

ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet
Issue Date: 20-Oct-2008
NC317ECP

CHEMWATCH 67341
Version No:5
CD 2008/3 Page 1 of 9

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

ARDEX ISOFLEX POWDER

SYNONYMS

"ceramic tile adhesive"

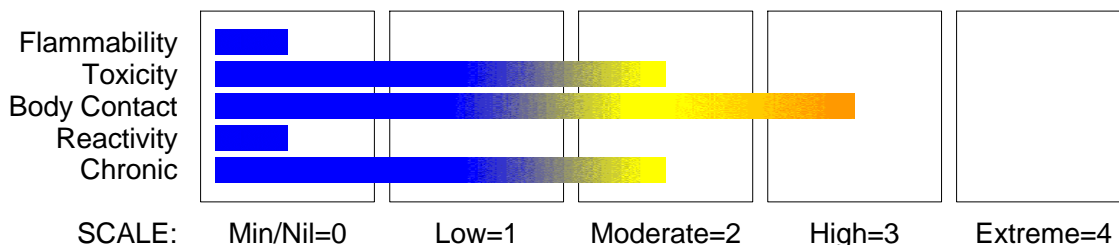
PRODUCT USE

» • Material is mixed and used in accordance with manufacturers directions. Mix with Isoflex Liquid to form ceramic tile adhesive.

SUPPLIER

Company: Ardex Australia Pty Ltd
Address:
20 Powers Road
Seven Hills
NSW, 2147
AUS
Telephone: 1800 224 070
Fax: +61 2 9838 7817

CHEMWATCH HAZARD RATINGS



Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE

None

RISK

» Causes burns.
» Risk of serious damage to eyes.

SAFETY

» Keep locked up.
» Do not breathe dust.

» Avoid contact with eyes.
» Wear suitable protective clothing.
» Use only in well ventilated areas.
» Keep container in a well ventilated place.
» To clean the floor and all objects contaminated by this material use water and detergent.
» Take off immediately all contaminated clothing.
» In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if

continued...

ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet
Issue Date: 20-Oct-2008
NC317ECP

CHEMWATCH 67341
Version No:5
CD 2008/3 Page 2 of 9
Section 2 - HAZARDS IDENTIFICATION

possible).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
portland cement	65997-15-1	10-60
rubber crumbed		10-60
graded sand	14808-60-7.	10-30

Section 4 - FIRST AID MEASURES

SWALLOWED

- » For advice, contact a Poisons Information Centre or a doctor.
- » • 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.
- Seek medical advice.

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 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 dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear breathing passages.
- Ask patient to rinse mouth with water but to not drink water.
- Seek immediate medical attention.

NOTES TO PHYSICIAN

- » Treat symptomatically as for strong alkaline material.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- » • Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.
- Water spray or fog - Large fires only.

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ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet

Issue Date: 20-Oct-2008

NC317ECP

CHEMWATCH 67341

Version No:5

CD 2008/3 Page 3 of 9

Section 5 - FIRE FIGHTING MEASURES

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.

FIRE/EXPLOSION HAZARD

- » • Non combustible.
 - Not considered a significant fire risk, however containers may burn.
- Decomposes on heating and produces toxic fumes of: caustic compounds and aldehydes.

FIRE INCOMPATIBILITY

- » Avoid contact with strong acids and strong oxidisers.

HAZCHEM: None

Personal Protective Equipment

Gas tight chemical resistant suit.

Limit exposure duration to 1 BA set 30 mins.

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- » • Clean up all spills immediately.
- Avoid contact with skin and eyes.
- Wear protective clothing, gloves, safety glasses and dust respirator.
- Use dry clean up procedures and avoid generating dust.
- Sweep up or
- Vacuum up (consider explosion-proof machines designed to be grounded during storage and use).
- Place in clean drum then flush area with water.

