

WATTYL COLOURTHANE PF330 PRIMER FILLER PART B

Chemwatch Independent Material Safety Data Sheet
Issue Date: 17-Aug-2008
C9317EC

CHEMWATCH 5072-26
Version No:4
CD 2010/4 Page 1 of 10

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

WATTYL COLOURTHANE PRIMER FILLER HARDENER

PROPER SHIPPING NAME

PAINT

PRODUCT USE

■ The use of a quantity of material in an unventilated or confined space may result in increased exposure and an irritating atmosphere developing. Before starting consider control of exposure by mechanical ventilation.

Used according to manufacturer's directions.

Requires that the two parts be mixed by hand or mixer before use, in accordance with manufacturers directions. Mix only as much as is required. Do not return the mixed material to the original containers.

CONTAINS free organic isocyanate. Mixing and application requires special precautions and use of personal protective gear [APMF].

SUPPLIER

Company: Wattyl Pty Ltd

Address:

4 Steel Street

Blacktown

NSW, 2148

Australia

Telephone: +61 2 9621 6255

Emergency Tel: **1800 039 008**

Fax: +61 2 9831 4244

Email: wattyl@wattyl.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

R23

R42/43

R65

R66

R67

Risk Phrases

• Flammable.

• Toxic by inhalation.

• May cause SENSITISATION by inhalation and skin contact.

• HARMFUL- May cause lung damage if swallowed.

• Repeated exposure may cause skin dryness and cracking.

• Vapours may cause drowsiness and dizziness.

SAFETY

Safety Codes

S01

S36

S38

S401

S35

S13

S60

Safety Phrases

• Keep locked up.

• Wear suitable protective clothing.

• In case of insufficient ventilation, wear suitable respiratory equipment.

• To clean the floor and all objects contaminated by this material, use water and detergent.

• This material and its container must be disposed of in a safe way.

• Keep away from food, drink and animal feeding stuffs.

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

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
hexamethylene diisocyanate polymer	28182-81-2	1-9
toluene diisocyanate/ hexamethylene diisocyanate copolymer	63368-95-6	10-30
toluene diisocyanate	26471-62-5	<0.5
hexamethylene diisocyanate	822-06-0	<0.5
n- butyl acetate	123-86-4	30-60
xylene	1330-20-7	<2
propylene glycol monomethyl ether acetate, alpha- isomer	108-65-6	<2
ethylbenzene	100-41-4	<1

Solvent grades have less than 0.1% benzene content.

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 2 of 10

Section 4 - FIRST AID MEASURES

SWALLOWED

- - If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus.
- 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.
- Avoid giving milk or oils.
- Avoid giving alcohol.

EYE

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

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

- Any material aspirated during vomiting may produce lung injury. Therefore emesis should not be induced mechanically or pharmacologically. Treat symptomatically.
- for simple esters:

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 .
- 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.
- Toluene diisocyanate is a known pulmonary sensitiser. Annual medical surveillance should be conducted including pulmonary history, examination of the heart and lungs, 14 x 17 inch (35 x 47 cm) x-ray and pulmonary function testing (FCV, FEV1).<</>.
- For acute or short term repeated exposures to xylene:
- Gastro-intestinal absorption is significant with ingestions. For ingestions exceeding 1-2 ml (xylene)/kg, intubation and lavage with cuffed endotracheal tube is recommended. The use of charcoal and cathartics is equivocal.
 - Pulmonary absorption is rapid with about 60-65% retained at rest.
 - Primary threat to life from ingestion and/or inhalation, is respiratory failure.
 - Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ < 50 mm Hg or pCO₂ > 50 mm Hg) should be intubated.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- - Alcohol stable foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Flooding quantities of water only.

FIRE FIGHTING

- - Alert Fire Brigade and tell them location and nature of hazard.
 - May be violently or explosively reactive.
 - Wear breathing apparatus plus protective gloves.
 - Prevent, by any means available, spillage from entering drains or water course.
- When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 metres in all directions.

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 3 of 10

Section 5 - FIRE FIGHTING MEASURES

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 dioxide (CO₂), carbon monoxide (CO), isocyanates, and minor amounts of, hydrogen cyanide, nitrogen oxides (NO_x), other pyrolysis products typical of burning organic material.
- Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
- When heated at high temperatures many isocyanates decompose rapidly generating a vapour which pressurises containers, possibly to the point of rupture. Release of toxic and/or flammable isocyanate vapours may then occur.
- Burns with acrid black smoke.

