

DENTSPLY CERGO FIT SPEED

ChemWatch Material Safety Data Sheet
Issue Date: Fri 22-Oct-2004

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

DENTSPLY CERGO FIT SPEED

SYNONYMS

! 06/03

PRODUCT USE

Dental restoration.

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

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

Irritating to eyes and respiratory system.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Cumulative effects may result following exposure*.
* (limited evidence)
Do not breathe dust.

SAFETY

Wear eye/face protection.
Use only in well ventilated areas.
Keep container in a well ventilated place.

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Section 2 - HAZARDS IDENTIFICATION ...

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 if possible).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
silica crystalline - quartz	14808-60-7	NotSpec
crystalite	14464-46-1	NotSpec
magnesium oxide	1309-48-4.	NotSpec
ammonium phosphate, monobasic	7722-76-1	NotSpec

Note: during processing may evolve ammonia

Section 4 - FIRST AID MEASURES

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 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

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Section 4 - FIRST AID MEASURES ...

necessary.

- Transport to hospital, or doctor, without delay.

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.
- 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
nitrogen oxides (NO_x)

ammonia

phosphorus oxides (PO_x)

sulfur oxides (SO_x)

metal oxides

May emit poisonous fumes.

May emit corrosive fumes.

FIRE INCOMPATIBILITY

None known.

HAZCHEM

None

Personal Protective Equipment

PERSONAL PROTECTION EQUIPMENT

Breathing apparatus.

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Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

- 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

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.

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 storing and handling recommendations.
- 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, 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

None assigned. Refer to individual constituents.

INGREDIENT DATA

SILICA CRYSTALLINE - QUARTZ:

TLV TWA: 0.05 mg/m³ (R) Quartz A2 [ACGIH]

PEL: (Quartz (Respirable)) [OSHA Z3]250 / (%SiO(2)+5) mppcf

Footnote (b): The percentage of crystalline silica in the formula is the amount determined from airborne samples, except in those instances in which other methods have been shown to be applicable.

PEL: (Quartz (Respirable)) [OSHA Z3]10 / (%SiO(2)+2) mg/m³

Footnote (e): Both concentration and percent quartz for the application of this limit are to be determined from the fraction passing a size-selector with the following characteristics.

Aerodynamic diameter (unit density sphere)	Percent passing selector
2.0	90
2.5	75
3.5	50
5.0	25
10	0

The measurements under this note refer to the uses of an AEC (now NRC) instrument. The respirable fraction of coal dust is determined with an MRE; the figures corresponding to that of 2.4 mg/m³ in the table for coal dust, is 4.5 mg/m³.

PEL: (Quartz (Total Dust)) [OSHA Z3]30 / (%SiO(2) + 2) mg/m³

TLV TWA: 0.05 mg/m³ (respirable dust) A2

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

The concentration of respirable dust for application of this limit is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative lognormal function with a median aerodynamic diameter of $4.0 \mu\text{m}$ (+-) $0.3 \mu\text{m}$ and with a geometric standard deviation of $1.5 \mu\text{m}$ (+-) $0.1 \mu\text{m}$, i.e..generally less than $5 \mu\text{m}$.

WARNING: For inhalation exposure ONLY:

This substance has been classified by the ACGIH as A2 Suspected Human Carcinogen.

ES TWA: 0.2 mg/m^3

MEL TWA: 0.3 mg/m^3 (respirable dust)

Because the margin of safety of the quartz TLV is not known with certainty and given the associated link between silicosis and lung cancer it is recommended that quartz concentrations be maintained as far below the TLV as prudent practices will allow.

CRISTOBALITE:

TLV TWA: 0.05 mg/m^3 (R) Cristobalite [ACGIH]

PEL: (Cristobalite (Respirable)) [OSHA Z3] $250 / (2 * (\% \text{SiO}(2)+5))$ mppcf

PEL: (Cristobalite (Respirable)) [OSHA Z3] $10 / (2 * (\% \text{SiO}(2)+2))$ mg/m^3

PEL: (Cristobalite (Total Dust)) [OSHA Z3] $30 / (2 * (\% \text{SiO}(2) + 2))$ mg/m^3

TLV TWA: 0.05 mg/m^3 (respirable dust)

The concentration of respirable dust for application of this limit is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative lognormal function with a median aerodynamic diameter of $4.0 \mu\text{m}$ (+-) $0.3 \mu\text{m}$ and with a geometric standard deviation of $1.5 \mu\text{m}$ (+-) $0.1 \mu\text{m}$, i.e..generally less than $5 \mu\text{m}$.

