Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia, December 2011)

SECTION 1: Identification

1.1. Product identifier

3M™ Stainless Steel Crowns

Product Identification Numbers

70-2004-5814-2	70-2004-5815-9	70-2004-5816-7	70-2004-5817-5	70-2004-6995-8
70-2010-2754-0	70-2010-2770-6	70-2010-2771-4	70-2010-2772-2	70-2010-2773-0
70-2010-2774-8	70-2010-2775-5	70-2010-2776-3	70-2010-2777-1	70-2010-2778-9
70-2010-2779-7	70-2010-2780-5	70-2010-2781-3	70-2010-2782-1	70-2010-2783-9
70-2010-2784-7	70-2010-2785-4	70-2010-2786-2	70-2010-2787-0	70-2010-2788-8
70-2010-2789-6	70-2010-2790-4	70-2010-2791-2	70-2010-2792-0	70-2010-2793-8
70-2010-2794-6	70-2010-2795-3	70-2010-2796-1	70-2010-2797-9	70-2010-2798-7
70-2010-2799-5	70-2010-2800-1	70-2010-2801-9	70-2010-2802-7	70-2010-2803-5
70-2010-2804-3	70-2010-2805-0	70-2010-2806-8	70-2010-2807-6	70-2010-2808-4
70-2010-2809-2	70-2010-2810-0	70-2010-2811-8	70-2010-2812-6	70-2010-2813-4

1.2. Recommended use and restrictions on use

Recommended use

Dental Product, Dental crowns

Restrictions on use

For use by dental professionals only.

1.3. Supplier's details

Address: 3M Australia - Building A, 1 Rivett Road, North Ryde NSW 2113
Telephone: 136 136
E Mail: productinfo.au@mmm.com
Website: www.3m.com.au

1.4. Emergency telephone number

EMERGENCY: 1800 097 146 (Australia only)

SECTION 2: Hazard identification

This product is NOT classified as a hazardous chemical according to the Model Work Health and Safety Regulations, 2011, in accordance with applicable State and Territory legislation.

This product is an article and is not regulated by the Model Work Health and Safety Regulations (2011) because, it is not classified as hazardous. When used as recommended or under ordinary conditions, it should not present a health and safety hazard. However, use or processing of the product not in accordance with the product's recommendations or not under ordinary conditions may affect the performance of the product and may present potential health and safety hazards.

Refer to Section 14 of this Safety Data Sheets for product Dangerous Goods Classification.

2.1. Classification of the substance or mixture
Not applicable.

2.2. Label elements

Signal word
Not applicable.

Symbols
Not applicable.

Pictograms
Not applicable

2.3. Other assigned/identified product hazards
None known.

2.4. Other hazards which do not result in classification
None known.

SECTION 3: Composition/information on ingredients

This material is a mixture.

Ingredient	CAS Nbr	% by Weight
Iron	7439-89-6	67 - 75
Chromium	7440-47-3	17 - 20
Nickel	7440-02-0	8 - 13
Manganese	7439-96-5	0 - 2
Silicon	7440-21-3	0 - 1
Copper	7440-50-8	0 - 0.75

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
No need for first aid is anticipated.

Skin contact
Wash with soap and water. If signs/symptoms develop, get medical attention.

Eye contact
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If swallowed
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
Material will not burn. Use a fire fighting agent suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

Hazardous Decomposition or By-Products

Substance	Condition
None known.	During combustion.

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Ventilate the area with fresh air.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Sweep up.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove.