FIRE INCOMPATIBILITY

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

HAZCHEM

•3Y

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

- - 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

- - Liquid Isocyanates and high isocyanate vapour concentrations will penetrate seals on self contained breathing apparatus - SCBA should be used inside encapsulating suit where this exposure may occur.
- Treat isocyanate spills with sufficient amounts of isocyanate decontaminant preparation.
- Typically, such a preparation may consist of: sawdust: 20 parts by weight Kiesegelguhr 40 parts by weight plus a mixture of {ammonia (s.g. 0.880) 8% v/v non-ionic surfactant 2% v/v water 90% v/v}.
- Let stand for 24 hours.
- Avoid contamination with water, alkalies 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

- - Containers, even those that have been emptied, may contain explosive vapours.
 - Do NOT cut, drill, grind, weld or perform similar operations on or near containers.
- Contains low boiling substance:
- Storage in sealed containers may result in pressure buildup causing violent rupture of containers not rated appropriately.
- Check for bulging containers.
 - Vent periodically
 - Always release caps or seals slowly to ensure slow dissipation of vapours.
 - DO NOT allow clothing wet with material to stay in contact with skin.
 - Electrostatic discharge may be generated during pumping - this may result in fire.
 - Ensure electrical continuity by bonding and grounding (earthing) all equipment.
 - Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 1 m/sec until fill pipe submerged to twice its diameter, then ≤ 7 m/sec).
 - Avoid splash filling.
 - 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.

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 4 of 10

Section 7 - HANDLING AND STORAGE

- For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
- For materials with a viscosity of at least 2680 cSt. (23 deg. C)
- For manufactured product having a viscosity of at least 250 cSt. (23 deg. C)
- Manufactured product that requires stirring before use and having a viscosity of at least 20 cSt (25 deg. C).

STORAGE INCOMPATIBILITY

- - Esters react with acids to liberate heat along with alcohols and acids.
 - Strong oxidising acids may cause a vigorous reaction with esters that is sufficiently exothermic to ignite the reaction products.
 - Heat is also generated by the interaction of esters with caustic solutions.
 - Flammable hydrogen is generated by mixing esters with alkali metals and hydrides.
 - Avoid reaction with water, alcohols and detergent solutions.
 - Isocyanates and thioisocyanates are incompatible with many classes of compounds, reacting exothermically to release toxic gases. Reactions with amines, strong bases, aldehydes, alcohols, alkali metals, ketones, mercaptans, strong oxidisers, hydrides, phenols, and peroxides can cause vigorous releases of heat. Acids and bases initiate polymerisation reactions in these materials.
 - Isocyanates easily form adducts with carbodiimides, isothiocyanates, ketenes, or with substrates containing activated CC or CN bonds.
 - Some isocyanates react with water to form amines and liberate carbon dioxide. This reaction may also generate large volumes of foam and heat. Foaming in confined spaces may produce pressure in confined spaces or containers. Gas generation may pressurise drums to the point of rupture.
 - A range of exothermic decomposition energies for isocyanates is given as 20-30 kJ/mol.
 - The relationship between energy of decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy released per unit of mass, rather than on a molar basis (J/g) be used in the assessment.
 - For example, in "open vessel processes" (with man-hole size openings, in an industrial setting), substances with exothermic decomposition energies below 500 J/g are unlikely to present a danger, whilst those in "closed vessel processes" (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150 J/g.
- BREITHERICK: Handbook of Reactive Chemical Hazards, 4th Edition.
- Avoid strong acids, bases.

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.
- for commercial quantities of isocyanates:
- Isocyanates should be stored in adequately bunded areas. Nothing else should be kept within the same bunding. Pre-polymers need not be segregated. Drums of isocyanates should be stored under cover, out of direct sunlight, protected from rain, protected from physical damage and well away from moisture, acids and alkalis.
 - Where isocyanates are stored at elevated temperatures to prevent solidifying, adequate controls should be installed to prevent the high temperatures and precautions against fire should be taken.
 - Where stored in tanks, the more reactive isocyanates should be blanketed with a non-reactive gas such as nitrogen and equipped with absorptive type breather valve (to prevent vapour emissions)..
 - Transfer systems for isocyanates in bulk storage should be fully enclosed and use pump or vacuum systems. Warning signs, in appropriate languages, should be posted where necessary.

