

# DENTSPLY 3% CITANEST DENTAL WITH ADRENALINE 1:300,000

ChemWatch Material Safety Data Sheet  
Issue Date: Mon 20-Jun-2005

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## Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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### PRODUCT NAME

DENTSPLY 3% CITANEST DENTAL WITH ADRENALINE 1:300,000

### SYNONYMS

Prilocaine Hydrochloride with Epinephrine  
Bitartrate Injection

### PRODUCT USE

Local dental anaesthetic for use by injection.

### SUPPLIER

Company: Dentsply (Australia) Pty Ltd (ABN: 15 004 290  
322)  
Address:  
11-21 Gilby Road  
Mount Waverley  
VIC, 3149  
AUS  
Telephone: +61 3 9538 8240  
Emergency Tel: 0413 830 239  
Fax: +61 3 9538 8260

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## Section 2 - HAZARDS IDENTIFICATION

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### STATEMENT OF HAZARDOUS NATURE

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

### POISONS SCHEDULE

S4

### RISK

Ingestion may produce health damage\*.  
Cumulative effects may result following exposure\*.  
May produce skin discomfort\*.  
\* (limited evidence).

### SAFETY

Do not breathe gas/fumes/vapour/spray.  
Take off immediately all contaminated clothing.  
If you feel unwell contact Doctor or Poisons Information Centre. (Show the label  
if possible).

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## Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

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NAME	CAS RN	%
prilocaine hydrochloride	1786-81-8	3.0
L-adrenaline-D-hydrogentartrate	51-42-3	0.0005

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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 in eyes, hold eyelids apart and flush the eye continuously with running water.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- 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 contact occurs:
- Immediately remove all contaminated clothing, including footwear
  - Flush skin and hair with running water (and soap if available).
  - Seek medical attention in event of irritation.

### INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

### NOTES TO PHYSICIAN

Treat symptomatically.

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## Section 5 - FIRE FIGHTING MEASURES

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### EXTINGUISHING MEDIA

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 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.

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## Section 5 - FIRE FIGHTING MEASURES

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### 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.
- Other decomposition products include.  
carbon dioxide (CO<sub>2</sub>).  
hydrogen chloride.  
nitrogen oxides (NO<sub>x</sub>).

### FIRE INCOMPATIBILITY

None known.

### HAZCHEM

None

### Personal Protective Equipment

PERSONAL PROTECTION EQUIPMENT  
Gloves, boots (chemical resistant).

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## Section 6 - ACCIDENTAL RELEASE MEASURES

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### 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.
- Take care to avoid needles and broken containers.

#### MAJOR SPILLS

Moderate hazard.

- Clear area of personnel and move upwind.
  - Alert Fire Brigade and tell them location and nature of hazard.
  - Wear breathing apparatus plus protective gloves.
  - Prevent, by any means available, spillage from entering drains or water course.
  - Stop leak if safe to do so.
  - Contain spill with sand, earth or vermiculite.
  - Collect recoverable product into labelled containers for recycling.
  - Neutralise/decontaminate residue.
  - Collect solid residues and seal in labelled drums for disposal.
  - Wash area and prevent runoff into drains.
  - After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
  - If contamination of drains or waterways occurs, advise emergency services.
- Take care to avoid needles and broken containers.

**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.
- Observe manufacturer's storing and handling recommendations.

### SUITABLE CONTAINER

- Packaging as recommended by manufacturer.
- Check that containers are clearly labelled.

### STORAGE INCOMPATIBILITY

None known.

### STORAGE REQUIREMENTS

- Protect from light.
- 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.
- Keep cool. Store below 25 deg.C.

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### EXPOSURE CONTROLS

No data available for prilocaine hydrochloride as (CAS: 1786-81-8)

No data available for L-adrenaline-D-hydrogentartrate as (CAS: 51-42-3)

Not available. Refer to individual constituents.

### INGREDIENT DATA

PRILOCAINE HYDROCHLORIDE:

REL TWA: 5 mg/m<sup>3</sup>\*

\*[AstraZeneca]

Airborne particulate or vapour must be kept to levels as low as is practicably achievable given access to modern engineering controls and monitoring hardware. Biologically active compounds may produce idiosyncratic effects which are entirely unpredictable on the basis of literature searches and prior clinical experience (both recent and past).

L-ADRENALINE-D-HYDROGENTARTRATE:

Airborne particulate or vapour must be kept to levels as low as is practicably achievable given access to modern engineering controls and monitoring hardware. Biologically active compounds may produce idiosyncratic effects which are entirely unpredictable on the basis of literature searches and prior clinical experience (both recent and past).

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## Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

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### PERSONAL PROTECTION

#### EYE

- Safety glasses with side shields
- Chemical goggles.
- 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.

#### GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:  
"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computer-generated selection:

Protective Material CPI \*

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\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

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.

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

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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### APPEARANCE

Clear, odourless liquid; mixes with water.

