

Dunlop Floor Repairer Minor Imperfections

Chemwatch Material Safety Data Sheet
Issue Date: 29-Jan-2010
C477LP

Hazard Alert Code: HIGH

CHEMWATCH 4639-11
Version No:3.1.1.1
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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

Dunlop Floor Repairer Minor Imperfections

STATEMENT OF HAZARDOUS NATURE

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Not regulated for transport of Dangerous Goods.

OTHER NAMES

"cementious underlayment"

PRODUCT USE

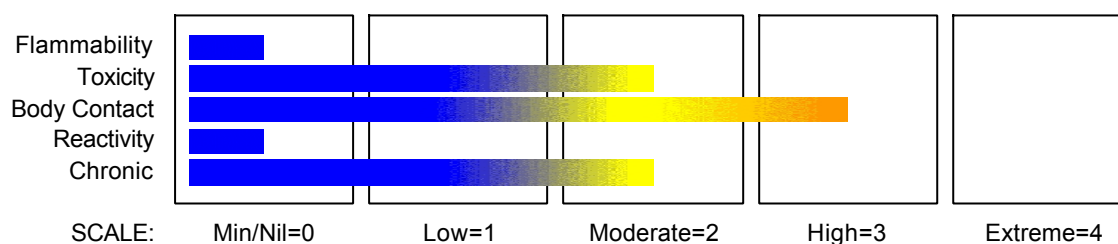
Cement based underlayment.

SUPPLIER

Company: Ardex NZ Pty Ltd
Address:
32 Lane Street
Woolston
Christchurch,
New Zealand
Telephone: +64 3384 3029
Emergency Tel:1800 222 841 (General Information)
Fax: +64 3384 9779

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS



GHS Classification

Respiratory Sensitizer Category 1
Skin Corrosion/Irritation Category 1C
Skin Sensitizer Category 1

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Section 2 - HAZARDS IDENTIFICATION



EMERGENCY OVERVIEW

HAZARD DANGER

Determined by Chemwatch using GHS/HSNO criteria
6.5A, 6.5B, 8.2C.

HAZARD STATEMENTS

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention

| Code | Phrase |
|------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. |
| P264 | Wash ... thoroughly after handling. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P285 | In case of inadequate ventilation wear respiratory protection. |

Response

| Code | Phrase |
|----------------|--|
| P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303+P361+P353 | IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P304+P341 | IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER or doctor/physician. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P342+P311 | If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. |
| P363 | Wash contaminated clothing before reuse. |

Storage

| Code | Phrase |
|------|------------------|
| P405 | Store locked up. |

Disposal

| Code | Phrase |
|------|--------|
|------|--------|

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Section 2 - HAZARDS IDENTIFICATION

P501 Dispose of contents/container to ...

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME | CAS RN | % |
|-----------------------------------|------------|-------|
| portland cement | 65997-15-1 | 10-40 |
| limestone | 1317-65-3 | 10-45 |
| ethylene/ vinyl acetate copolymer | 24937-78-8 | 1-20 |

Section 4 - FIRST AID MEASURES

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

SWALLOWED

- For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Transport to hospital or doctor without delay.

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.
 - Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

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

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Lay patient down. Keep warm and rested.
- Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.
- Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask

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Section 4 - FIRST AID MEASURES

device, or pocket mask as trained. Perform CPR if necessary.

- Transport to hospital, or doctor, without delay.

NOTES TO PHYSICIAN

Treat symptomatically.

For acute or short-term repeated exposures to highly alkaline materials:

- Respiratory stress is uncommon but present occasionally because of soft tissue edema.
- Unless endotracheal intubation can be accomplished under direct vision, cricothyroidotomy or tracheotomy may be necessary.
- Oxygen is given as indicated.
- The presence of shock suggests perforation and mandates an intravenous line and fluid administration.
- Damage due to alkaline corrosives occurs by liquefaction necrosis whereby the saponification of fats and solubilisation of proteins allow deep penetration into the tissue.

Alkalis continue to cause damage after exposure.