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	Wattyl Colourthane Primer Filler Hardener (Isocyanates, all (as- NCO))		0.02		0.07	Sen
Australia Exposure Standards	n- butyl acetate (n- Butyl acetate)	150	713	200	950	
Australia Exposure Standards	propylene glycol monomethyl ether acetate, alpha-isomer (1- Methoxy-2- propanol acetate)	50	274	100	548	Sk
Australia Exposure Standards	ethylbenzene (Ethyl benzene)	100	434	125	543	

PERSONAL PROTECTION

RESPIRATOR

Type A Filter of sufficient capacity

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

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 5 of 10

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

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.

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

- frequency and duration of contact,
- chemical resistance of glove material,
- glove thickness and
- dexterity.

- Isocyanate resistant materials include Teflon, Viton, nitrile rubber and some PVA gloves.

- Protective gloves and overalls should be worn as specified in the appropriate national standard.

- Contaminated garments should be removed promptly and should not be re-used until they have been decontaminated.

- NOTE: Natural rubber, neoprene, PVC can be affected by isocyanates.

OTHER

■ All employees working with isocyanates must be informed of the hazards from exposure to the contaminant and the precautions necessary to prevent damage to their health. They should be made aware of the need to carry out their work so that as little contamination as possible is produced, and of the importance of the proper use of all safeguards against exposure to themselves and their fellow workers.

Employees exposed to contamination hazards should be educated in the need for, and proper use of, facilities, clothing and equipment and thereby maintain a high standard of personal cleanliness.

- Overalls.

- PVC Apron.

- PVC protective suit may be required if exposure severe.

- Eyewash unit.

- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.

- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets), non sparking safety footwear.

ENGINEERING CONTROLS

■ For flammable liquids and flammable gases, local exhaust ventilation or a process enclosure ventilation system may be required. Ventilation equipment should be explosion-resistant.<</>.

- All processes in which isocyanates are used should be enclosed wherever possible.

- Total enclosure, accompanied by good general ventilation, should be used to keep atmospheric concentrations below the relevant exposure standards.

- If total enclosure of the process is not feasible, local exhaust ventilation may be necessary. Local exhaust ventilation is essential where lower molecular weight isocyanates (such as TDI or HDI) is used or where isocyanate or polyurethane is sprayed.

- Where other isocyanates or pre-polymers are used and aerosol formation cannot occur, local exhaust ventilation may not be necessary if the atmospheric concentration can be kept below the relevant exposure standards.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Clear colourless to pale yellow flammable liquid with strong solvent odour; does not mix with water.

Will react with water to release carbon dioxide.

PHYSICAL PROPERTIES

Liquid.

Does not mix with water.

Toxic or noxious vapours/gas.

State	Liquid	Molecular Weight	Not applicable
Melting Range (°C)	Not available	Viscosity	Not Available
Boiling Range (°C)	127- 143	Solubility in water (g/L)	Immisc ible
Flash Point (°C)	23	pH (1% solution)	Not applicable
Decomposition Temp (°C)	Not Available	pH (as supplied)	Not a plicable
Autoignition Temp (°C)	Not available	Vapour Pressure (kPa)	Not available
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	0.97- 1.01
Lower Explosive Limit (%)	Not available	Relative Vapour Density (air=1)	>1
Volatile Component (%vol)	25- 35	Evaporation Rate	Not available

n- butyl acetate

log Kow (Prager 1995): 1.82

log Kow (Sangster 1997): 1.78

xylene

log Kow (Prager 1995): 3.12- 3.20

ethylbenzene

log Kow (Prager 1995): 3.15

log Kow (Sangster 1997): 3.15

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet
Issue Date: 17-Aug-2008
C9317EC

CHEMWATCH 5072-26
Version No:4
CD 2010/4 Page 6 of 10

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

- Toxic by inhalation.
- HARMFUL- May cause lung damage if swallowed.
- Vapours may cause dizziness or suffocation.
- Vapours may cause drowsiness and dizziness.

CHRONIC HEALTH EFFECTS

- May cause SENSITISATION by inhalation and skin contact.
- Repeated exposure may cause skin dryness and cracking.

