SAFETY DATA SHEETS

This SDS packet was issued with item:

071784099

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

071851252 074082269

The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).

071017052 071805373 071837202

Dentsply (Australia)

Chemwatch: **4993-46** Version No: **5.1.1.1**

Material Safety Data Sheet according to NOHSC and ADG requirements

Chemwatch Hazard Alert Code: 4

Issue Date: 01/01/2013
Print Date: 02/17/2015
Initial Date: Not Available
S.Local.AUS.EN

SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Caulk 34% Tooth Conditioner Gel	
Synonyms	Caulk 34% Tooth Conditoner Gel	
Proper shipping name	CORROSIVE LIQUID, N.O.S. (contains phosphoric acid)	
Other means of identification	Not Available	

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified	For dental use only
uses	. c. ccai doc omy

Details of the manufacturer/importer

Registered company name	Dentsply (Australia)	
Address	11-21 Gilby Road Mount Waverley 3149 VIC Australia	
Telephone	+61 3 9538 8240; 1300 552 929	
Fax	+61 3 9538 8260	
Website	www.dentsply.com.au	
Email	Not Available	

Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	1300 552 929 (Mon-Fri 9am-5pm)
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

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

CHEMWATCH HAZARD RATINGS

	Min	Max	
Flammability	0		
Toxicity	2		0 = Minimum
Body Contact	4		1 = Low
Reactivity	1		2 = Moderate 3 = High
Chronic	2		4 = Extreme

Poisons Schedule	Not Applicable		
	R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
	R58	May cause long-term adverse effects in the environment.	
Risk Phrases ^[1]	k Phrases ^[1] R41	Risk of serious damage to eyes.	
	R35	Causes severe burns.	
	R22	Harmful if swallowed.	

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Legend:

1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex





Indication(s) of danger	C, N
ETY ADVICE	
S01	Keep locked up.
S20	When using do not eat or drink.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse with plenty of water and contact Doctor or Poisons Information Centre.
S28	After contact with skin, wash immediately with plenty of water
S29	Do not empty into drains.
S35	This material and its container must be disposed of in a safe way.
S36	Wear suitable protective clothing.
S37	Wear suitable gloves.
S39	Wear eye/face protection.
S40	To clean the floor and all objects contaminated by this material, use water and detergent.
S45	In case of accident or if you feel unwell IMMEDIATELY contact Doctor or Poisons Information Centre (show label if possible).
S46	If swallowed, seek medical advice immediately and show this container or label.
S56	Dispose of this material and its container at hazardous or special waste collection point.
S57	Use appropriate container to avoid environmental contamination.
S61	Avoid release to the environment. Refer to special instructions/Safety data sheets.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

Cumulative effects may result following exposure*.		Cumulative effects may result following exposure*.	
		Inhalation may produce serious health damage*.	

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name	
7664-38-2	34	phosphoric acid	
Not Available	NotSpec.	blue dye	

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact

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.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

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Skin Contact	 If skin or hair contact occurs: Immediately flush body and clothes with large amounts of water, using safety shower if available. Quickly remove all contaminated clothing, including footwear. Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre. Transport to hospital, or doctor.
Inhalation	 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.
Ingestion	 For advice, contact a Poisons Information Centre or a doctor at once. Urgent hospital treatment is likely to be needed. 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. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Transport to hospital or doctor without delay.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

Fire Incompatibility

None known.

Advice for firefighters

Fire	Fighting
------	----------

- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.
- Prevent, by any means available, spillage from entering drains or water course.
- Use fire fighting procedures suitable for surrounding area.

Fire/Explosion Hazard

- ▶ Non combustible.
- ▶ Not considered to be a significant fire risk.
- Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.
- Heating may cause expansion or decomposition leading to violent rupture of containers.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills

Environmental hazard - contain spillage.

- Clean up all spills immediately.
- ▶ Avoid contact with skin and eyes.
- Wear impervious gloves and safety goggles.

Major Spills

Environmental hazard - contain spillage. • Clear area of personnel and move upwind.

