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 Clean-Trace NG Luminometer Lithium-ion Battery Pack

Product Identification Numbers
GH-6205-1651-4

1.2. Recommended use and restrictions on use

Recommended use
Micorbiological testing.

For use only by dental professionals.

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 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
Lithium Cobalt Oxide	12190-79-3	25 - 35
Carbon	7440-44-0	10 - 30
Aluminium.	7429-90-5	0.1 - 1
Copper	7440-50-8	0.1 - 1
[1,1'-Biphenyl]-2-ol	92-52-4	0.1 0.3

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
No need for first aid is anticipated.

Skin contact
No need for first aid is anticipated.

Eye contact
No need for first aid is anticipated.

If swallowed
No need for first aid is anticipated.

4.2. Most important symptoms and effects, both acute and delayed
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
DO NOT USE WATER.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

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

Hazchem Code: 4W*

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Not applicable.

6.2. Environmental precautions
Not applicable.

6.3. Methods and material for containment and cleaning up
Not applicable.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

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
Cobalt, inorganic compounds		ACGIH		
Aluminium.	7429-90-5	Australia OELs	TWA(Al, welding fume)(8 hours):5 mg/m3;TWA(as Al pyrophoric powder)(8 hours):5 mg/m3;TWA(as dust)(8 hours):10 mg/m3	
Aluminium.	7429-90-5	ACGIH	TWA(respirable fraction):1 mg/m3	A4: Not class. as human carcin
Graphite	7440-44-0	Australia OELs	TWA(as respirable dust)(8 hours):3 mg/m3	
Graphite	7440-44-0	ACGIH	TWA(respirable fraction):2 mg/m3	
Copper	7440-50-8	Australia OELs	TWA(as Cu dust or mist)(8 hours):1 mg/m3;TWA(as fume)(8 hours):0.2 mg/m3	
[1,1'-Biphenyl]-2-ol	92-52-4	Australia OELs	TWA(8 hours):1.3 mg/m3(0.2 ppm)	
[1,1'-Biphenyl]-2-ol	92-52-4	ACGIH	TWA:0.2 ppm	

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
Not applicable.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Eye protection not required.

Skin/hand protection
No protective gloves required. No chemical protective gloves are required.

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.
Specific Physical Form:	Battery
Appearance/Odour	Lithium-Ion Battery
Odour threshold	*No data available.*
pH	*No data available.*
Melting point/Freezing point	*No data available.*
Boiling point/Initial boiling point/Boiling range	*No data available.*
Flash point	*Not applicable.*
Evaporation rate	*No data available.*
Flammability (solid, gas)	Not classified
Flammable Limits(LEL)	*No data available.*
Flammable Limits(UEL)	*No data available.*
Vapour pressure	*No data available.*
Vapour density	*No data available.*
Density	*No data available.*
Relative density	*Not applicable.*
Water solubility	*No data available.*
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Autoignition temperature	*No data available.*
Decomposition temperature	*No data available.*
Viscosity	*No data available.*
Molecular weight	*Not applicable.*

SECTION 10: Stability and reactivity

10.1 Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability
Stable.

10.3. Conditions to avoid
Not determined

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

10.5 Incompatible materials
Water

10.6 Hazardous decomposition products

Substance	Condition
Carbon monoxide.	Not specified.
Carbon dioxide.	Not specified.
Hydrogen gas.	Not specified.

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 health effects are expected. No known health effects.

Skin contact
No health effects are expected.

Eye contact
No health effects are expected.

Ingestion
No health effects are expected. No known health effects.

Additional information:
This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a

health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

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
Carbon	Dermal		LD50 estimated to be > 5,000 mg/kg
Carbon	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 2.1 mg/l
Carbon	Ingestion	Rat	LD50 > 2,000 mg/kg
Aluminium.	Dermal		LD50 estimated to be > 5,000 mg/kg
Aluminium.	Ingestion		LD50 estimated to be > 5,000 mg/kg
Aluminium.	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 0.888 mg/l
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
[1,1'-Biphenyl]-2-ol	Dermal		estimated to be > 5,000 mg/kg
[1,1'-Biphenyl]-2-ol	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
[1,1'-Biphenyl]-2-ol	Inhalation-Vapour		estimated to be > 50 mg/l
[1,1'-Biphenyl]-2-ol	Ingestion		estimated to be > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
Carbon	Rabbit	No significant irritation
Aluminium.	Rabbit	No significant irritation
Copper	Rabbit	No significant irritation

Serious Eye Damage/Irritation

Name	Species	Value
Carbon	Rabbit	Mild irritant
Aluminium.	Rabbit	No significant irritation
Copper	Rabbit	Mild irritant

Skin Sensitisation

Name	Species	Value
Aluminium.	Guinea pig	Not sensitizing

Respiratory Sensitisation

Name	Species	Value
Aluminium.	Human	Some positive data exist, but the data are not sufficient for classification

Germ Cell Mutagenicity

Name	Route	Value
Aluminium.	In Vitro	Not mutagenic

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

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
Aluminium.	Inhalation	nervous system | respiratory system	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	occupational exposure

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

No product test data available.

Material	CAS Number	Organism	Type	Exposure	Test endpoint	Test result
Copper	7440-50-8	Green Algae	Experimental	72 hours	NOEC	0.0003 mg/l
[1,1'-Biphenyl]-2-ol	92-52-4		Data not available or insufficient for classification			

Aluminium.	7429-90-5		Data not available or insufficient for classification			
Carbon	7440-44-0		Data not available or insufficient for classification			
Lithium Cobalt Oxide			Data not available or insufficient for classification			

12.2. Persistence and degradability

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
[1,1'-Biphenyl]-2-ol	92-52-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon	7440-44-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Lithium Cobalt Oxide		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
Aluminium.	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

12.3 : Bioaccumulative potential

Material	CAS Number	Test type	Duration	Study Type	Test result	Protocol
Aluminium.	7429-90-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon	7440-44-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
[1,1'-Biphenyl]-2-ol	92-52-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Lithium Cobalt Oxide		Data not available or insufficient for	N/A	N/A	N/A	N/A

		classification				
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.

Incinerate in a permitted waste incineration facility.

SECTION 14: Transport Information

Australian Dangerous Goods Code (ADG) - Road/Rail Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: Not applicable.
Special Instructions: Not restricted, as per Special Provision 188, lithium ion batteries or cells.
Hazchem Code: 4W*
IERG: 26

International Air Transport Association (IATA) - Air Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: Not applicable.
Special Instructions: Forbidden by this mode of transport

International Maritime Dangerous Goods Code (IMDG)- Marine Transport
UN No.: Not applicable.
Proper shipping name: Not applicable.
Class/Division: 9
Sub Risk: Not applicable.
Packing Group: Not applicable.
Marine Pollutant: Not applicable.
Special Instructions: Not restricted, as per Special Provision 188, lithium ion batteries or cells.

SECTION 15: Regulatory information

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

Australian Inventory Status:
The chemical components contained within this product are listed on the Australian Inventory of Chemical Substances and

are in compliance with the requirements of the Industrial Chemicals (Notification and Assessment) Act 1989 as amended.

Poison Schedule: This product is intended for Industrial or Professional Use only and therefore is not packaged and labelled in accordance with the requirements of the Standard for the Uniform Scheduling of Medicines and Poisons.

SECTION 16: Other information

Revision information:
Conversion to GHS format SDS.

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