TOXICITY AND IRRITATION

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

TOLUENE DIISOCYANATE:

N-BUTYL ACETATE:

XYLENE:

ETHYLBENZENE:

WATTYL COLOURTHANE PRIMER FILLER HARDENER:

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

HEXAMETHYLENE DIISOCYANATE POLYMER:

N-BUTYL ACETATE:

XYLENE:

WATTYL COLOURTHANE PRIMER FILLER HARDENER:

- 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.

HEXAMETHYLENE DIISOCYANATE POLYMER:

TOLUENE DIISOCYANATE:

HEXAMETHYLENE DIISOCYANATE:

WATTYL COLOURTHANE PRIMER FILLER HARDENER:

- 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.
- Particular attention is drawn to so-called atopic diathesis which is characterised by an increased susceptibility to allergic rhinitis, allergic bronchial asthma and atopic eczema (neurodermatitis) which is associated with increased IgE synthesis.
- Allergic reactions which develop in the respiratory passages as bronchial asthma or rhinoconjunctivitis, are mostly the result of reactions of the allergen with specific antibodies of the IgE class and belong in their reaction rates to the manifestation of the immediate type. In addition to the allergen-specific potential for causing respiratory sensitisation, the amount of the allergen, the exposure period and the genetically determined disposition of the exposed person are likely to be decisive.
- 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.

HEXAMETHYLENE DIISOCYANATE:

TOLUENE DIISOCYANATE:

- Isocyanate vapours/mists are irritating to the upper respiratory tract and lungs; the response may be severe enough to produce bronchitis with wheezing, gasping and severe distress, even sudden loss of consciousness, and pulmonary oedema. Possible neurological symptoms arising from isocyanate exposure include headache, insomnia, euphoria, ataxia, anxiety neurosis, depression and paranoia.
- 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.

HEXAMETHYLENE DIISOCYANATE POLYMER:

TOXICITY

Inhalation (rat) LC50: 18500 mg/m³/1h

Oral (rat) LD50: >10000 mg/kg*

Dermal (rabbit) LD50: >5000 mg/kg*

- The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Eye (rabbit) 100: mg -

[* BAYER]

IRRITATION

Skin (rabbit): 500 mg - Moderate

TOLUENE DIISOCYANATE/ HEXAMETHYLENE DIISOCYANATE COPOLYMER:

- Not available. Refer to individual constituents.

TOLUENE DIISOCYANATE:

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 7 of 10

Section 11 - TOXICOLOGICAL INFORMATION

■ 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.<</>.
for diisocyanates:

In general, there appears to be little or no difference between aromatic and aliphatic diisocyanates as toxicants. In addition, there are insufficient data available to make any major distinctions between polymeric (<1000 MW) and monomeric diisocyanates.

HEXAMETHYLENE DIISOCYANATE:

TOXICITY

Oral (rat) LD50: 738 mg/kg

Inhalation (rat) LC50: 60 mg/m³/4h

Oral (mouse) LD50: 350 mg/kg

Inhalation (mouse) LC50: 30 mg/m³

Intravenous (mouse) LD50: 5.6 mg/kg

Dermal (rabbit) LD50: 593 mg/kg

■ for 1,6-hexamethylene diisocyanate:

Exposures to HDI are often associated with exposures to its prepolymers, especially to a trimeric biuretic prepolymer of HDI (HDI-BT), which is widely used as a hardener in automobile and airplane paints, and which typically contains 0.5-1% unreacted HDI. There is evidence that diisocyanate prepolymers may induce asthma at the same or greater frequency as the monomers; therefore, there is a need to assess the potential for human exposure to prepolymeric HDI as well as monomeric HDI.

1,6-Hexamethylene diisocyanate is corrosive to the skin and the eye.

1,6-Hexamethylene diisocyanate was found to induce dermal and respiratory sensitization in animals and humans.