### PHYSICAL PROPERTIES

Liquid.

Mixes with water.

Molecular Weight: Not Applicable

Melting Range (°C): Not Available

Solubility in water (g/L): 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 Applicable

State: Liquid

Boiling Range (°C): Not Available

Specific Gravity (water=1): 1.0 (water

pH (as supplied): 3.3-5.5

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

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 (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.

Local anaesthetics may produce systemic effects following excessive dosage by any route, Systemic toxicity mainly involves the central nervous system and the cardiovascular system. Central nervous system excitation may be manifested by yawning, restlessness, excitement, tinnitus, nausea and vomiting. Numbness of the tongue and perioral region is an early sign of systemic toxicity.

Simultaneous effects on the cardiovascular system may result in myocardial depression and peripheral vasodilation resulting in hypotension and bradycardia. The substance and/or its metabolites may bind to haemoglobin inhibiting normal uptake of oxygen. This condition, known as "methaemoglobinemia", is a form of

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## Section 11 - TOXICOLOGICAL INFORMATION

oxygen starvation (anoxia).

Symptoms include cyanosis (a bluish discolouration skin and mucous membranes) and breathing difficulties. Symptoms may not be evident until several hours after exposure.

At about 15% concentration of blood methaemoglobin there is observable cyanosis of the lips, nose and earlobes. Symptoms may be absent although euphoria, flushed face and headache are commonly experienced. At 25-40%, cyanosis is marked but little disability occurs other than that produced on physical exertion. At 40-60%, symptoms include weakness, dizziness, lightheadedness, increasingly severe headache, ataxia, rapid shallow respiration, drowsiness, nausea, vomiting, confusion, lethargy and stupor. Above 60% symptoms include dyspnea, respiratory depression, tachycardia or bradycardia, and convulsions. Levels exceeding 70% may be fatal.

### EYE

Although the liquid 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).

### 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. 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. Topical application of local anaesthetics may produce burning, stinging, tenderness, erythema, excoriation, vesiculation, sloughing and tissue necrosis. Photosensitivity reactions may produce skin eruptions.

### 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 control measures be used in an occupational setting.

### CHRONIC HEALTH EFFECTS

Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Repeated exposure to high levels of an amide anesthetic in animals produced adverse effects on the liver and central nervous system. [Dentsply]

### TOXICITY AND IRRITATION

Not available. Refer to individual constituents.  
unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

#### PRILOCAINE HYDROCHLORIDE:

##### TOXICITY

Parenteral (man) LDLo: 12.43 mg/kg/1h - I Nil reported

Intraperitoneal (rat) LD50: 148 mg/kg

Subcutaneous (rat) LD50: 790 mg/kg

##### IRRITATION

continued...

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## Section 11 - TOXICOLOGICAL INFORMATION

Intravenous (rat) LD50: 56.6 mg/kg  
Intraperitoneal (mouse) LD50: 30 mg/kg  
Subcutaneous (mouse) LD50: 632 mg/kg  
Intravenous (mouse) LD50: 55 mg/kg  
Intravenous (rabbit) LD50: 18 mg/kg  
Intratracheal (rabbit) LD50: 65 mg/kg  
Altered sleep-time, convulsions recorded.

### L-ADRENALINE-D-HYDROGENTARTRATE: TOXICITY

Subcutaneous (rat) LDLo: 8.3 mg/kg  
Intravenous (rat) LD50: 0.082 mg/kg  
Oral (mouse) LD50: 4 mg/kg  
Reproductive effector

IRRITATION  
Nil reported

Exposure to the material for prolonged periods may cause physical defects in the developing embryo (teratogenesis).

## Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

### PRILOCAINE HYDROCHLORIDE:

LC50 (Zebra fish): 188 mg/l/96h\*  
EC50 (Daphnia magna): 61 mg/l/48h\*  
EC50 (Green algae): 154 mg/l/72h\*

\*[AstraZeneca]

### L-ADRENALINE-D-HYDROGENTARTRATE:

No data for L-adrenaline-D-hydrogentartrate.

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

## Section 14 - TRANSPORTATION INFORMATION

Shipping Name:

None

Dangerous Goods Class: None, None

UN/NA Number: None

ADR Number: None

Packing Group: None

Labels Required:

Additional Shipping Information:

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## Section 14 - TRANSPORTATION INFORMATION

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International Transport Regulations:  
IMO: None

### HAZCHEM

None

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## Section 15 - REGULATORY INFORMATION

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### POISONS SCHEDULE

S4

### REGULATIONS

prilocaine hydrochloride (CAS: 1786-81-8) is found on the following regulatory lists:

Australian Inventory of Chemical Substances (AICS)  
Australian Poisons Schedule

L-adrenaline-D-hydrogentartrate (CAS: 51-42-3) is found on the following regulatory lists:

Australian Inventory of Chemical Substances (AICS)  
Australian Poisons Schedule

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## Section 16 - OTHER INFORMATION

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