

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet
Issue Date: 28-May-2008
NA477ECP

CHEMWATCH 15-6685
Version No:2.0
CD 2008/2 Page 1 of 10

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DUNLOP WALLFIX TILE ADHESIVE

STATEMENT OF HAZARDOUS NATURE

Not considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation.

OTHER NAMES

"premixed ceramic tile adhesive"

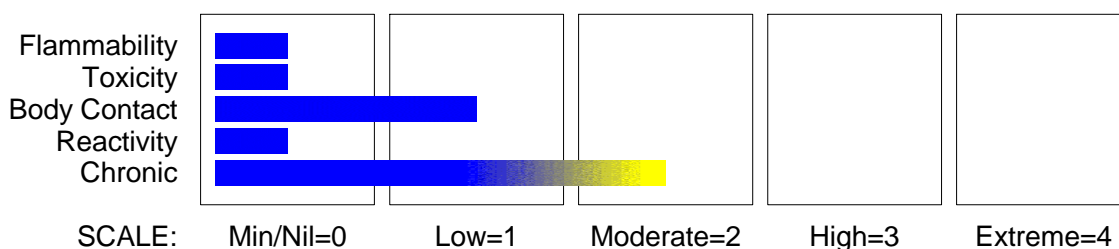
PRODUCT USE

Premixed adhesive used to fix ceramic wall tiles in interior situations.

SUPPLIER

Company: Ardex NZ Pty Ltd
Address:
32 Lane Street
Woolston
Christchurch,
NZL
Telephone: +64 3384 3029
Fax: +64 3384 9779

HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

HAZARD

Not hazardous
No hazards determined by Chemwatch using GHS/HSNO criteria

PRECAUTIONARY STATEMENTS

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME | CAS RN | % |
|----------------------|--------|-------|
| acrylic emulsion | | 10-60 |
| fillers | | 10-60 |
| cellulosic thickener | | 1-10 |
| bacteriacide | | 0-1 |

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 2 of 10

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| | | |
|-----------------|-----------|-------|
| ethylene glycol | 107-21-1 | <0.5 |
| water | 7732-18-5 | 30-60 |

Section 4 - FIRST AID MEASURES

NEW ZEALAND POISONS INFORMATION CENTRE 0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

- 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.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- foam.
- dry chemical powder.
- carbon dioxide.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 3 of 10

Section 5 - FIRE FIGHTING MEASURES

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered to be a significant fire risk.
- Expansion or decomposition on heating may lead to violent rupture of containers.
- Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
- May emit acrid smoke., carbon dioxide (CO₂), other pyrolysis products typical of burning organic material.

FIRE INCOMPATIBILITY

None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

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

MAJOR SPILLS

Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.
- When handling, DO NOT eat, drink or smoke.
- Keep containers securely sealed when not in use.
- Avoid physical damage to containers.
- Always wash hands with soap and water after handling.
- Work clothes should be laundered separately.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 4 of 10

Section 7 - HANDLING AND STORAGE

SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

Avoid contamination of water, foodstuffs, feed or seed.
None known.

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.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

| Source | Material | Peak ppm | Peak mg/m ³ |
|--|---|----------|------------------------|
| New Zealand Workplace Exposure Standards (WES) | ethylene glycol (Ethylene glycol vapour & mist) | 50 | 127 |

The following materials had no OELs on our records

- water: CAS:7732- 18- 5

MATERIAL DATA

None assigned for mixture or identified for ingredient(s).

INGREDIENT DATA

ETHYLENE GLYCOL:

Odour Threshold: 25 ppm

NOTE: Detector tubes for ethylene glycol, measuring in excess of 10 mg/m³, are commercially available.

It appears impractical to establish separate TLVs for ethylene glycol vapour and mists. Atmospheric concentration that do not cause discomfort are unlikely to cause adverse effects. The TLV-C is thought to be protective against throat and respiratory irritation and headache reported in exposed humans. NIOSH has not established a limit for this substance due to the potential teratogenicity associated with exposure and because respiratory irritation reported at the TLV justified a lower value.

