

# DENTSPLY AQUACEM

ChemWatch Material Safety Data Sheet

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### PRODUCT NAME

DENTSPLY AQUACEM

### SYNONYMS

### PRODUCT USE

Medicine

### SUPPLIER

Company: Dentsply (Australia) Pty Ltd (ABN 15 004 290 322)

Address:

11-21 Gilby Road

Mount Waverley

VIC, 3149

AUS

Telephone: +61 03 9538 8240

Emergency Tel: 0413 830 239

Fax: 03 9538 8260

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## Section 2 - HAZARDS IDENTIFICATION

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### STATEMENT OF HAZARDOUS NATURE

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.**

According to the Criteria of NOHSC, and the ADG Code.

### POISONS SCHEDULE

None

### RISK

Irritating to eyes and skin.

Skin contact may produce health damage\*.

Cumulative effects may result following exposure\*.

Limited evidence of a carcinogenic effect\*.

\* (limited evidence)

### SAFETY

Do not breathe dust.

Wear eye/face protection.

Take off immediately all contaminated clothing.

In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.

If you feel unwell contact Doctor or Poisons Information Centre. (Show the label

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## Section 2 - HAZARDS IDENTIFICATION ...

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if possible).

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
acrylic acid homopolymer	9003-01-4	25

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## Section 4 - FIRST AID MEASURES

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### 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 the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs 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.
- 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 device, or pocket mask as trained. Perform CPR if necessary.
- Transport to hospital, or doctor, without delay.

### NOTES TO PHYSICIAN

Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

- Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- 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.

### FIRE/EXPLOSION HAZARD

- Solid which exhibits difficult combustion or is difficult to ignite.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited
- Dry dust can also be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.
- Build-up of electrostatic charge 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.

Decomposition may produce toxic fumes of carbon dioxide (CO<sub>2</sub>)

other pyrolysis products typical of burning organic material

May emit poisonous fumes.

May emit corrosive fumes.

### FIRE INCOMPATIBILITY

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

### HAZCHEM

None

### Personal Protective Equipment

Glasses:

Full face- shield.

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## Section 5 - FIRE FIGHTING MEASURES ...

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Gloves:  
PVC chemical resistant type.

Respirator:  
Particulate

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### EMERGENCY PROCEDURES

#### MINOR SPILLS

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

#### MAJOR SPILLS

- Slippery when spilt.  
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.
  - 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.

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## Section 7 - HANDLING AND STORAGE

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### PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.

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## Section 7 - HANDLING AND STORAGE ...

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- Observe manufacturer's storing and handling recommendations.

### SUITABLE CONTAINER

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

### STORAGE INCOMPATIBILITY

Avoid reaction with oxidising agents

### STORAGE REQUIREMENTS

Observe manufacturer's storing and handling recommendations.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

#### EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

Composite Exposure Standard for Mixture (TWA) :10 mg/m<sup>3</sup>.

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m<sup>3</sup> Mixture Conc (%)

Component	Breathing Zone (mg/m <sup>3</sup> )	Mixture Conc (%)
acrylic acid homopolymer	10.0000	25.0

#### INGREDIENT DATA

##### ACRYLIC ACID HOMOPOLYMER:

TLV TWA: 10 mg/m<sup>3</sup> (Value for particulate matter containing no asbestos and <1% crystalline silica, Inhalable fraction) [ACGIH]

TLV TWA: 3 mg/m<sup>3</sup> (Value for particulate matter containing no asbestos and <1% crystalline silica, Respirable fraction) [ACGIH]

Dusts not otherwise classified, as inspirable dust;

ES TWA: 10 mg/m<sup>3</sup>

### PERSONAL PROTECTION

continued...

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

### EYE

- Chemical goggles.
- Full face shield.
- Contact lenses pose a special hazard; soft lenses may absorb irritants and all lenses concentrate them.

### HANDS/FEET

- Wear chemical protective gloves, eg. PVC.
- Wear safety footwear or safety gumboots, eg. Rubber

### OTHER

- Overalls.
- P.V.C. apron.
- Barrier cream.
- Skin cleansing cream.
- Eye wash 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

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

- 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.
- 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

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

Yellow powder with an acidic odour; partly soluble in water.

### PHYSICAL PROPERTIES

Molecular Weight: Not Applicable

Melting Range (°C): Not Available

Solubility in water (g/L): Partly Miscible

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 Available

State: Divided Solid

Boiling Range (°C): Not Available

Specific Gravity (water=1): Not Available

pH (as supplied): 2.6-4.2

Vapour Pressure (kPa): Not Available

Evaporation Rate: Not Available

Flash Point (°C): Not Applicable

Upper Explosive Limit (%): Not Applicable

Decomposition Temp (°C): Not Available

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## Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

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### CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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## Section 11 - TOXICOLOGICAL INFORMATION

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### POTENTIAL HEALTH EFFECTS

#### ACUTE HEALTH EFFECTS

##### SWALLOWED

(No Oral LD50, any animal species) The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (eg. 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.

##### EYE

This material can cause eye irritation and damage in some persons.

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## Section 11 - TOXICOLOGICAL INFORMATION ...

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### SKIN

This material can cause inflammation of the skin on contact in some persons.

The material may accentuate any pre-existing dermatitis condition

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

The material is not thought to produce adverse health effects following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

### CHRONIC HEALTH EFFECTS

Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung. Prime symptom is breathlessness; lung shadows show on X-ray.

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 mucous production.

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

Although polymer with a molecular weight of more than 10000 are normally considered to be of low concern, this does not apply to water-absorbing polymers.

A two year cancer study on rats, with high molecular weight polyacrylate (1 million), with no reactive functional group, showed an increase in lung tumours and scarring.

### Dentsply AquaCem

Not available. Refer to individual constituents.

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

ACRYLIC ACID HOMOPOLYMER:

continued...

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## Section 11 - TOXICOLOGICAL INFORMATION ...

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### TOXICITY

Oral (rat) LD50: 2500 mg/kg

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.

### IRRITATION

Nil reported

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## Section 12 - ECOLOGICAL INFORMATION

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DO NOT discharge into sewer or waterways.

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## Section 13 - DISPOSAL CONSIDERATIONS

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Puncture containers to prevent re-use and bury at an authorised landfill.

- 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 licenced land-fill 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.

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## Section 14 - TRANSPORTATION INFORMATION

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Shipping Name:

None

Dangerous Goods Class: None

UN/NA Number: None

ADR Number:

Packing Group: None

Labels Required:

Additional Shipping Information:

International Transport Regulations:

IMO: None

## HAZCHEM

None

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## Section 15 - REGULATORY INFORMATION

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## POISONS SCHEDULE

None

continued...

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## Section 16 - OTHER INFORMATION

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