Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
DENTSPLY BLUEPRINT XCREME

PRODUCT USE
Dental impression material.

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 NOHSC Criteria, and ADG Code.

RISK
■ Risk of serious damage to eyes.
■ May cause SENSITISATION by skin contact.
■ Harmful: danger of serious damage to health by prolonged exposure through inhalation.

SAFETY
• Do not breathe dust.
• Avoid contact with skin.
• Avoid contact with eyes.

• Wear suitable protective clothing.
• Wear suitable gloves.
• Wear eye/face protection.
• 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.
• Keep away from food, drink and animal feeding stuffs.
• In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
• If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
diatomaceous earth, flux- calcined	68855-54-9	25-50
cristobalite	14464-46-1	10-25
potassium hexafluorotitanate(IV)	16919-27-0	2.5-10
magnesium oxide	1309-48-4.	2.5-10

continued...

Section 4 - FIRST AID MEASURES

SWALLOWED
• 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.

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.

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.
• 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.

NOTES TO PHYSICIAN
■ Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA
• Water spray or fog.
• Foam.
• Dry chemical powder.
• BCF (where regulations permit).

FIRE FIGHTING
• When silica dust is dispersed in air, firefighters should wear inhalation protection as hazardous substances from the fire may be adsorbed on the silica particles.
• When heated to extreme temperatures, (>1700 deg.C) amorphous silica can fuse.
• 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.

FIRE/EXPLOSION HAZARD
• Non combustible.
• Not considered a significant fire risk, however containers may burn.
Combustion products include: silicon dioxide (SiO_2).
May emit poisonous fumes.
May emit corrosive fumes.

FIRE INCOMPATIBILITY
■ None known.

HAZCHEM
None

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Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
• Remove all ignition sources.
• Clean up all spills immediately.
• Avoid contact with skin and eyes.
• Control personal contact by using protective equipment.

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.

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.

SUITABLE CONTAINER
• Packaging as recommended by manufacturer.

STORAGE INCOMPATIBILITY
• Avoid reaction with oxidising agents.
• Contact with acids produces toxic fumes.
• Reacts vigorously with alkalis.
Silicas:
• react with hydrofluoric acid to produce silicon tetrafluoride gas
• react with xenon hexafluoride to produce explosive xenon trioxide
• reacts exothermically with oxygen difluoride, and explosively with chlorine trifluoride (these halogenated materials are not commonplace industrial materials) and other fluorine-containing compounds
• may react with fluorine, chlorates.

STORAGE REQUIREMENTS
• Store in original containers.
• Keep containers securely sealed.
• No smoking, naked lights or ignition sources.
• Store in a cool, dry, well-ventilated area.
• Keep dry.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

Source	Material	TWA mg/m³	Notes
Australia Exposure Standards	diatomaceous earth, flux-calcined (Silica - Amorphous Fumed silica (respirable dust))	2	(see Chapter 14)
Australia Exposure Standards	cristobalite (Silica - Crystalline Cristobalite)	0.1	(see Chapter 14)
Australia Exposure Standards	magnesium oxide (Magnesium oxide (fume))	10	

The following materials had no OELs on our records
• potassium hexafluorotitanate(IV): CAS:16919- 27- 0

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PERSONAL PROTECTION

RESPIRATOR
•Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

EYE
• Safety glasses with side shields.
• 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], [AS/NZS 1336 or national equivalent].

HANDS/FEET
■ NOTE:
• The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
• Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:
• frequency and duration of contact,
• chemical resistance of glove material,
• glove thickness and
• dexterity.

OTHER
• Overalls.
• P.V.C. apron.
• Barrier cream.
• Skin cleansing cream.

ENGINEERING CONTROLS
■ Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.
The basic types of engineering controls are:
Process controls which involve changing the way a job activity or process is done to reduce the risk.
Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE
Blue powder with a characteristic odour; does not mix with water.

PHYSICAL PROPERTIES
Does not mix with water.

State	Divided Solid	Molecular Weight	Not Applicable
Melting Range (℃)	Not Available	Viscosity	Not Applicable
Boiling Range (℃)	Not Available	Solubility in water (g/L)	Immiscible
Flash Point (℃)	Not Applicable	pH (1% solution)	Not Applicable
Decomposition Temp (℃)	Not Applicable	pH (as supplied)	Not Applicable
Autoignition Temp (℃)	Not Available	Vapour Pressure (kPa)	Not Applicable
Upper Explosive Limit (%)	Not Applicable	Specific Gravity (water=1)	Not Available
Lower Explosive Limit (%)	Not Applicable	Relative Vapour Density (air=1)	Not Available
Volatile Component (%vol)	Not Applicable	Evaporation Rate	Not Available

Section 10 - STABILITY AND REACTIVITY

CONDITIONS CONTRIBUTING TO INSTABILITY
• Presence of incompatible materials.

continued...

