

POWERS POWERFOAM

Chemwatch Independent Material Safety Data Sheet
Issue Date: 10-Oct-2011
9317SP

CHEMWATCH 4727-96
Version No:6
CD 2011/3 Page 1 of 8

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

POWERS POWERFOAM

PROPER SHIPPING NAME

AEROSOLS

PRODUCT USE

■ Application is by spray atomisation from a hand held aerosol pack.
Polyurethane.

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

R12
R20
R36/37/38
R40(3)
R42/43
R44
R48/20
R63(3)

Risk Phrases

- Extremely flammable.
- Harmful by inhalation.
- Irritating to eyes, respiratory system and skin.
- Limited evidence of a carcinogenic effect.
- May cause SENSITISATION by inhalation and skin contact.
- Risk of explosion if heated under confinement.
- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- Possible risk of harm to the unborn child.

SAFETY

Safety Codes

S16
S23
S24
S25
S36
S37
S39
S51
S09
S53
S401
S07
S13
S26
S46
S60
S63

Safety Phrases

- Keep away from sources of ignition. No smoking.
- Do not breathe gas/fumes/vapour/spray.
- Avoid contact with skin.
- Avoid contact with eyes.
- Wear suitable protective clothing.
- Wear suitable gloves.
- Wear eye/face protection.
- 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.
- 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 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.

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Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
polymeric diphenylmethane diisocyanate	9016-87-9	>25
tris(2- chloroisopropyl)phosphate	13674-84-5	1-24
hydrocarbon propellant as iso- butane	68476-85-7.	1-<20
propane	75-28-5.	
dimethyl ether	74-98-6	
	115-10-6	1-9

Section 4 - FIRST AID MEASURES

SWALLOWED

- Not considered a normal route of entry.
- 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 aerosols come in contact with the eyes:
- Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes 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.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- If solids or aerosol mists are deposited upon the skin:
- Flush skin and hair with running water (and soap if available).
- Remove any adhering solids with industrial skin cleansing cream.
- DO NOT use solvents.
- Seek medical attention in the event of irritation.

INHALED

- If aerosols, fumes or combustion products are inhaled:
- Remove to fresh air.
- Lay patient down. Keep warm and rested.
- Protheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.

NOTES TO PHYSICIAN

- Treat symptomatically.
- 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

- SMALL FIRE:
- Water spray, dry chemical or CO2
- LARGE FIRE:
- Water spray or fog.

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.

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Section 5 - FIRE FIGHTING MEASURES

- Prevent, by any means available, spillage from entering drains or water course.

FIRE/EXPLOSION HAZARD

- - Liquid and vapour are highly flammable.
- Severe fire hazard when exposed to heat or flame.
- Vapour forms an explosive mixture with air.
- Severe explosion hazard, in the form of vapour, when exposed to flame or spark.

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

Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.

FIRE INCOMPATIBILITY

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

HAZCHEM

2YE

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- - Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Wear protective clothing, impervious gloves and safety glasses.
- Shut off all possible sources of ignition and increase ventilation.

MAJOR SPILLS

- - Avoid contamination with water, alkalis and detergent solutions.
- Material reacts with water and generates gas, pressurises containers with even drum rupture resulting.
- DO NOT reseal container if contamination is suspected.
- Open all containers with care.
- 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

- - 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.

SUITABLE CONTAINER

- - Aerosol dispenser.
- Check that containers are clearly labelled.

STORAGE INCOMPATIBILITY

- - Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances.
- Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous.

STORAGE REQUIREMENTS

- - Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can.
- 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. Contents under pressure.

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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	polymeric diphenylmethane diisocyanate (Isocyanates, all (as- NCO))		0.02		0.07	Sen
Australia Exposure Standards	hydrocarbon propellant (LPG (liquified petroleum gas))	1000	1800			
Australia Exposure Standards	dimethyl ether (Dimethyl ether)	400	760	500	950	

The following materials had no OELs on our records

- tris(2- chloroisopropyl)phosphate: CAS:13674- 84- 5 CAS:16839- 32- 0 CAS:98112- 32- 4

PERSONAL PROTECTION

RESPIRATOR

- Type AX-P 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 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

- 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.
- No special equipment needed when handling small quantities.
- OTHERWISE:
- For potentially moderate exposures:
- Wear general protective gloves, eg. light weight rubber gloves.

OTHER

- No special equipment needed when handling small quantities.
 - OTHERWISE:
 - Overalls.
 - Skin cleansing cream.
 - Eyewash unit.
 - Do not spray on hot surfaces.
 - The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton.
 - Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.
- BREThERICK: Handbook of Reactive Chemical Hazards.

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.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

- Supplied as an aerosol pack. Contents under PRESSURE.
- Coloured liquid with a characteristic odour; does not mix with water.