WATER:

No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION

EYE

- Safety glasses with side shields
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 5 of 10

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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 general protective gloves, eg. light weight rubber gloves.

OTHER

No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Barrier cream.
- Eyewash unit.

RESPIRATOR

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

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

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Thick white paste with a slight odour; does not mix with water.

PHYSICAL PROPERTIES

Does not mix with water.

Sinks in water.

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 6 of 10

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Molecular Weight: Not Applicable
Melting Range (°C): Not Available
Solubility in water (g/L): Immiscible
pH (1% solution): Not Available
Volatile Component (%vol): Not Available
Relative Vapour Density (air=1): Not Available
Lower Explosive Limit (%): Not Applicable
Autoignition Temp (°C): Not Applicable
State: Non Slump Paste

Boiling Range (°C): 100
Specific Gravity (water= 1): 1.6 approx.
pH (as supplied): 9
Vapour Pressure (kPa): Not Available
Evaporation Rate: Not Available
Flash Point (°C): Not Applicable

Upper Explosive Limit (%): Not Applicable
Decomposition Temp (°C): Not Available
Viscosity: Not Available

log Kow (Prager 1995): - 1.36
log Kow (Sangster 1997): - 1.36
log Kow: -1.93- -1.36

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

Product is considered stable and hazardous polymerisation will not occur.

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).

Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

Ingestion may result in nausea, abdominal irritation, pain and vomiting.

Considered an unlikely route of entry in commercial/industrial environments.

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).

Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.

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 adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 7 of 10

Section 11 - TOXICOLOGICAL INFORMATION

control measures be used in an occupational setting.

CHRONIC HEALTH EFFECTS

Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.

As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

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

Not available for mixture or identified for ingredient(s).

ETHYLENE GLYCOL:

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

TOXICITY

Oral (rat) LD50: 4700 mg/kg

Oral (human) LDLo: 398 mg/kg

Oral (child) TDLo: 5500 mg/kg

Inhalation (human) TCLo: 10000 mg/m³

Dermal (rabbit) LD50: 9530 mg/kg

Inhalation (rat) LC50: 50100 mg/m³/8 hr

[Estimated Lethal Dose (human) 100 ml; RTECS quoted by Orica]

Substance is reproductive effector in rats (birth defects).

Mutagenic to rat cells.

IRRITATION

Skin (rabbit): 555 mg(open)- Mild

Eye (rabbit): 100 mg/1h - Mild

Eye (rabbit): 1440mg/6h- Moderate

Eye (rabbit): 500 mg/24h - Mild

Eye (rabbit): 12 mg/m³/3D

WATER:

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

No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

No data for Dunlop Wallfix Tile Adhesive.

Refer to data for ingredients, which follows:

ETHYLENE GLYCOL:

Hazardous Air Pollutant:

Yes

Fish LC50 (96hr.) (mg/l):

18500- 4100

Algae IC50 (72hr.) (mg/l):

180000

log Kow (Prager 1995):

- 1.36

log Kow (Sangster 1997):

- 1.36

log Pow (Verschueren 1983):

- 1.93

BOD5:

35%

COD:

94%

ThOD:

1.26

Half- life Soil - High (hours):

288

Half- life Soil - Low (hours):

48

Half- life Air - High (hours):

83

Half- life Air - Low (hours):

8.3

Half- life Surface water - High (hours):

288

Half- life Surface water - Low (hours):

48

Half- life Ground water - High (hours):

576

Half- life Ground water - Low (hours):

96

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 8 of 10

Section 12 - ECOLOGICAL INFORMATION

| | |
|--|--------|
| Aqueous biodegradation - Aerobic - High (hours): | 288 |
| Aqueous biodegradation - Aerobic - Low (hours): | 48 |
| Aqueous biodegradation - Anaerobic - High (hours): | 1152 |
| Aqueous biodegradation - Anaerobic - Low (hours): | 192 |
| Aqueous biodegradation - Removal secondary treatment - High (hours): | 100% |
| Aqueous biodegradation - Removal secondary treatment - Low (hours): | 80% |
| Photooxidation half- life water - High (hours): | 566000 |
| Photooxidation half- life water - Low (hours): | 6400 |
| Photooxidation half- life air - High (hours): | 83 |
| Photooxidation half- life air - Low (hours): | 8.3 |