7.2. Conditions for safe storage including any incompatibilities
Not applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
CAS No S7439965A	7439-96-5	ACGIH	TWA(as Mn, inhalable fraction):0.1 mg/m3	A4: Not class. as human carcin
CAS No S7439965B	7439-96-5	ACGIH	TWA(as Mn, respirable	A4: Not class. as human

			fraction):0.02 mg/m3	carcin
Manganese	7439-96-5	Australia OELs	TWA(as Mn fume)(8 hours): 1 mg/m3; TWA(as Mn, dust)(8 hours): 1 mg/m3; STEL(as Mn fume)(15 minutes): 3 mg/m3	
Nickel	7440-02-0	ACGIH	TWA(inhalable fraction):1.5 mg/m3	Distillates (petroleum), hydrotreated heavy naphthenic
Nickel	7440-02-0	Australia OELs	TWA(8 hours): 1 mg/m3	
Silicon	7440-21-3	Australia OELs	TWA(Inspirable dust)(8 hours):10 mg/m3	
Chromium	7440-47-3	ACGIH	TWA(as Cr(0), inhalable fraction):0.5 mg/m3	
Chromium	7440-47-3	Australia OELs	TWA(8 hours): 0.5 mg/m3	
Copper	7440-50-8	Australia OELs	TWA(as fume)(8 hours):0.2 mg/m3;TWA(as Cu dust or mist)(8 hours):1 mg/m3	
COPPER, DUSTS AND MISTS, AS CU	7440-50-8	ACGIH	TWA(as Cu dust or mist):1 mg/m3	
COPPER, FUME AS CU	7440-50-8	ACGIH	TWA(as Cu, fume):0.2 mg/m3	

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
Australia OELs : Australia. Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment
CMRG : Chemical Manufacturer's Recommended Guidelines
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling
Sen: Sensitiser
Sk: Absorption through the skin may be a significant source of exposure.

8.2. Exposure controls

8.2.1. Engineering controls
No engineering controls required.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required. Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety glasses with side shields.

Select and use eye protection in accordance with AS/NZS 1336. Eye protection should comply with the performance specifications of AS/NZS 1337.

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection

Respiratory protection is not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid.
Colour	Metallic Silver
Odour	Slight Odour, Characteristic Odour
Odour threshold	*Not applicable.*
pH	*Not applicable.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*Not applicable.*
Flash point	*Not applicable.*
Evaporation rate	*Not applicable.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*Not applicable.*
Flammable Limits(UEL)	*Not applicable.*
Vapour pressure	*Not applicable.*
Vapor Density and/or Relative Vapor Density	*Not applicable.*
Density	*Not applicable.*
Relative density	*Not applicable.*
Water solubility	Nil
Solubility- non-water	*Not applicable.*
Partition coefficient: n-octanol/water	*Not applicable.*
Autoignition temperature	*Not applicable.*
Decomposition temperature	*Not applicable.*
Viscosity/Kinematic Viscosity	*Not applicable.*
Volatile organic compounds (VOC)	*Not applicable.*
Percent volatile	*Not applicable.*
VOC less H2O & exempt solvents	*Not applicable.*
Molecular weight	*No data available.*

Nanoparticles
This material does not contain nanoparticles.

SECTION 10: Stability and reactivity

10.1 Reactivity
This material is considered to be non reactive under normal use conditions

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
None known.

10.4. Possibility of hazardous reactions
Hazardous polymerisation will not occur.

10.5 Incompatible materials
None known.

10.6 Hazardous decomposition products

Substance	**Condition**
None known.	

Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labelling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

11.1 Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation
No known health effects.

Skin contact
Contact with the skin during product use is not expected to result in significant irritation.

Eye contact
Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion
No known health effects.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Iron	Dermal		LD50 estimated to be > 5,000 mg/kg
Iron	Ingestion	Rat	LD50 30,000 mg/kg
Nickel	Dermal		LD50 estimated to be > 5,000 mg/kg
Nickel	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.55 mg/l
Nickel	Ingestion	Rat	LD50 > 9,000 mg/kg
Manganese	Dermal		LD50 estimated to be > 5,000 mg/kg
Manganese	Ingestion	Rat	LD50 > 9,000 mg/kg
Silicon	Dermal	Rabbit	LD50 > 5,000 mg/kg
Silicon	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.08 mg/l
Silicon	Ingestion	Rat	LD50 3,160 mg/kg
Copper	Dermal	Rat	LD50 > 2,000 mg/kg
Copper	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.11 mg/l
Copper	Ingestion	Rat	LD50 > 2,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value

