Dentsply Degunorm Supra

Dentsply (Australia) Pty Ltd

Chemwatch: 41-9159

Version No: 2.1.1.1 Safety Data Sheet according to WHS and ADG requirements Chemwatch Hazard Alert Code: 0

Issue Date: **30/05/2014** Print Date: **18/01/2017** S.GHS.AUS.EN

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

Product Identifier

Product name	Dentsply Degunorm Supra
Synonyms	Degunorm Supra
Other means of identification	Not Available

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

Relevant identified uses	Use according to manufacturer's directions.

Details of the supplier of the safety data sheet

Registered company name	Dentsply (Australia) Pty Ltd
Address	11-21 Gilby Road Mount Waverley VIC 3149 Australia
Telephone	1300 55 29 29
Fax	+61 3 9538 8260
Website	www.dentsply.com.au
Email	clientservices@dentsply.com

Emergency telephone number

Association / Organisation	Poisons Information Centre (AUSTRALIA)
Emergency telephone numbers	13 11 26 - AUSTRALIA (24 hour service)
Other emergency telephone numbers	Not Available

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

CHEMWATCH HAZARD RATINGS

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

Poisons Schedule	Not Applicable
Classification	Not Applicable

Label elements

Label elements	
GHS label elements	Not Applicable
SIGNAL WORD	NOT APPLICABLE

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Chemwatch: 41-9159 Page 2 of 8
Version No: 2.1.1.1

Dentsply Degunorm Supra

Issue Date: **30/05/2014**Print Date: **18/01/2017**

Not Applicable

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
7440-57-5	73.2	gold
7440-22-4	13.8	silver
7440-05-3	6.3	palladium
7440-66-6	2.9	zinc
7440-06-4	3.2	platinum
7440-31-5	0.5	<u>tin</u>
7439-88-5	0.1	iridium
Not Available	NotSpec.	during processing, releases
1314-13-2	NotSpec.	zinc oxide fume

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: Wash out immediately with fresh 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. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin or hair contact occurs: Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	If dust is inhaled, remove from contaminated area. Encourage patient to blow nose to ensure clear passage of breathing. If irritation or discomfort persists seek medical attention.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- ▶ Water spray or fog.
- Foam.
- Dry chemical powder.
- BCF (where regulations permit).

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 breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses. Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	 Non combustible. Not considered a significant fire risk, however containers may burn. Combustion products include: metal oxides
HAZCHEM	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Chemwatch: 41-9159 Page 3 of 8
Version No: 2.1.1.1

Dentsply Degunorm Supra

Issue Date: **30/05/2014** Print Date: **18/01/2017**

Methods and material for containment and cleaning up

Minor Spills Clean up all spills immediately. Secure load if safe to do so. Bundle/collect recoverable product. Collect remaining material in containers with covers for disposal. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Control personal contact with the substance, by using protective equipment. Prevent spillage from entering drains, sewers or water courses.

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

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	 Limit all unnecessary personal contact. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Avoid contact with incompatible materials.
Other information	 Keep dry. Store under cover. Protect containers against physical damage. Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container	Check that containers are clearly labelled Packaging as recommended by manufacturer.
Storage incompatibility	

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	silver	Silver, metal	0.1 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	palladium	Fume (thermally generated) (respirable dust)	2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	zinc	Fume (thermally generated) (respirable dust)	2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	platinum	Platinum, metal	1 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	tin	Tin, metal	2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	iridium	Fume (thermally generated) (respirable dust)	2 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	zinc oxide fume	Zinc oxide (dust) / Zinc oxide (fume)	10 mg/m3 / 5 mg/m3	10 mg/m3	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
gold	Gold	0.46 mg/m3	5.1 mg/m3	30 mg/m3
silver	Silver	0.3 mg/m3	170 mg/m3	990 mg/m3
palladium	Palladium	6 mg/m3	66 mg/m3	400 mg/m3
zinc	Zinc	6 mg/m3	21 mg/m3	120 mg/m3
platinum	Platinum	3 mg/m3	33 mg/m3	200 mg/m3
tin	Tin	6 mg/m3	67 mg/m3	400 mg/m3
iridium	Iridium	4.7 mg/m3	51 mg/m3	310 mg/m3
zinc oxide fume	Zinc oxide	10 mg/m3	15 mg/m3	2,500 mg/m3