• Product is considered stable.
• Hazardous polymerisation will not occur.
For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED
■ Although ingestion is not thought to produce harmful effects (as classified under EC Directives), 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).

EYE
■ If applied to the eyes, this material causes severe eye damage.

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.

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
■ Harmful: danger of serious damage to health by prolonged exposure through inhalation.
Harmful: danger of serious damage to health by prolonged exposure through inhalation.
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.
There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.
Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
Extended exposure to inorganic fluorides causes fluorosis, which includes signs of joint pain and stiffness, tooth discolouration, nausea and vomiting, loss of appetite, diarrhoea or constipation, weight loss, anaemia, weakness and general unwellness. There may also be frequent urination and thirst. Redness, itchiness and allergy-like inflammation of the skin and mouth cavity can occur. The central nervous system may be involved.
A case of chronic abuse of magnesium citrate (a mild purgative), by a 62 year-old woman, has been reported. Symptoms included lethargy and severe refractory hypotension.
Crystalline silicas activate the inflammatory response of white blood cells after they injure the lung epithelium. Chronic exposure to crystalline silicas reduces lung capacity and predisposes to chest infections. A large part of the crystals accumulates in the lungs. Silicosis can occur, a condition where irreversible scarring of the lung occurs. Symptoms do not appear until months to years after exposure. Smoking increases this risk. Most simple cases of silicosis do not produce symptoms, but they can progress and eventually cause a tuberculosis-like syndrome which can be fatal. When silicosis is advanced, there is an increased risk of lung cancer and lymphoma. Laws in some areas require those exposed to silica to be under health surveillance.
Overexposure to respirable dust may cause coughing, wheezing, difficulty in breathing and impaired lung function. Chronic symptoms may include decreased vital lung capacity, chest infections
Repeated exposures, in an occupational setting, to high levels of fine- divided dusts may produce a condition known as pneumoconiosis which is the lodgement of any inhaled dusts in the lung irrespective of the effect.
Amorphous silicas generally are less hazardous than crystalline silicas, but the former can be converted to the latter on heating and subsequent cooling. Inhalation of dusts containing crystalline silicas may lead to silicosis, a disabling lung disease that may take years to develop.

TOXICITY AND IRRITATION
■ 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. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.
For silica amorphous:
When experimental animals inhale synthetic amorphous silica (SAS) dust, it dissolves in the lung fluid and is rapidly eliminated.
If swallowed, the vast majority of SAS is excreted in the faeces and there is little accumulation in the body.

continued...

CARCINOGEN

Silica dust, crystalline, in the form of quartz or cristobalite	International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs	Group

Section 12 - ECOLOGICAL INFORMATION

No data

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
Dentsply Blueprint Xcreme	No Data Available	No Data Available		
diatomaceous earth, flux-calcined	No Data Available	No Data Available		
cristobalite	No Data Available	No Data Available		
potassium hexafluorotitanate(IV)	HIGH	No Data Available	LOW	HIGH
magnesium oxide	No Data Available	No Data Available		

Section 13 - DISPOSAL CONSIDERATIONS

■ Consult State Land Waste Management Authority for disposal.
Must not be disposed together with household garbage.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM:
None (ADG7)

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

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE S6

REGULATIONS

Regulations for ingredients

diatomaceous earth, flux-calcined (CAS: 68855-54-9) is found on the following regulatory lists;
"Australia Inventory of Chemical Substances (AICS)"

cristobalite (CAS: 14464-46-1) is found on the following regulatory lists;
"Australia Exposure Standards","Australia Hazardous Substances","Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)","International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs"

potassium hexafluorotitanate(IV) (CAS: 16919-27-0) is found on the following regulatory lists;
"Australia Inventory of Chemical Substances (AICS)","International Council of Chemical Associations (ICCA) - High Production Volume List"

magnesium oxide (CAS: 1309-48-4) is found on the following regulatory lists;
"Australia Exposure Standards","Australia Hazardous Substances","Australia High Volume Industrial Chemical List (HVICL)", "Australia Inventory of Chemical Substances (AICS)","Australia National Pollutant Inventory","Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines","CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP",

continued...

"International Council of Chemical Associations (ICCA) - High Production Volume List"

No data for Dentsply Blueprint Xcreme (CW: 28-3065)

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.

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Issue Date: 4-Oct-2011
Print Date: 4-Oct-2011

This is the end of the MSDS.