Iron	Rabbit	No significant irritation
Nickel	Rabbit	Minimal irritation
Silicon	Rabbit	No significant irritation
Copper	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Iron	Rabbit	No significant irritation
Nickel	Rabbit	Mild irritant
Silicon	Rabbit	Mild irritant
Copper	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Nickel	Human	Sensitising

Respiratory Sensitisation
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity
For the component/components, either no data are currently available or the data are not sufficient for classification.

Carcinogenicity

Name	Route	Species	Value
Nickel	Inhalation	similar compounds	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects
For the component/components, either no data are currently available or the data are not sufficient for classification.

Target Organ(s)

Specific Target Organ Toxicity - single exposure
For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Nickel	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.001 mg/l	13 weeks

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Exposure Levels
Refer Section **8.1 Control Parameters** of this Safety Data Sheet.

Interactive Effects
Not determined.

SECTION 12: Ecological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. Additional information leading to material classification in Section 2 is available upon request. In addition, environmental fate and effects data on ingredients may not be reflected in this section because an ingredient is present below the threshold for labelling, an ingredient is not expected to be available for exposure, or the data is considered not relevant to the material as a whole.

12.1. Toxicity

Acute aquatic hazard:
Not acutely toxic to aquatic life by GHS criteria.

Chronic aquatic hazard:
Not chronically toxic to aquatic life by GHS criteria.

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Iron	7439-89-6		Data not available or insufficient for classification			N/A
Chromium	7440-47-3		Data not available or insufficient for classification			n/a
Nickel	7440-02-0	Activated sludge	Experimental	30 minutes	EC50	33 mg/l
Manganese	7439-96-5	Activated sludge	Experimental	3 hours	NOEC	1,000 mg/l
Manganese	7439-96-5	Green algae	Experimental	72 hours	EC50	4.5 mg/l
Manganese	7439-96-5	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Manganese	7439-96-5	Water flea	Experimental	48 hours	EC50	>100 mg/l
Manganese	7439-96-5	Green algae	Experimental	72 hours	NOEC	2.5 mg/l
Manganese	7439-96-5	Water flea	Experimental	8 days	NOEC	1.7 mg/l
Silicon	7440-21-3	Green Algae	Estimated	72 hours	EC50	250 mg/l
Silicon	7440-21-3	Green Algae	Estimated	72 hours	EC10	228 mg/l
Copper	7440-50-8	Green Algae	Experimental	72 hours	NOEC	0.0003 mg/l

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Iron	7439-89-6	Data not available-insufficient			N/A	
Chromium	7440-47-3	Data not available-insufficient			N/A	
Nickel	7440-02-0	Data not available-insufficient			N/A	
Manganese	7439-96-5	Data not available-insufficient			N/A	
Silicon	7440-21-3	Data not			N/A	

		available-insufficient				
Copper	7440-50-8	Data not available-insufficient			N/A	

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Iron	7439-89-6	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Chromium	7440-47-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Nickel	7440-02-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Manganese	7439-96-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Silicon	7440-21-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Copper	7440-50-8	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.4. Mobility in soil
Please contact manufacturer for more details

12.5 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Disposal methods
Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.

Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

Hazchem Code: Not applicable
IERG: Not applicable.

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: Not applicable.
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.

SECTION 15: Regulatory information

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

Australian Inventory Status:
This product is regulated by the Therapeutics Goods Administration and is exempt from compliance with the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

SECTION 16: Other information

Revision information:
Complete document review.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Safety Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications.
Greenguard ® is a United States based program. The 'Low VOC' reference related to United States Federal and State regulations exemptions for some solvents.

3M Australia SDSs are available at www.3m.com.au