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear full body protective clothing with breathing apparatus.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

▶ DO NOT allow clothing wet with material to stay in contact with skin

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Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. WARNING: To avoid violent reaction, ALWAYS add material to water and NEVER water to material. Store in original containers. Keep containers securely sealed. Other information ▶ Store in a cool, dry, well-ventilated area. • Store away from incompatible materials and foodstuff containers.

Conditions for safe storage, including any incompatibilities

Suitable container

Packaging as recommended by manufacturer.

Phosphoric acid:

- is a medium-strong acid which produces violent reaction with bases
- may produce violent react when water is added to the concentrated form
- reacts violently with solutions containing ammonia or bleach, azo compounds, epoxides and other polymerisable

Storage incompatibility

- reacts, possibly violently with amines, aldehydes, alkanolamines, alcohols, alkylene oxides, amides, ammonia, ammonia hydroxide, calcium oxide, cyanides, epichlorohydrin, esters, halogenated organics, isocyanates, ketones, oleum, organic anhydrides, sodium tetraborate, sulfides, sulfuric acid, strong oxidisers, vinyl acetate
- forms explosive mixtures with nitromethane
- ▶ at elevated temperatures attacks many metals producing hydrogen gas
- at room temperature does not attack stainless steel, copper or its alloys
- attacks glass, ceramics, and some plastics, rubber and coatings
- Reacts vigorously with alkalis
- ▶ Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.

PACKAGE MATERIAL INCOMPATIBILITIES

Not Available

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	phosphoric acid	Phosphoric acid	1 mg/m3	3 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available
Ingredient	Original IDLH		Revised IDLH	
phosphoric acid	10,000 mg/m3		1,000 mg/m3	

Exposure controls

blue dye

Appropriate 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.

Not Available

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.

Personal protection



Not Available









Eye and face

protection

- ▶ Safety glasses with unperforated side shields may be used where continuous eye protection is desirable, as in laboratories; spectacles are not sufficient where complete eye protection is needed such as when handling bulk-quantities, where there is a danger of splashing, or if the material may be under pressure.
- Chemical goggles whenever there is a danger of the material coming in contact with the eyes; goggles must be properly

	 fitted. Full face shield (20 cm, 8 in minimum) may be required for supplementary but never for primary protection of eyes; these afford face protection. Alternatively a gas mask may replace splash goggles and face shields.
Skin protection	See Hand protection below
Hands/feet protection	▶ When handling corrosive liquids, wear trousers or overalls outside of boots, to avoid spills entering boots. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.
Body protection	See Other protection below
Other protection	▶ Overalls.▶ P.V.C. apron.▶ Barrier cream.
Thermal hazards	Not Available

Recommended material(s)

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:

Caulk 34% Tooth Conditioner Gel

Material	СРІ
NAT+NEOPR+NITRILE	A
NATURAL RUBBER	A
NATURAL+NEOPRENE	A
NEOPRENE	A
NEOPRENE/NATURAL	A
NITRILE	A
NITRILE+PVC	A
PE	A
PVC	A
SARANEX-23	A

^{*} 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.

Respiratory protection

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

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	B-AUS P2	-	B-PAPR-AUS / Class 1 P2
up to 50 x ES	-	B-AUS / Class 1 P2	-
up to 100 x ES	-	B-2 P2	B-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Lowboiling point organic compounds(below 65 degC)

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Blue gel with acrid odour; does not mix with water.		
Physical state	Gel	Relative density (Water = 1)	1.3
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	<2	Decomposition temperature	Not Available

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Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 Contact with alkaline material liberates heat Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

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.		
Ingestion	Accidental ingestion of the material may be harmful; animal expension of the material may be harmful; animal expension of large quantity of phosphoric acid may cause seve convulsions, collapse, shock and death. Although less hazardous than nitric and sulfuric acid, phosphoric individual 19 days after ingestion of phosphoric acid was due to	dividual. re abdominal pains, thirst, acidaemia, difficult breathing, ric acid has equal corrosive action upon ingestion. Death of an	
Skin Contact	Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Open cuts, abraded or irritated skin should not be exposed to this material 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. The material may cause severe inflammation of the skin either following direct contact or after a delay of some time.		
Eye	If applied to the eyes, this material causes severe eye damag Direct eye contact with acid corrosives may produce pain, tea generally recover rapidly and completely.		
Chronic	Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways to lung, with cough, and inflammation of lung tissue often occurs. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Sodium phosphate dibasic can cause stones in the kidney, loss of mineral from the bones and loss of thyroid gland function.		
Caulk 34% Tooth Conditioner Gel	TOXICITY Not Available	Not Available	