ES TWA: 0.1 mg/m^3

IDLH Level: 25 mg/m^3

Cristobalite produces a more severe response, than does quartz, on lung function and disease. The fibrosis produced by cristobalite is diffuse rather than nodular. The TLV-TWA is thought to be protective against pulmonary fibrosis associated with exposure at higher levels. NIOSH has designated cristobalite as a potential occupational carcinogen.

MAGNESIUM OXIDE:

TLV TWA: 10 mg/m^3 (Inhalable fraction) A4 [ACGIH]

PEL TWA: 15 mg/m^3 [OSHA Z1]

TLV TWA: 10 mg/m^3 inhalable fraction A4

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

MAK value: 4 mg/m^3

- measured as the respirable fraction of the aerosol

MAK values, and categories and groups are those recommended within the Federal Republic of Germany as magnesium oxide fume

ES TWA: 10 mg/m^3

TLV TWA: 10 mg/m^3

AMMONIUM PHOSPHATE, MONOBASIC:

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

TLV TWA: 3 mg/m^3 (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^3

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION ...

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.

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	-
100+ x ES	-	Air-line*	-
		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 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

Coloured, almost odourless powder; does not mix with water.

PHYSICAL PROPERTIES

Does not mix with water.
Sinks in water.

Molecular Weight: Not Applicable
Melting Range (°C): >1500
Solubility in water (g/L): Immiscible
pH (1% solution): Not Available
Volatile Component (%vol): Not Applicable
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): 1.1-1.2
pH (as supplied): 5 approx.
Vapour Pressure (kPa): Not Applicable
Evaporation Rate: Not Applicable
Flash Point (°C): Not Applicable
Upper Explosive Limit (%): Not Applicable
Decomposition Temp (°C): 200

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

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

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

The material is not thought to produce adverse health effects following ingestion (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.

EYE

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

SKIN

Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the

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Section 11 - TOXICOLOGICAL INFORMATION ...

material may still produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.

INHALED

Inhalation of dusts, generated by the material, during the course of normal handling, may be harmful.

The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage.

Acute silicosis occurs under conditions of extremely high silica dust exposure particularly when the particle size of the dust is small. The disease is rapidly progressive and spreads widely through the lungs within months of the initial exposure and causing death within 1 to 2 years.

Effects on lungs are significantly enhanced in the presence of respirable particles.

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. This material can cause serious damage if one is exposed to it for long periods. It can be assumed that it contains a substance which can produce severe defects. This has been demonstrated via both short- and long-term experimentation.

Dentsply Cergo fit Speed

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

SILICA CRYSTALLINE - QUARTZ:

TOXICITY

Inhalation (human)LCLo:0.3 mg/m³/10Y

Inhalation (human)TCLo:16 mppcf*/8H/17.9Y

Intermittent; focal fibrosis,

(pneumoconiosis), cough, dyspnoea

Inhalation (rat) TCLo: 50 mg/m³/6H/71W

Intermittent; liver - tumours.

* Millions of particles per cubic foot (based on impinger samples counted by light field techniques).

IRRITATION

Nil reported

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Section 14 - TRANSPORTATION INFORMATION ...

International Transport Regulations:
IMO: None

HAZCHEM

None

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

The following substances are found on Australia - South Australia - Hazardous Substances Requiring Health Surveillance:
silica crystalline - quartz (CAS: 14808-60-7)

The following substances are found on Australia Hazardous Substances Requiring Health Surveillance:
silica crystalline - quartz (CAS: 14808-60-7)

The following substances are found on Australian Inventory of Chemical Substances (AICS):

silica crystalline - quartz (CAS: 14808-60-7)
cristobalite (CAS: 14464-46-1)
magnesium oxide (CAS: 1309-48-4)
ammonium phosphate, monobasic (CAS: 7722-76-1)

Section 16 - OTHER INFORMATION

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