Ingredient	Original IDLH	Revised IDLH
gold	Not Available	Not Available
silver	N.E. mg/m3 / N.E. ppm	10 mg/m3
palladium	Not Available	Not Available
zinc	Not Available	Not Available
platinum	N.E. mg/m3 / N.E. ppm	4 mg/m3
tin	Unknown mg/m3 / 400 mg/m3 / Unknown ppm	25 mg/m3 / 100 mg/m3
iridium	Not Available	Not Available
during processing, releases	Not Available	Not Available
zinc oxide fume	2,500 mg/m3	500 mg/m3

Version No: **2.1.1.1**

Dentsply Degunorm Supra

Issue Date: **30/05/2014**Print Date: **18/01/2017**

Appropriate engineering controls	General exhaust is adequate under normal operating conditions.
Personal protection	
Eye and face protection	No special equipment for minor exposure i.e. when handling small quantities. OTHERWISE: Safety glasses with side shields. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. Iff dust occurs: basket-shaped glasses.
Skin protection	See Hand protection below
Hands/feet protection	No special equipment required due to the physical form of the product.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: Overalls. Barrier cream. Eyewash unit.
Thermal hazards	Not Available

Respiratory protection

Particulate. (AS/NZS 1716 & 1715, EN 143:000 & 149:001, ANSI Z88 or national equivalent)

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	P1 Air-line*	-	PAPR-P1
up to 50 x ES	Air-line**	P2	PAPR-P2
up to 100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

^{* -} Negative pressure demand ** - Continuous flow

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 = Low boiling point organic compounds(below 65 degC)

None under normal operating conditions.

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- ► Use approved positive flow mask if significant quantities of dust becomes airborne.
- ► Try to avoid creating dust conditions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Yellow odourless solid.		
Physical state	Solid	Relative density (Water = 1)	16.1
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point / freezing point (°C)	1035-1080	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable

Chemwatch: **41-9159**Version No: **2.1.1.1**

Page 5 of 8 Dentsply Degunorm Supra

Issue Date: **30/05/2014**Print Date: **18/01/2017**

Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Product is considered stable and 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

GOLD

Substance has been investigated as a tumorigen by implantation in rodents:

Information on toxicological effects

nformation on toxicologic	Not normally a hazard due to physical form of product.		
Inhaled	Generated dust may be discomforting When melting, soldering and grinding: do not breathe dusts and vapours. Zinc oxide fumes is released during processing.		
Ingestion	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial	environments	
Skin Contact	Not normally a hazard due to physical form of product.		
Eye	Not normally a hazard due to physical form of product. Generated dust may be discomforting		
Chronic	► Hazard relates to dust released by sawing, cutting, sanding, trimming or other finishing operations. 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.		
Dententy Degraper Supre	TOXICITY	IRRITATION	
Dentsply Degunorm Supra	Not Available	Not Available	
	тохісіту	IRRITATION	
gold	Not Available	Not Available	
	тохісіту	IRRITATION	
silver	Oral (rat) LD50: >2000 mg/kg ^[1]	Not Available	
	TOXICITY	IRRITATION	
palladium	Not Available	Not Available	
	TOXICITY	IRRITATION	
zinc	Dermal (rabbit) LD50: 1130 mg/kg ^[2]	Not Available	
	Oral (rat) LD50: >2000 mg/kg ^[1]		
	TOXICITY	IRRITATION	
platinum	Not Available	Not Available	
	TOXICITY	IRRITATION	
tin	dermal (rat) LD50: >2000 mg/kg ^[1]	Not Available	
	Oral (rat) LD50: >2000 mg/kg ^[1]		
	TOXICITY	IRRITATION	
iridium	Not Available	Not Available	
	TOXICITY	IRRITATION	
zinc oxide fume	Oral (rat) LD50: >5000 mg/kg ^[1]	Eye (rabbit): 500 mg/24h mild	
		Skin (rabbit): 500 mg/24h mild	
Legend:		es - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data	
	extracted from RTECS - Register of Toxic Effect of chemical	Substances	

Continued...