DO NOT discharge into sewer or waterways.

log Kow: -1.93- -1.36

Half-life (hr) air: 24

Henry's atm m³ /mol: 6.00E-08

BOD 5 if unstated: 0.15-0.81, 12%

COD: 1.21-1.29

ThOD: 1.26

BCF: 10-190

Toxicity Fish: LC50(96)118-550mg/L

Toxicity invertebrate: cell mult. inhib.135-1127mg/L

Bioaccumulation: not sig

Nitrif. inhib.: inhib at 125mg/L

Anaerobic effects: no degrad

Effects on algae and plankton: cell mult. inhib. algae 105-710mg/L

Degradation Biological: little

processes Abiotic: photol&hydrol notsig,RxnOH*

In the atmosphere ethylene glycol exists mainly in the vapour phase. It is degraded in the atmosphere by reaction with photochemically produced hydroxy radicals (estimated half-life 24-50 hours).

Ethylene glycol does not concentrate in the food chain.

Section 13 - DISPOSAL CONSIDERATIONS

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

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None

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

Section 15 - REGULATORY INFORMATION

REGULATIONS

Dunlop Wallfix Tile Adhesive (CAS: None):

No regulations applicable

ethylene glycol (CAS: 107-21-1) is found on the following regulatory lists:

GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 9 of 10

Section 15 - REGULATORY INFORMATION

IMO IBC Code Chapter 17: Summary of minimum requirements
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk
IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances
IMO Provisional Categorization of Liquid Substances - List 1: Pure or technically pure products
IMO Provisional Categorization of Liquid Substances - List 2: Pollutant only mixtures containing at least 99% by weight of components already assessed by IMO
International Council of Chemical Associations (ICCA) - High Production Volume List
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Chemicals (single components)
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Hazardous Substances Register
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Pesticides
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Scheduled Toxic Substances
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Timber Preservatives, Antisapstains and Antifouling Paints
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Poisons Schedule [NLV]
New Zealand Workplace Exposure Standards (WES)
OECD Representative List of High Production Volume (HPV) Chemicals

water (CAS: 7732-18-5) is found on the following regulatory lists;
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 18: List of products to which the Code does not apply
New Zealand Inventory of Chemicals (NZIoC)
OECD Representative List of High Production Volume (HPV) Chemicals

Specific advice on controls required for materials used in New Zealand can be found at
<http://www.ermanz.govt.nz/search/registers.html>

Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE
0800 POISON (0800 764 766)
NZ EMERGENCY SERVICES: 111

REPRODUCTIVE HEALTH GUIDELINES

| Ingredient | ORG | UF | Endpoi nt | CR | Adeq TLV |
|-----------------|----------|-----|--------------|----|-------------|
| ethylene glycol | 26 mg/m3 | 100 | R | NA | - |

These exposure guidelines have been derived from a screening level of risk assessment and should not be construed as unequivocally safe limits. ORGS represent an 8-hour time-weighted average unless specified otherwise.

CR = Cancer Risk/10000; UF = Uncertainty factor:

TLV believed to be adequate to protect reproductive health:

LOD: Limit of detection

Toxic endpoints have also been identified as:

D = Developmental; R = Reproductive; TC = Transplacental carcinogen

Jankovic J., Drake F.: A Screening Method for Occupational Reproductive

American Industrial Hygiene Association Journal 57: 641-649 (1996).

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. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Test disclaimer:

fdafadsfasfasfasfs

asdfsafas

asfsafas

asfsdg

sf

gsdfgfd

continued...

DUNLOP WALLFIX TILE ADHESIVE

Chemwatch Material Safety Data Sheet

Issue Date: 28-May-2008

NA477ECP

CHEMWATCH 15-6685

Version No:2.0

CD 2008/2 Page 10 of 10

Section 16 - OTHER INFORMATION

hdfs

hdfsbdb

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: 28-May-2008

Print Date: 10-Jun-2008