IRRITATION

Nil Reported

N-BUTYL ACETATE:

TOXICITY

Oral (rat) LD50: 13100 mg/kg

Dermal (rabbit) LD50: 3200 mg/kg*

Inhalation (human) TClO: 200 ppm

Inhalation (rat) LC50: 2000 ppm/4h

Inhalation (Human) TClO: 200 ppm/4h * [PPG]

Oral (Rat) LD50: 10768 mg/kg

Inhalation (Rat) LC50: 390 ppm/4h

Intraperitoneal (Mouse) LD50: 1230 mg/kg

Oral (Rabbit) LD50: 3200 mg/kg

Oral (Guinea pig) LD50: 4700 mg/kg

Intraperitoneal (Guinea pig) LD: 1500 mg/kg

IRRITATION

Skin (rabbit): 500 mg/24h- Moderate

Eye (rabbit): 20 mg (open)- SEVERE

Eye (rabbit): 20 mg/24h - Moderate

Eye (human): 300 mg

XYLENE:

TOXICITY

Oral (human) LDLo: 50 mg/kg

Oral (rat) LD50: 4300 mg/kg

Inhalation (human) TClO: 200 ppm

Inhalation (man) LCLo: 10000 ppm/6h

Inhalation (rat) LC50: 5000 ppm/4h

Oral (Human) LD: 50 mg/kg

Inhalation (Human) TClO: 200 ppm/4h

Intraperitoneal (Rat) LD50: 2459 mg/kg

Subcutaneous (Rat) LD50: 1700 mg/kg

Oral (Mouse) LD50: 2119 mg/kg

Intraperitoneal (Mouse) LD50: 1548 mg/kg

Intravenous (Rabbit) LD: 129 mg/kg

Inhalation (Guinea pig) LC: 450 ppm/4h

■ 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.

Reproductive effector in rats

IRRITATION

Skin (rabbit):500 mg/24h Moderate

Eye (human): 200 ppm Irritant

Eye (rabbit): 87 mg Mild

Eye (rabbit): 5 mg/24h SEVERE

PROPYLENE GLYCOL MONOMETHYL ETHER ACETATE, ALPHA-ISOMER:

TOXICITY

Oral (rat) LD50: 8532 mg/kg

Dermal (rabbit) LD50: >5000 mg/kg* * [CCINFO]

Inhalation (rat) LC50: 4345 ppm/6h

■ for propylene glycol ethers (PGEs):

Typical propylene glycol ethers include propylene glycol n-butyl ether (PnB); dipropylene glycol n-butyl ether (DPnB); dipropylene glycol methyl ether acetate (DPMA); tripropylene glycol methyl ether (TPM).

Testing of a wide variety of propylene glycol ethers Testing of a wide variety of propylene glycol ethers has shown that propylene glycol-based ethers are less toxic than some ethers of the ethylene series.

A BASF report (in ECETOC) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects.

The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer.

A BASF report (in ECETOC) showed that inhalation exposure to 545 ppm PGMEA (beta isomer) was associated with a teratogenic response in rabbits; but exposure to 145 ppm and 36 ppm had no adverse effects.

The beta isomer of PGMEA comprises only 10% of the commercial material, the remaining 90% is alpha isomer.

need for care in handling this chemical.

[I.C.]

IRRITATION

Nil Reported

ETHYLBENZENE:

TOXICITY

Oral (rat) LD50: 3500 mg/kg

Inhalation (human) TClO: 100 ppm/8h

Inhalation (rat) LCLo: 4000 ppm/4h

Intraperitoneal (mouse) LD50: 2642 mg/kg

Dermal (rabbit) LD50: 17800 mg/kg

Inhalation (Rat) LC: 4000 ppm/4h

■ The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of

IRRITATION

Skin (rabbit): 15 mg/24h Mild

Eye (rabbit): 500 mg - SEVERE

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 8 of 10

Section 11 - TOXICOLOGICAL INFORMATION

dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

Ethylbenzene is readily absorbed following inhalation, oral, and dermal exposures, distributed throughout the body, and excreted primarily through urine. There are two different metabolic pathways for ethylbenzene with the primary pathway being the alpha-oxidation of ethylbenzene to 1-phenylethanol, mostly as the R-enantiomer.

NOTE: Substance has been shown to be mutagenic in at least one assay, or belongs to a family of chemicals producing damage or change to cellular DNA.

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

Liver changes, uterine tract, effects on fertility, foetotoxicity,

specific developmental abnormalities (musculoskeletal system) recorded.