Chemwatch: **41-9159**Version No: **2.1.1.1**

Page 6 of 8

Dentsply Degunorm Supra

Issue Date: **30/05/2014**Print Date: **18/01/2017**

PLATINUM	The following information refers to contact allergens as a group and may not be specific to this product. 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.		
ZINC OXIDE FUME	The material may be irritating to the eye, with prolonged contact causing inflammation. Rep	eated or prolonged exposure to irritants may produce conjunctivitis.	
PALLADIUM & PLATINUM & TIN & IRIDIUM	No significant acute toxicological data identified in literature search.		
ZINC & ZINC OXIDE FUME	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.		
Acute Toxicity	○ Carcinogen	city 🛇	
Skin Irritation/Corrosion	○ Reproduct	vity 🛇	
Serious Eye Damage/Irritation	STOT - Single Expos	ure 🛇	
Respiratory or Skin sensitisation	STOT - Repeated Expos	ure 🛇	
Mutagenicity	○ Aspiration Haz	ard 🛇	

Legend:

X − Data available but does not fill the criteria for classification
 ✓ − Data required to make classification available

O - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
silver	LC50	96	Fish	0.00148mg/L	2
silver	EC50	48	Crustacea	0.00024mg/L	4
silver	EC50	96	Algae or other aquatic plants	0.001628837mg/L	4
silver	BCF	336	Crustacea	0.02mg/L	4
silver	EC50	48	Crustacea	0.00024mg/L	4
silver	NOEC	480	Crustacea	0.00031mg/L	2
zinc	LC50	96	Fish	0.00272mg/L	4
zinc	EC50	48	Crustacea	0.04mg/L	5
zinc	EC50	72	Algae or other aquatic plants	0.106mg/L	4
zinc	BCF	360	Algae or other aquatic plants	9mg/L	4
zinc	EC50	120	Fish	0.00033mg/L	5
zinc	NOEC	336	Algae or other aquatic plants	0.00075mg/L	4
tin	LC50	96	Fish	>0.0124mg/L	2
tin	EC50	48	Crustacea	0.00018mg/L	5
tin	EC50	72	Algae or other aquatic plants	>0.0192mg/L	2
tin	EC50	72	Algae or other aquatic plants	>0.0192mg/L	2
tin	NOEC	168	Crustacea	<0.005mg/L	2
zinc oxide fume	LC50	96	Fish	0.439mg/L	2
zinc oxide fume	EC50	48	Crustacea	0.105mg/L	2
zinc oxide fume	EC50	72	Algae or other aquatic plants	0.042mg/L	4
zinc oxide fume	BCF	336	Fish	4376.673mg/L	4
zinc oxide fume	EC20	72	Algae or other aquatic plants	0.023mg/L	4
zinc oxide fume	NOEC	72	Algae or other aquatic plants	0.0049mg/L	2

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air	
	No Data available for all ingredients	No Data available for all ingredients	

Bioaccumulative potential

Ingredient	Bioaccumulation
zinc oxide fume	LOW (BCF = 217)

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

Page 7 of 8 Dentsply Degunorm Supra

Issue Date: **30/05/2014**Print Date: **18/01/2017**

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal

- ▶ Recycle wherever possible or consult manufacturer for recycling options.
- ► Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- ▶ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

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

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

GOLD(7440-57-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

SILVER(7440-22-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

PALLADIUM(7440-05-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards International Agency for Research on Cancer (IARC) - Agents Classified by the IARC
Australia Inventory of Chemical Substances (AICS) Monographs

ZINC(7440-66-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC

Monographs

PLATINUM(7440-06-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

TIN(7440-31-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

RIDIUM(7439-88-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC

Australia Inventory of Chemical Substances (AICS)

Monographs

ZINC OXIDE FUME(1314-13-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC
Monographs

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Υ
Canada - NDSL	N (platinum; zinc; iridium; zinc oxide fume; palladium; gold; tin; silver)
China - IECSC	N (iridium)
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (platinum; zinc; iridium; palladium; gold; tin; silver)
Korea - KECI	Y
New Zealand - NZIoC	Υ
Philippines - PICCS	N (iridium)
USA - TSCA	Υ

Chemwatch: 41-9159 Page 8 of 8 Issue Date: 30/05/2014 Version No: 2.1.1.1 Print Date: 18/01/2017

Dentsply Degunorm Supra

Y = All ingredients are on the inventory Legend:

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

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

The 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.

Definitions and abbreviations

PC – TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

TEEL: Temporary Emergency Exposure Limit。

IDLH: Immediately Dangerous to Life or Health Concentrations

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

This document is copyright.

Apart from any fair dealing for the purposes of private study, research, review or criticism, as permitted under the Copyright Act, no part may be reproduced by any process without written permission from CHEMWATCH.

TEL (+61 3) 9572 4700.