PHYSICAL PROPERTIES

Liquid.
Gas.
Does not mix with water.
Floats on 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)	Not Available	pH (1% solution)	Not Applicable
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not Applicable
Autoignition Temp (°C)	Not Available	Vapour Pressure (kPa)	Not Available
Upper Explosive Limit (%)	Not Available	Specific Gravity (water=1)	0.95
Lower Explosive Limit (%)	Not Available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	Not Available	Evaporation Rate	Not Available
iso-butane			
log Kow (Sangster 1997):		2.76	
propane			
log Kow (Sangster 1997):		2.36	
dimethyl ether			
log Kow (Sangster 1997):		0.1	

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY

- - Elevated temperatures.
 - Presence of open flame.
 - 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

- Not considered to be a risk because of the extreme volatility of the gas.
 - 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.

SKIN

- Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

INHALED

- Evidence shows, or practical experience predicts, that the material produces irritation of the respiratory system in a substantial number of individuals following inhalation.

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Section 11 - TOXICOLOGICAL INFORMATION

CHRONIC HEALTH EFFECTS

■ Harmful: danger of serious damage to health by prolonged exposure through inhalation. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. This has been demonstrated via both short- and long-term experimentation. Based on experience with animal studies, exposure to the material may result in toxic effects to the development of the foetus, at levels which do not cause significant toxic effects to the mother. Principal route of occupational exposure to the gas is by inhalation. 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].

TOXICITY AND IRRITATION

■ Not available. Refer to individual constituents.

CARCINOGEN

Polymethylene polyphenyl isocyanate	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group	3
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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 Powerfoam	No Data Available	No Data Available		
polymeric diphenylmethane diisocyanate	No Data Available	No Data Available		
tris(2-chloroisopropyl)phosphate	HIGH	No Data Available	LOW	MED
hydrocarbon propellant	No Data Available	No Data Available		
iso- butane	HIGH	No Data Available	LOW	HIGH
propane	LOW	No Data Available	LOW	HIGH
dimethyl ether	LOW	No Data Available	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- - DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.
- Allow small quantities to evaporate.
- DO NOT incinerate or puncture aerosol cans.

Section 14 - TRANSPORTATION INFORMATION



Labels Required: FLAMMABLE GAS

HAZCHEM:

2YE (ADG7)

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Section 14 - TRANSPORTATION INFORMATION

ADG7:

Class or Division	2.1	Subsidiary Risk:	None
UN No.:	1950	Packing Group:	None
Special Provision:	63, 190, 277, 327	Limited Quantity:	See SP 277
Portable Tanks & Bulk Containers - Instruction:	None	Portable Tanks & Bulk Containers - Special Provision:	None
Packagings & IBCs - Packing Instruction:	PP17, PP87, L2	Packagings & IBCs - Special Packing Provision:	P003, LP02

Name and Description: AEROSOLS

Land Transport UNDG:

Class or division	2.1	Subsidiary risk:	None
UN No.:	1950	UN packing group:	None

Shipping Name: AEROSOLS

Air Transport IATA:

ICAO/IATA Class:	2.1	ICAO/IATA Subrisk:	None
UN/ID Number:	1950	Packing Group:	-

Special provisions: A145

Shipping Name: AEROSOLS, FLAMMABLE

Maritime Transport IMDG:

IMDG Class:	2	IMDG Subrisk:	SP63
UN Number:	1950	Packing Group:	None
EMS Number:	F- D, S- U	Special provisions:	63 190 277 327 344 959

Limited Quantities: See SP277

Shipping Name: AEROSOLS

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE None

REGULATIONS

Regulations for ingredients

polymeric diphenylmethane diisocyanate (CAS: 9016-87-9) is found on the following regulatory lists;

"Australia High Volume Industrial Chemical List (HVICL)", "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 Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs"

tris(2-chloroisopropyl)phosphate (CAS: 13674-84-5,16839-32-0,98112-32-4) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)"

hydrocarbon propellant (CAS: 68476-85-7,68476-86-8) is found on the following regulatory lists;

"Australia Exposure Standards", "Australia Hazardous Substances", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)"

iso-butane (CAS: 75-28-5) is found on the following regulatory lists;

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

propane (CAS: 74-98-6) is found on the following regulatory lists;

"Australia - Queensland Hazardous Materials and Prescribed Quantities for Major Hazard Facilities", "Australia Exposure Standards", "Australia Hazardous Substances", "Australia Inventory of Chemical Substances (AICS)", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "International Council of Chemical Associations (ICCA) - High Production Volume List"

dimethyl ether (CAS: 115-10-6,157621-61-9) is found on the following regulatory lists;

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

No data for Powers Powerfoam (CW: 4727-96)

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Section 16 - OTHER INFORMATION

Denmark Advisory list for selfclassification of dangerous substances

Substance	CAS	Suggested codes
tris(2- chloroisopropyl)phosphate	13674- 84- 5	Mut3; R68 Rep3; R63 Xn; R22 Xi; R38

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
tris(2- chloroisopropyl)phosphate	13674- 84- 5, 16839- 32- 0, 98112- 32- 4
hydrocarbon propellant	68476- 85- 7, 68476- 86- 8
dimethyl ether	115- 10- 6, 157621- 61- 9

■ 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.