INGESTION:

- Milk and water are the preferred diluents

No more than 2 glasses of water should be given to an adult.

- Neutralising agents should never be given since exothermic heat reaction may compound injury.

* Catharsis and emesis are absolutely contra-indicated.

* Activated charcoal does not absorb alkali.

* Gastric lavage should not be used.

Supportive care involves the following:

- Withhold oral feedings initially.
- If endoscopy confirms transmucosal injury start steroids only within the first 48 hours.
- Carefully evaluate the amount of tissue necrosis before assessing the need for surgical intervention.
- Patients should be instructed to seek medical attention whenever they develop difficulty in swallowing (dysphagia).

SKIN AND EYE:

- Injury should be irrigated for 20-30 minutes.

Eye injuries require saline. [Ellenhorn & Barceloux: Medical Toxicology].

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- 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.

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered a significant fire risk, however containers may burn.

Decomposition may produce toxic fumes of:

metal oxides.

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Section 5 - FIRE FIGHTING MEASURES

May emit poisonous fumes.
May emit corrosive fumes.

FIRE INCOMPATIBILITY

- None known.

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Remove all ignition sources.
- Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Use dry clean up procedures and avoid generating dust.
- Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

Moderate hazard.

- CAUTION: Advise personnel in area.
- Alert Emergency Services and tell them location and nature of hazard.
- Control personal contact by wearing protective clothing.
- Prevent, by any means available, spillage from entering drains or water courses.
- Recover product wherever possible.
- IF DRY: Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. IF WET: Vacuum/shovel up and place in labelled containers for disposal.
- ALWAYS: Wash area down with large amounts of water and prevent runoff into drains.
- 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

- 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.
- DO NOT enter confined spaces until atmosphere has been checked.
- DO NOT allow material to contact humans, exposed food or food utensils.
- 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. Launder contaminated clothing before re-use.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.
- Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

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Section 7 - HANDLING AND STORAGE

SUITABLE CONTAINER

- Polyethylene or polypropylene container.
- Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY

None known.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

For major quantities:

- Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).
- Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



- +: *May be stored together*
- O: *May be stored together with specific preventions*
- X: *Must not be stored together*

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

| Source | Material | TWA ppm | TWA mg/m ³ | STEL ppm | STEL mg/m ³ | Peak ppm | Peak mg/m ³ | TWA F/CC | Notes |
|--|-----------------------------------|---------|-----------------------|----------|------------------------|----------|------------------------|----------|--|
| New Zealand Workplace Exposure Standards (WES) | portland cement (Portland cement) | | 10 | | | | | | (a)The value for inhalable dust containing no asbestos and less than 1% free silica. |

The following materials had no OELs on our records

- limestone: CAS:1317- 65- 3
- ethylene/ vinyl acetate copolymer: CAS:24937- 78- 8

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EMERGENCY EXPOSURE LIMITS

| Material | Revised IDLH Value (mg/m3) | Revised IDLH Value (ppm) |
|-----------------------|----------------------------|--------------------------|
| portland cement 13763 | 5,000 | |

ODOUR SAFETY FACTOR (OSF)

OSF=20 (ethylene/ vinyl acetate copolymer)

■ Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

| Class | OSF | Description |
|-------|---------|---|
| A | 550 | Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV- TWA for example) is being reached, even when distracted by working activities |
| B | 26- 550 | As " A" for 50- 90% of persons being distracted |
| C | 1- 26 | As " A" for less than 50% of persons being distracted |
| D | 0.18- 1 | 10- 50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached |
| E | <0.18 | As " D" for less than 10% of persons aware of being tested |

MATERIAL DATA

PORTLAND CEMENT:

for calcium silicate:

containing no asbestos and <1% crystalline silica

ES TWA: 10 mg/m3 inspirable dust

TLV TWA: 10 mg/m3 total dust (synthetic nonfibrous) A4

Although in vitro studies indicate that calcium silicate is more toxic than substances described as "nuisance dusts" is thought that adverse health effects which might occur following exposure to 10-20 mg/m3 are likely to be minimal. The TLV-TWA is thought to be protective against the physical risk of eye and upper respiratory tract irritation in workers and to prevent interference with vision and deposition of particulate in the eyes, ears, nose and mouth.