REPROTOXIN

ylene

ILO Chemicals in the electronics industry that have toxic effects on reproduction

Reduced fertility or sterility

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
hexamethylene diisocyanate polymer	HIGH		LOW	LOW
toluene diisocyanate	LOW	LOW	LOW	MED
hexamethylene diisocyanate	LOW		LOW	MED
n- butyl acetate	LOW		LOW	HIGH
ylene	LOW	LOW	LOW	
propylene glycol monomethyl ether acetate, alpha- isomer	HIGH		LOW	HIGH
ethylbenzene	LOW	MED	LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

■ - Containers may still present a chemical hazard/ danger when empty.

- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain 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.

- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area.

A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction.

- 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.

- 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.:	1263	UN packing group:	III
Special provisions:	163; 223	Packing Instructions:	None
Limited quantities:	5 L	Portable tanks and bulk containers - Instructions:	T2
Portable tanks and bulk containers - Special provisions:	TP1; TP29	Packagings and IBCs - Packing instruction:	P001; IBC03; LP01

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 9 of 10

Section 14 - TRANSPORTATION INFORMATION

Packagings and IBCs - PP1

Special packing

provisions:

Name and description: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)

Land Transport UNDG:

Class or division:	3	Subsidiary risk:	None
UN No.:	1263	UN packing group:	III

Shipping Name: PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)

Air Transport IATA:

ICAO/IATA Class:	3	ICAO/IATA Subrisk:	None
UN/ID Number:	1263	Packing Group:	III

Special provisions: A3

Shipping name: PAINT

Maritime Transport IMDG:

IMDG Class:	3	IMDG Subrisk:	None
UN Number:	1263	Packing Group:	III
EMS Number:	F- E , S- E	Special provisions:	163 223 955

Limited Quantities: 5 L

Shipping Name: PAINT (including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning or reducing compound)

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE S6

REGULATIONS

Regulations for ingredients

hexamethylene diisocyanate polymer (CAS: 28182-81-2,53200-31-0) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)"

toluene diisocyanate/ hexamethylene diisocyanate copolymer (CAS: 63368-95-6) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)"

toluene diisocyanate (CAS: 26471-62-5,584-84-9,91-08-7) is found on the following regulatory lists;

"Australia - Queensland Hazardous Materials and Prescribed Quantities for Major Hazard Facilities", "Australia Hazardous Substances", "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"

hexamethylene diisocyanate (CAS: 822-06-0) 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", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

n-butyl acetate (CAS: 123-86-4) 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)", "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"

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", "OECD Representative List of High Production Volume (HPV) Chemicals"

propylene glycol monomethyl ether acetate, alpha-isomer (CAS: 108-65-6,84540-57-8,142300-82-1) 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)", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "International Council of Chemical Associations (ICCA) - High Production Volume List", "OECD Representative List of High Production Volume (HPV) Chemicals"

ethylbenzene (CAS: 100-41-4) is found on the following regulatory lists;

"Australia - Australian Capital Territory - Environment Protection Regulation: Ambient environmental standards (Domestic water supply - organic compounds)", "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 - Australian Capital Territory Environment Protection Regulation Pollutants entering waterways - Domestic water quality", "Australia Exposure Standards", "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", "IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO", "International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "OECD Representative List of High Production

continued...

WATTYL COLOURTHANE PRIMER FILLER HARDENER

Chemwatch Independent Material Safety Data Sheet

Issue Date: 17-Aug-2008

C9317EC

CHEMWATCH 5072-26

Version No:4

CD 2010/4 Page 10 of 10

Section 15 - REGULATORY INFORMATION

Volume (HPV) Chemicals", "WHO Guidelines for Drinking-water Quality - Guideline values for chemicals that are of health significance in drinking-water"

No data for WattyL Colourthane Primer Filler Hardener (CW: 5072-26)

Section 16 - OTHER INFORMATION

ND

Substance	CAS	Suggested codes
propylene glycol monomethyl ether	84540- 57- 8	
acetate, alpha- isomer		

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
hexamethylene diisocyanate polymer	28182- 81- 2, 53200- 31- 0
toluene diisocyanate	26471- 62- 5, 584- 84- 9, 91- 08- 7
propylene glycol monomethyl ether acetate, alpha- isomer	108- 65- 6, 84540- 57- 8, 142300- 82- 1

■ 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.

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: 17-Aug-2008

Print Date: 10-Dec-2010

This is the end of the MSDS.