

DENTSPLY ZIRCATE PROPHY PASTE

Chemwatch Independent Material Safety Data Sheet

Issue Date: 29-Oct-2009

C93177C

CHEMWATCH 4620-68

Version No:4

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DENTSPLY ZIRCATE PROPHY PASTE

PRODUCT USE

Cleaning and polishing for dental use.

SUPPLIER

Company: DENTSPLY (AUSTRALIA) PTY LTD

Address:

11- 21 Gilby Road

Mount Waverley

VIC 3149

AUSTRALIA

Telephone: 1300 55 29 29

Emergency Tel: 1300 55 29 29 (Hours of operation:

Monday - Friday 9:00 am - 5:00 pm EST; General

information only)

Fax: +61 3 9538 8260

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

None under normal operating conditions.

SAFETY

- Do not breathe dust.
- Avoid contact with skin.
- Wear eye/face protection.
- Use only in well ventilated areas.
- Keep container in a well ventilated place.
- In case of contact with eyes rinse with plenty of water and contact Doctor or Poisons Information Centre.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
zirconium silicate	14940-68-2	<75
stannic oxide	18282-10-5	<10
sodium saccharin	128-44-9	<0.1

Section 4 - FIRST AID MEASURES

SWALLOWED

- - For advice, contact a Poisons Information Centre or a doctor at once.
- Urgent hospital treatment is likely to be needed.

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.

SKIN

- If skin contact occurs:
 - Remove all contaminated clothing, including footwear
 - Remove adhering sticky material using a waterless hand cleaner.

INHALED

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

continued...

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Section 4 - FIRST AID MEASURES

NOTES TO PHYSICIAN

- Treat symptomatically.

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 for fire only.

FIRE/EXPLOSION HAZARD

- - Non combustible.
 - Not considered a significant fire risk, however containers may burn.
- Decomposition may produce toxic fumes of: carbon dioxide (CO₂), nitrogen oxides (NO_x), sulfur oxides (SO_x), metal oxides, 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 PROTECTION

Glasses:

Gloves:

Respirator:

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- - Clean up all spills immediately.
- Avoid breathing vapours/ aerosols/ or dusts and avoid contact with skin and eyes.

MAJOR SPILLS

- - Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.

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.

SUITABLE CONTAINER

- - Polyethylene or polypropylene container.
- Packing as recommended by manufacturer.

STORAGE INCOMPATIBILITY

- - Avoid reaction with oxidising agents.

STORAGE REQUIREMENTS

- - Store in original containers.
- Keep containers securely sealed.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m ³	STEL mg/m ³
Australia Exposure Standards	zirconium silicate (Zirconium compounds (as Zr))	5	10
Australia Exposure Standards	zirconium silicate (Zirconium	5	10

continued...

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Source	Material	TWA mg/m ³	STEL mg/m ³
Australia Exposure Standards	compounds (as Zr) stannic oxide (Tin, oxide & inorganic compounds, except SnH ₄ (as Sn))	2	

The following materials had no OELs on our records

• sodium saccharin:

CAS:128- 44- 9 CAS:6155- 57- 3

PERSONAL PROTECTION

EYE

- - Safety glasses with side shields
- Chemical goggles.

HANDS/FEET

- Wear general protective gloves, eg. light weight rubber gloves.

OTHER

- - Overalls.
- P.V.C. apron.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

- General exhaust is adequate under normal operating conditions. Local exhaust ventilation may be required in specific circumstances.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Light grey paste with a spearmint odour; does not mix with water.

PHYSICAL PROPERTIES

Does not mix with water.

Sinks in water.

Molecular Weight: Not

Applicable

Specific Gravity (water=1): 2.5

pH (1% solution): Not Available

Evaporation Rate: Not

Applicable

Lower Explosive Limit (%): Not

Applicable

Decomposition Temp (°C): Not

Available

Boiling Range (°C): Not Available

Solubility in water (g/L):

Immiscible

Vapour Pressure (kPa): Not

Available

Relative Vapour Density (air=1):

Not Applicable

Upper Explosive Limit (%): Not

Applicable

State: Free- flowing Paste

Mel ting Range (°C): Not

Available

pH (as supplied): Not

Available

Volatile Component (%vol): Not

Available

Flash Point (°C): Not

Applicable

Autoignition Temp (°C): Not

Applicable

Vis cosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- - Elevated temperatures.

- Presence of open flame.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

- Not applicable.

CHRONIC HEALTH EFFECTS

- Not applicable.

TOXICITY AND IRRITATION

- Not available. Refer to individual constituents.

ZIRCONIUM SILICATE:

continued...

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Section 11 - TOXICOLOGICAL INFORMATION

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

■ OSHA concluded that the recommended TLV-TWA and STEL would protect workers from any significant risk of pulmonary effects. NIOSH conclude that a separate limit should be considered for zirconium tetrachloride (because of the irritancy of hydrogen chloride derived from hydrolysis).

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.

Zircon sands may contain trace amounts (106-120 picoCurie per gram or 3.9-4.44 Bq/g) of naturally occurring radioactive uranium and thorium.

However, measurements made by US DuPont during the use of similar mineral sands indicated that by observing OSHA Permitted Exposure Limit (PEL) for respirable quartz dust, i.e. 0.05 mg/m³ ensured the user is below the permitted limits [radioactive dose annual intake] established for uranium and thorium. [North American Refractories Co.]

STANNIC OXIDE:

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

TOXICITY

Oral (rat) LD50: >20, 000 mg/kg

IRRITATION

No data

SODIUM SACCHARIN:

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

TOXICITY

Oral (rat) LD50: 14200 mg/kg

IRRITATION

Nil Reported

■ Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type.

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.

Human embryo cell mutagen

Reproductive effector in rats.

Equivocal tumorigen by RTECS criteria

CARCINOGEN

Saccharin and its salts
(NB: Overall evaluation
downgraded from 2B to 3
with supporting
evidence from other
relevant data)

International Agency
for Research on Cancer
(IARC) Carcinogens

Group

3

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient

Persistence:
Water/Soil

Persistence:
Air

Bioaccumulat
ion

Mobility

Dentsply Zircate Proply Paste
zirconium silicate
stannic oxide
sodium saccharin

No data
No data
No data
No data

Section 13 - DISPOSAL CONSIDERATIONS

■ - Consult manufacturer for recycling options and recycle where possible .
- Consult State Land Waste Management Authority for disposal.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG7)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: ADG7, UN, IATA, IMDG

continued...

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Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

Regulations for ingredients

zirconium silicate (CAS: 14940-68-2,10101-52-7) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "OECD Representative List of High Production Volume (HPV) Chemicals"

stannic oxide (CAS: 18282-10-5) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)"

sodium saccharin (CAS: 128-44-9,6155-57-3) is found on the following regulatory lists;

"Australia Inventory of Chemical Substances (AICS)", "OECD Representative List of High Production Volume (HPV) Chemicals"

No data for Dentsply Zircate Prophy Paste (CW: 4620-68)

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name

CAS

zirconium silicate

14940- 68- 2, 10101- 52- 7

sodium saccharin

128- 44- 9, 6155- 57- 3

■ 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.

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This is the end of the MSDS.