For calcium oxide:

The TLV-TWA is thought to be protective against undue irritation and is analogous to that recommended for sodium hydroxide.

The concentration of dust, for application of respirable dust limits, is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative log-normal function with a median aerodynamic diameter of 4.0 µm (+-) 0.3 µm and with a geometric standard deviation of 1.5 µm (+-) 0.1 µm, i.e. generally less than 5 µm.

NOTE: This substance has been classified by the ACGIH as A4 NOT classifiable as causing Cancer in humans.

Portland cement is considered to be a nuisance dust that does not cause fibrosis and has little potential to induce adverse effects on the lung.

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LIMESTONE:

Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

ETHYLENE/ VINYL ACETATE COPOLYMER:

for acetic acid:

NOTE:Detector tubes for acetic acid, measuring in excess of 1 ppm, are commercially available.

Exposure at or below the TLV-TWA and TLV-STEL is thought to protect the worker against conjunctival, nose and respiratory tract irritation.

Odour Safety Factor(OSF)

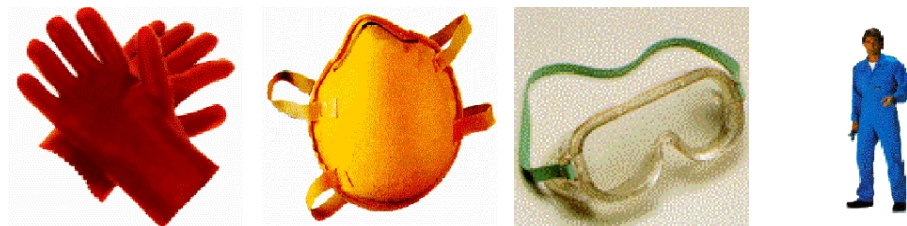
OSF=21 ("ACETIC ACID, GLACIAL").

Particulates Not Otherwise Classified (PNOC)

TLV TWA: 10 mg/m³ Inhalable particulate

TLV TWA: 3 mg/m³ Respirable particulate.

PERSONAL PROTECTION



EYE

- Chemical goggles.
- Full face shield may be required for supplementary but never for primary protection of eyes
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. 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.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash unit.

RESPIRATOR

- Particulate. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

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

■ 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. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.

An approved self contained breathing apparatus (SCBA) may be required in some situations.

Provide adequate ventilation in warehouse or closed storage area.

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Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Fine grey odourless powder; very slightly mixes with water.

PHYSICAL PROPERTIES

Alkaline.

| | | | |
|---------------------------|----------------|---------------------------------|-----------------|
| State | Divided Solid | Molecular Weight | Not Applicable |
| Melting Range (°C) | Not Available | Viscosity | Not Available |
| Boiling Range (°C) | Not Applicable | Solubility in water (g/L) | Partly Miscible |
| Flash Point (°C) | Not Applicable | pH (1% solution) | Not Available |
| Decomposition Temp (°C) | Not Available | pH (as supplied) | Not Applicable |
| Autoignition Temp (°C) | Not Available | Vapour Pressure (kPa) | Not Applicable |
| Upper Explosive Limit (%) | Not Applicable | Specific Gravity (water=1) | 1.2 |
| Lower Explosive Limit (%) | Not Applicable | Relative Vapour Density (air=1) | Not Applicable |
| Volatile Component (%vol) | Not Applicable | Evaporation Rate | Not Applicable |

Section 10 - CHEMICAL STABILITY

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

Health hazard summary table:

| | |
|-----------------------------------|-------------------------------|
| Acute toxicity | Not applicable |
| Skin corrosion/irritation | Skin Corr. 1 C |
| Serious eye damage/irritation | Not applicable |
| Respiratory or skin sensitization | Resp. Sens. 1 Skin Sens. 1 |
| Germ cell mutagenicity | Not applicable |
| Carcinogenicity | Not applicable |
| Reproductive toxicity | Not applicable |
| STOT- single exposure | Not applicable |
| STOT- repeated exposure | Not applicable |
| Aspiration hazard | Not applicable |

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

- The material can produce chemical burns within the oral cavity and gastrointestinal tract following ingestion.