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	TOXICITY	IRRITATION	
	Dermal (rabbit) LD50: >1260 mg/kg* ^[2]	[Monsanto]*	
phosphoric acid	Inhalation (rat) LC50: 0.0255 mg/L/4h ^[2]	Eye (rabbit): 119 mg - SEVERE	
	Oral (rat) LD50: 1.7 ml/100 g body weight ^[1]	ght ^[1] Skin (rabbit):595 mg/24h - SEVERE	
Legend:	Nalue obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's msds unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances		
		even years after exposure to the material ceases. This may be or ays dysfunction syndrome (RADS) which can occur following	

Conditioner Gel

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.

PHOSPHORIC ACID

for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in

protecting the gastric epithelium from its auto-secreted hydrochloric acid. phosphoric acid (85%)

No significant acute toxicological data identified in literature search.

Acute Toxicity	~	Carcinogenicity	0
Skin Irritation/Corrosion	✓	Reproductivity	0
Serious Eye Damage/Irritation	~	STOT - Single Exposure	0
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend:

✓ – Data required to make classification available

🗶 – Data available but does not fill the criteria for classification

Not Available to make classification

CMR STATUS

Not Applicable

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

May cause long-term adverse effects in the environment.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
phosphoric acid	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
phosphoric acid	LOW (LogKOW = -0.7699)

Mobility in soil

Ingredient	Mobility
phosphoric acid	HIGH (KOC = 1)

SECTION 13 DISPOSAL CONSIDERATIONS

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Waste treatment methods

▶ Containers may still present a chemical hazard/ danger when empty.

Product / Packaging disposal

• Return to supplier for reuse/ recycling if possible.

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and MSDS and observe all notices pertaining to the product.

SECTION 14 TRANSPORT INFORMATION

Labels Required



Marine Pollutant



HAZCHEM

Land transport (ADG)

UN number	1760
Packing group	II
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (contains phosphoric acid)
Environmental hazard	No relevant data
Transport hazard class(es)	Class 8 Subrisk Not Applicable
Special precautions for user	Special provisions 274 Limited quantity 1 L

Air transport (ICAO-IATA / DGR)

UN number	1760			
Packing group	II .			
UN proper shipping name	Corrosive liquid, n.o.s. *	(contains phosphoric acid)		
Environmental hazard	No relevant data			
Transport hazard class(es)	ICAO/IATA Class ICAO / IATA Subrisk ERG Code	8 Not Applicable 8L		
Special precautions for user	Special provisions		A3A803	
	Cargo Only Packing Ir Cargo Only Maximum		855 30 L	
	Passenger and Cargo Packing Instructions		851	
	Passenger and Cargo	Maximum Qty / Pack	1 L	
	Passenger and Cargo	Limited Quantity Packing Instructions	Y840	
	Passenger and Cargo	Limited Maximum Qty / Pack	0.5 L	

Sea transport (IMDG-Code / GGVSee)

UN number	1760
Packing group	II

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Caulk 34% Tooth Conditioner Gel

UN proper shipping name	CORROSIVE LIQUID, N.O.S. (contains phosphoric acid)	
Environmental hazard	Not Applicable	
Transport hazard class(es)	IMDG Class 8 IMDG Subrisk Not Applicable	
Special precautions for user	EMS Number F-A , S-B Special provisions 274 Limited Quantities 1 L	

Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	phosphoric acid	Z

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

phosphoric acid(7664-38-2) is found on the following regulatory lists

"Australia Exposure Standards", "Australia Inventory of Chemical Substances (AICS)", "Australia Hazardous Substances Information System - Consolidated Lists"

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No
phosphoric acid	16271-20-8, 7664-38-2

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. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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