MAJOR SPILLS

- » • Clear area of personnel and move upwind.
- If inhalation risk of exposure exists, wear SAA approved dust respirator.
- Collect recoverable product into labelled containers for recycling.

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

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- » Avoid generating and breathing mist and vapour.
- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with incompatible materials.

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ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet

Issue Date: 20-Oct-2008

NC317ECP

CHEMWATCH 67341

Version No:5

CD 2008/3 Page 4 of 9

Section 7 - HANDLING AND STORAGE

- 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.

SUITABLE CONTAINER

» Multi-ply paper bag with sealed plastic liner or heavy gauge plastic bag. NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse. Check that all containers are clearly labelled and free from leaks. Packing as recommended by manufacturer.

STORAGE INCOMPATIBILITY

» Avoid storage with oxidisers and acids.

STORAGE REQUIREMENTS

» • Keep dry.

Keep containers securely sealed when not in use.

Absorbs water and carbon dioxide from the air.

- 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	TWA mg/m ³
Australia Exposure Standards	portland cement (Portland cement (a))	10

The following materials had no OELs on our records

- graded sand: CAS:14808- 60- 7

EMERGENCY EXPOSURE LIMITS

Material	Revised IDLH Value (mg/m ³)	Revised IDLH Value (ppm)
portland cement	5, 000	
graded sand	50	

MATERIAL DATA

» None assigned. Refer to individual constituents.

INGREDIENT DATA

PORTLAND CEMENT:

» 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-

continued...

ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet

Issue Date: 20-Oct-2008

NC317ECP

CHEMWATCH 67341

Version No:5

CD 2008/3 Page 5 of 9

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

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.

GRADED SAND:

NOTE: This product contains negligible amount of respirable dust.

PERSONAL PROTECTION

EYE

- » • Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

- » Wear chemical protective gloves. eg. PVC gloves with barrier cream
- Wear safety footwear.

OTHER

- » • Overalls.
- Barrier cream
- Eyewash unit.

RESPIRATOR

Protection Factor	Half- Face Respirator	Full- Face Respirator	Powered Air Respirator
10 x ES	P1 Air- line*	- -	PAPR- P1 -
50 x ES	Air- line**	P2	PAPR- P2
100 x ES	-	P3	-
		Air- line*	-
100+ x ES	-	Air- line**	PAPR- P3

* - Negative pressure demand ** - Continuous flow.

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ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet
Issue Date: 20-Oct-2008
NC317ECP

CHEMWATCH 67341
Version No:5
CD 2008/3 Page 6 of 9

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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

- » Use in a well-ventilated area.
- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
 - (a): particle dust respirators, if necessary, combined with an absorption cartridge;
 - (b): filter respirators with absorption cartridge or canister of the right type;
 - (c): fresh-air hoods or masks
- Build-up of electrostatic charge on the dust particle, may be prevented by bonding and grounding.
- Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

Refer also to protective measures for the other component used with the product. Read both MSDS before using; store and attach MSDS together.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White to grey odourless powder; insoluble in water.

PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Floats on water.

Molecular Weight: Not applicable
Melting Range (°C): Not available
Solubility in water (g/L): Immiscible
pH (1% solution): Not applicable
Volatile Component (%vol): 0.5 maximum
Relative Vapour Density (air=1): Not applicable
Lower Explosive Limit (%): Not applicable
Autoignition Temp (°C): Not applicable
State: Divided solid

Boiling Range (°C): Not applicable
Specific Gravity (water= 1): 0.9 approx.
pH (as supplied): Not applicable
Vapour Pressure (kPa): Not applicable
Evaporation Rate: Not applicable
Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable
Decomposition Temp (°C): Not available
Viscosity: Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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.

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ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet
Issue Date: 20-Oct-2008
NC317ECP

CHEMWATCH 67341
Version No:5
CD 2008/3 Page 7 of 9

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

» The material is discomforting to the gastro-intestinal tract and is harmful if swallowed. Ingestion may result in nausea, abdominal irritation, pain and vomiting. Considered an unlikely route of entry in commercial/industrial environments.