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Section 11 - TOXICOLOGICAL INFORMATION

EYE

- The material can produce chemical burns to the eye following direct contact. Vapours or mists may be extremely irritating.
- If applied to the eyes, this material causes severe eye damage.
- The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

SKIN

- The material can produce chemical burns following direct contact with the skin.
- Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

- Inhalation of dusts, generated by the material during the course of normal handling, may be damaging to the health of the individual.
- Effects on lungs are significantly enhanced in the presence of respirable particles.

CHRONIC HEALTH EFFECTS

- There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.

Overexposure to respirable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity, chest infections. Repeated exposures, in an occupational setting, to high levels of fine-divided dusts may produce a condition known as pneumoconiosis which is the lodgement of any inhaled dusts in the lung irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns (1/50,000 inch), are present. Lung shadows are seen in the X-ray. Symptoms of pneumoconiosis may include a progressive dry cough, shortness of breath on exertion (exertional dyspnea), increased chest expansion, weakness and weight loss. As the disease progresses the cough produces a stringy mucous, vital capacity decreases further and shortness of breath becomes more severe. Other signs or symptoms include altered breath sounds, diminished lung capacity, diminished oxygen uptake during exercise, emphysema and pneumothorax (air in lung cavity) as a rare complication.

Removing workers from possibility of further exposure to dust generally leads to halting the progress of the lung abnormalities. Where worker-exposure potential is high, periodic examinations with emphasis on lung dysfunctions should be undertaken.

Dust inhalation over an extended number of years may produce pneumoconiosis. Pneumoconiosis is the accumulation of dusts in the lungs and the tissue reaction in its presence. It is further classified as being of noncollagenous or collagenous types. Noncollagenous pneumoconiosis, the benign form, is identified by minimal stromal reaction, consists mainly of reticulin fibres, an intact alveolar architecture and is potentially reversible.

There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population.

Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping.

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.

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

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Section 11 - TOXICOLOGICAL INFORMATION

TOXICITY AND IRRITATION

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

DUNLOP FLOOR REPAIRER MINOR IMPERFECTIONS:

■ Not available. Refer to individual constituents.

PORTLAND CEMENT:

■ 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. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

LIMESTONE:

TOXICITY

Oral (rat) LD50:6450 mg/kg

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

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Eye (rabbit) 0.75: mg/24h -

No evidence of carcinogenic properties. No evidence of mutagenic or teratogenic effects.

IRRITATION

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

ETHYLENE/ VINYL ACETATE COPOLYMER:

■ No significant acute toxicological data identified in literature search.

SKIN

ethylene/ vinyl acetate
copolymer

GESAMP/EHS Composite
List - GESAMP Hazard
Profiles

D1: skin
irritation/corrosion

2

Section 12 - ECOLOGICAL INFORMATION

LIMESTONE:

PORTLAND CEMENT:

DO NOT discharge into sewer or waterways.

PORTLAND CEMENT:

For Metal:

Atmospheric Fate - Metal-containing inorganic substances generally have negligible vapour pressure and are not expected to partition to air.

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Section 12 - ECOLOGICAL INFORMATION

Environmental Fate: Environmental processes, such as oxidation, the presence of acids or bases and microbiological processes, may transform insoluble metals to more soluble ionic forms. Environmental processes may enhance bioavailability and may also be important in changing solubilities.

Aquatic/Terrestrial Fate: When released to dry soil, most metals will exhibit limited mobility and remain in the upper layer; some will leach locally into ground water and/ or surface water ecosystems when soaked by rain or melt ice. A metal ion is considered infinitely persistent because it cannot degrade further. Once released to surface waters and moist soils their fate depends on solubility and dissociation in water. A significant proportion of dissolved/ sorbed metals will end up in sediments through the settling of suspended particles. The remaining metal ions can then be taken up by aquatic organisms. Ionic species may bind to dissolved ligands or sorb to solid particles in water.

