not Available |
| Upper Explosive Limit (%) | Not Available | Specific Gravity (water=1) | 1.2 |
| Lower Explosive Limit (%) | Not Available | Relative Vapour Density (air=1) | >1 |
| Volatile Component (%vol) | Not Available | Evaporation Rate | Not Available |
| xylene log Kow (Prager 1995): | | 3.12- 3.20 | |

Section 10 - STABILITY AND REACTIVITY

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

SWALLOWED

■ Although ingestion is not thought to produce harmful effects (as classified under EC Directives), the material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health).

EYE

■ Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).

SKIN

■ The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED

■ The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation, of the material, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.

CHRONIC HEALTH EFFECTS

■ Persons with a history of asthma or other respiratory problems or are known to be sensitised, should not be engaged in any work involving the handling of isocyanates. [CCTRADE-Bayer, APMF].

Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.

Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

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.

TOXICITY AND IRRITATION

■ 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. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.

Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.

Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.

Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.

CARCINOGEN

| | | | |
|---|---|-------|---|
| Xylenes | International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs | Group | 3 |
| 4, 4' - Methylene-diphenyl diisocyanate | International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs | Group | 3 |

REPROTOXIN

| | | |
|----------|---|--------------------------------|
| xylylene | ILO Chemicals in the electronics industry that have toxic effects on reproduction | Reduced fertility or sterility |
|----------|---|--------------------------------|

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Section 12 - ECOLOGICAL INFORMATION

This material and its container must be disposed of as hazardous waste.

Ecotoxicity

| Ingredient | Persistence: Water/Soil | Persistence: Air | Bioaccumulation | Mobility |
|--|----------------------------|----------------------|-----------------|----------|
| Powers Powerflex 310FC | No Data Available | No Data Available | | |
| xylene | LOW | LOW | LOW | |
| isophorone diisocyanate | HIGH | No Data Available | LOW | LOW |
| 4, 4' - diphenylmethane diisocyanate (MDI) | LOW | LOW | LOW | LOW |
| naphtha petroleum, light aromatic solvent | No Data Available | No Data Available | | |

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.
- Dispose of 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: FLAMMABLE LIQUID

HAZCHEM:

•3Y (ADG7)

ADG7:

| | | | |
|---|----------|---|-------------------|
| Class or Division: | 3 | Subsidiary Risk: | None |
| UN No.: | 1993 | Packing Group: | III |
| Special Provision: | 223, 274 | Limited Quantity: | 5 L |
| Portable Tanks & Bulk Containers - Instruction: | T4 | Portable Tanks & Bulk Containers - Special Provision: | TP1, TP29 |
| Packagings & IBCs - Packing Instruction: | None | Packagings & IBCs - Special Packing Provision: | P001, IBC03, LP01 |

Name and Description: FLAMMABLE LIQUID, N.O.S. (contains xylene)

Land Transport UNDG:

| | | | |
|--------------------|------|-------------------|------|
| Class or division: | 3 | Subsidiary risk: | None |
| UN No.: | 1993 | UN packing group: | III |

Shipping Name: FLAMMABLE LIQUID, N.O.S. (contains xylene)

Air Transport IATA:

| | | | |
|------------------|-----|---------------------|------|
| ICAO/IATA Class: | 3 | UN/ID Number: | 1993 |
| Packing Group: | III | Special provisions: | A3 |

Shipping Name: FLAMMABLE LIQUID, N.O.S. *(CONTAINS XYLENE)

Maritime Transport IMDG:

| | | | |
|-------------|------------|---------------------|-------------|
| IMDG Class: | 3 | IMDG Subrisk: | None |
| UN Number: | 1993 | Packing Group: | III |
| EMS Number: | F- E, S- E | Special provisions: | 223 274 955 |

Limited Quantities: 5 L
Shipping Name: FLAMMABLE LIQUID, N.O.S.(contains xylene)

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Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

Regulations for ingredients

xylene (CAS: 1330-20-7) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List"

isophorone diisocyanate (CAS: 4098-71-9) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "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", "OSPAR Substances removed from the List of Substances of Possible Concern"

4,4'-diphenylmethane diisocyanate (MDI) (CAS: 101-68-8,26447-40-5) is found on the following regulatory lists;

"Australia - Queensland Hazardous Materials and Prescribed Quantities for Major Hazard Facilities", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "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", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "International Air Transport Association (IATA) Dangerous Goods Regulations"

naphtha petroleum, light aromatic solvent (CAS: 64742-95-6) is found on the following regulatory lists;

"Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)", "International Council of Chemical Associations (ICCA) - High Production Volume List"

No data for Powers Powerflex 310FC (CW: 4729-97)

Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

| Substance | CAS | Suggested codes |
|--|--------------|-----------------|
| 4, 4' - diphenylmethane diisocyanate (MDI) | 26447- 40- 5 | R43 |

INGREDIENTS WITH MULTIPLE CAS NUMBERS

| Ingredient Name | CAS |
|--|--------------------------|
| 4, 4' - diphenylmethane diisocyanate (MDI) | 101- 68- 8, 26447- 40- 5 |

■ 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.

■ 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.

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This is the end of the MSDS.