EYE

» The solid/dust is highly discomforting, may be abrasive to the eyes and capable of causing a mild, temporary redness of the conjunctiva (similar to wind-burn), temporary impairment of vision and/ or other transient eye damage/ ulceration.

SKIN

» The dust is discomforting to the skin and is capable of causing skin reactions which may lead to dermatitis.

Handling wet cement can cause dermatitis. Cement when wet is quite alkaline and this alkali action on the skin contributes strongly to cement contact dermatitis since it may cause drying and defatting of the skin which is followed by hardening, cracking, lesions developing, possible infections of lesions and penetration by soluble salts.

Cement contact dermatitis (CCD) may occur when contact shows an allergic response, which may progress to sensitisation. Sensitisation is due to soluble chromates (chromate compounds) present in trace amounts in some cements and cement products. Soluble chromates readily penetrate intact skin. Cement dermatitis can be characterised by fissures, eczematous rash, dystrophic nails, and dry skin; acute contact with highly alkaline mixtures may cause localised necrosis. Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities.

INHALED

» The dust is discomforting to the upper respiratory tract and lungs and may cause sensitisation. Respiratory sensitisation may result in allergic/asthma like responses; from coughing and minor breathing difficulties to bronchitis with wheezing, gasping. Effects on lungs are significantly enhanced in the presence of respirable particles.

CHRONIC HEALTH EFFECTS

» Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

TOXICITY AND IRRITATION

» Not available. Refer to individual constituents.

PORTLAND CEMENT:

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

» 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

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ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet

Issue Date: 20-Oct-2008

NC317ECP

CHEMWATCH 67341

Version No:5

CD 2008/3 Page 8 of 9

Section 11 - TOXICOLOGICAL INFORMATION

is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production.

GRADED SAND:

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

» No data of toxicological significance identified in literature search.

CARCINOGEN

graded sand	International Agency for Research on Cancer (IARC) Carcinogens	Group	1
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Section 12 - ECOLOGICAL INFORMATION

No data for Ardex Isoflex Powder.
Refer to data for ingredients, which follows:

PORTLAND CEMENT:

» DO NOT discharge into sewer or waterways.

Section 13 - DISPOSAL CONSIDERATIONS

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

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG7)

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

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

Ardex Isoflex Powder (CAS: None):
No regulations applicable

portland cement (CAS: 65997-15-1) is found on the following regulatory lists;
Australia Exposure Standards
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
OECD Representative List of High Production Volume (HPV) Chemicals

graded sand (CAS: 14808-60-7) is found on the following regulatory lists;
Australia - New South Wales Hazardous Substances Prohibited for Specific Uses
Australia - New South Wales Hazardous Substances Requiring Health Surveillance
Australia - South Australia Hazardous Substances Requiring Health Surveillance
Australia - Tasmania Hazardous Substances Prohibited for Specified Uses
Australia - Tasmania Hazardous Substances Requiring Health Surveillance
Australia - Western Australia Hazardous Substances Requiring Health Surveillance
Australia Exposure Standards
Australia Hazardous Substances

continued...

ARDEX ISOFLEX POWDER

Chemwatch Material Safety Data Sheet

Issue Date: 20-Oct-2008

NC317ECP

CHEMWATCH 67341

Version No:5

CD 2008/3 Page 9 of 9

Section 15 - REGULATORY INFORMATION

Australia Hazardous Substances Requiring Health Surveillance
Australia High Volume Industrial Chemical List (HVICL)
Australia Inventory of Chemical Substances (AICS)
Australia Occupational Health and Safety (Commonwealth Employment) (National Standards) Regulations
1994 - Hazardous Substances Requiring Health Surveillance
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 6
International Agency for Research on Cancer (IARC) Carcinogens
OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

» 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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