Ecotoxicity: Even though many metals show few toxic effects at physiological pH levels, transformation may introduce new or magnified effects.

Ecotoxicity

| Ingredient | Persistence: Water/Soil | Persistence: Air | Bioaccumulation | Mobility |
|--------------------------------------|----------------------------|----------------------|----------------------|----------------------|
| portland cement | No Data Available | No Data Available | No Data Available | No Data Available |
| limestone | No Data Available | No Data Available | No Data Available | No Data Available |
| ethylene/ vinyl acetate copolymer | No Data Available | No Data Available | LOW | 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.
- 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.

Insure that the disposal of material is carried out in accordance with Hazardous Substances (Disposal) Regulations 2001.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:

None

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

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Section 15 - REGULATORY INFORMATION

EPA Approval number

This substance is to be managed in accordance with the classification and controls specified in the Hazardous Substances Transfer Notice, 2004, (see table below). This substance may alternatively be managed under the conditions imposed by an applicable Group Standard.

| HSR No. | HSR Name |
|-----------|--|
| HSR002491 | Additives, Process Chemicals and Raw Materials (Corrosive) Group Standard 2006 |
| HSR002514 | Aerosols (Corrosive) Group Standard 2006 |
| HSR002630 | Organic Peroxides, Corrosive Group Standard 2006 |
| HSR002526 | Cleaning Products (Corrosive) Group Standard 2006 |
| HSR002542 | Construction Products (Corrosive [8.2C]) Group Standard 2006 |
| HSR002547 | Corrosion Inhibitors (Corrosive) Group Standard 2006 |
| HSR002552 | Cosmetic Products Group Standard 2006 |
| HSR002555 | Dental Products (Corrosive) Group Standard 2006 |
| HSR002562 | Embalming Products (Corrosive [8.2C]) Group Standard 2006 |
| HSR002569 | Fertilisers (Corrosive) Group Standard 2006 |
| HSR002575 | Food Additives and Fragrance Materials (Corrosive [8.2C]) Group Standard 2006 |
| HSR002582 | Fuel Additives (Corrosive) Group Standard 2006 |
| HSR002647 | Reagent Kits Group Standard 2006 |
| HSR002618 | N.O.S. (Corrosive) Group Standard 2006 |
| HSR002636 | Photographic Chemicals (Corrosive) Group Standard 2006 |
| HSR002648 | Refining Catalysts Group Standard 2006 |
| HSR002658 | Surface Coatings and Colourants (Corrosive) Group Standard 2006 |
| HSR002681 | Water Treatment Chemicals (Corrosive) Group Standard 2006 |
| HSR100425 | Pharmaceutical Active Ingredients Group Standard 2010 |
| HSR002609 | Metal Industry Products (Corrosive) Group Standard 2006 |

REGULATIONS

Regulations for ingredients

portland cement (CAS: 65997-15-1) is found on the following regulatory lists;

"New Zealand Inventory of Chemicals (NZIoC)", "New Zealand Workplace Exposure Standards (WES)", "OECD List of High Production Volume (HPV) Chemicals"

limestone (CAS: 1317-65-3) is found on the following regulatory lists;

"New Zealand Inventory of Chemicals (NZIoC)", "OECD List of High Production Volume (HPV) Chemicals"

ethylene/ vinyl acetate copolymer (CAS: 24937-78-8) is found on the following regulatory lists;

"GESAMP/EHS Composite List - GESAMP Hazard Profiles", "IMO IBC Code Chapter 17: Summary of minimum requirements", "IMO MARPOL 73/78 (Annex II) - List of Other Liquid Substances", "International Fragrance Association (IFRA) Survey: Transparency List", "New Zealand Inventory of Chemicals (NZIoC)"

No data for Dunlop Floor Repairer Minor Imperfections (CW: 4639-11)

Specific advice on controls required for materials used in New Zealand can be found at www.epa.govt.nz/search-databases/Pages/controls-search.aspx

continued...

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Section 16 - OTHER INFORMATION

NEW ZEALAND POISONS INFORMATION CENTRE

0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

■ 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.

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