



## Safety Data Sheet

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This product is defined as an article under REACH and does not require a Safety Data Sheet under Article 31 of Regulation (EC) No. 1907/2006. Since an SDS is not required, this document does not contain all of the information that is required for substance and mixture SDSs under REACH.

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

TR-332 High Capacity Battery (Intermediate)

#### Product Identification Numbers

XA-0077-0656-8

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### Identified uses

Battery

#### 1.3. Details of the supplier of the safety data sheet

**Address:** 3M United Kingdom PLC, 3M Centre, Cain Road, Bracknell, Berkshire, RG12 8HT.  
**Telephone:** +44 (0)1344 858 000  
**E Mail:** tox.uk@mmm.com  
**Website:** www.3M.com/uk

#### 1.4. Emergency telephone number

+44 (0)1344 858 000

### SECTION 2: Hazard identification

#### 2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

##### CLASSIFICATION:

This material is exempt from hazard classification according to Regulation (EC) No. 1272/2008, as amended, on classification, labelling, and packaging of substances and mixtures.

#### 2.2. Label elements

CLP REGULATION (EC) No 1272/2008

Not applicable

### 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

Ingredient	CAS Nbr	EU Inventory	% by Wt	Classification
cobalt lithium oxide	12190-79-3	EINECS 235-362-0	30 - 40	
Dimethyl carbonate	616-38-6	EINECS 210-478-4	1 - 5	Flam. Liq. 2, H225 (CLP)
Diethyl carbonate	105-58-8	EINECS 203-311-1	1 - 5	
Ethylene carbonate	96-49-1	EINECS 202-510-0	1 - 5	Eye Irrit. 2, H319 (Vendor)
lithium hexafluorophosphate(1-)	21324-40-3	EINECS 244-334-7	1 - 5	Aquatic Chronic 3, H412 (Self Classified)
Propylene carbonate	108-32-7	EINECS 203-572-1	0.1 - 1	Eye Irrit. 2, H319 (CLP)

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

## 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. Extinguishing media

Material will not burn.

### 5.2. Special hazards arising from the substance or mixture

None inherent in this product.

#### **Hazardous Decomposition or By-Products**

##### **Substance**

Carbon monoxide.  
Carbon dioxide.  
Toxic vapour, gas, particulate.

##### **Condition**

During combustion.  
During combustion.  
During combustion.

#### **5.3. Advice 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**

Not applicable.

#### **6.2. Environmental precautions**

Not applicable.

#### **6.3. Methods and material for containment and cleaning up**

Not applicable.

#### **6.4. Reference to other sections**

Refer to Section 8 and Section 13 for more information

### **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. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.)

#### **7.2. Conditions for safe storage including any incompatibilities**

Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents.

#### **7.3. Specific end use(s)**

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

### **SECTION 8: Exposure controls/personal protection**

#### **8.1 Control parameters**

##### **Occupational exposure limits**

No occupational exposure limit values exist for any of the components listed in Section 3 of this Safety Data Sheet.

##### **Biological limit values**

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

#### **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.

#### 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	Odourless, metallic, geometric object.
Odour threshold	<i>Not applicable.</i>
pH	<i>Not applicable.</i>
Boiling point/boiling range	<i>Not applicable.</i>
Melting point	<i>Not applicable.</i>
Flammability (solid, gas)	Not classified
Explosive properties	Not classified
Oxidising properties	Not classified
Flash point	No flash point
Autoignition temperature	<i>Not applicable.</i>
Flammable Limits(LEL)	<i>Not applicable.</i>
Flammable Limits(UEL)	<i>Not applicable.</i>
Vapour pressure	<i>Not applicable.</i>
Relative density	<i>No data available.</i>
Water solubility	<i>Not applicable.</i>
Solubility- non-water	<i>Not applicable.</i>
Partition coefficient: n-octanol/water	<i>No data available.</i>
Evaporation rate	<i>Not applicable.</i>
Vapour density	<i>Not applicable.</i>
Decomposition temperature	<i>Not applicable.</i>
Viscosity	<i>Not applicable.</i>
Density	<i>No data available.</i>

### 9.2. Other information

Volatile organic compounds (VOC)	<i>Not applicable.</i>
Percent volatile	<i>Not applicable.</i>
VOC less H <sub>2</sub> O & exempt solvents	<i>Not applicable.</i>

## 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. Stable to 130 °C

### 10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

### 10.4 Conditions to avoid

Heat.

### 10.5 Incompatible materials

Strong oxidising agents.

Reducing agents.

Strong acids.

Strong bases.

### 10.6 Hazardous decomposition products

<u>Substance</u>	<u>Condition</u>
None known.	

Refer to section 5.2 for hazardous decomposition products during combustion.

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 agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from 3M assessments.

### 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.

#### Skin contact

No health effects are expected.

#### Eye contact

No health effects are expected.

#### Ingestion

No health effects are expected.

#### 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
Dimethyl carbonate	Dermal		estimated to be > 5,000 mg/kg
Dimethyl carbonate	Inhalation-Dust/Mist		estimated to be > 12.5 mg/l
Dimethyl carbonate	Inhalation-Vapor		estimated to be > 50 mg/l
Dimethyl carbonate	Ingestion		estimated to be > 5,000 mg/kg
Propylene carbonate	Dermal	Rabbit	LD50 > 3,000 mg/kg
Propylene carbonate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

#### Skin Corrosion/Irritation

Name	Species	Value
Propylene carbonate	Rabbit	No significant irritation

#### Serious Eye Damage/Irritation

Name	Species	Value
Propylene carbonate	Rabbit	Severe irritant

#### Skin Sensitisation

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

#### Respiratory Sensitisation

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

#### Germ Cell Mutagenicity

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

#### Carcinogenicity

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

#### Reproductive Toxicity

#### Reproductive and/or Developmental Effects

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

#### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

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

#### Specific Target Organ Toxicity - repeated exposure

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

#### Aspiration Hazard

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

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

## SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

### 12.1. Toxicity

No product test data available.

Material	CAS Nbr	Organism	Type	Exposure	Test endpoint	Test result
Propylene carbonate	108-32-7	Common Carp	Experimental	96 hours	LC50	>1,000 mg/l
Propylene carbonate	108-32-7	Green algae	Experimental	72 hours	EC50	>900 mg/l
Propylene carbonate	108-32-7	Green algae	Experimental	72 hours	NOEC	900 mg/l
Propylene carbonate	108-32-7	Water flea	Experimental	48 hours	EC50	>1,000 mg/l
lithium hexafluorophosphate(1-)	21324-40-3	Mummichog	Experimental	96 hours	LC50	16.7 mg/l
Dimethyl carbonate	616-38-6	Fish	Experimental	96 hours	LC50	>1,000 mg/l
Diethyl carbonate	105-58-8		Data not available or insufficient for classification			
cobalt lithium oxide	12190-79-3		Data not available or insufficient for classification			
Ethylene carbonate	96-49-1	Crustacea other	Experimental	48 hours	EC50	5,900 mg/l
Ethylene carbonate	96-49-1	Fathead minnow	Estimated	96 hours	LC50	49,000 mg/l

### 12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propylene carbonate	108-32-7	Experimental Biodegradation	28 days	BOD	82 % weight	OECD 301C - MITI test (I)
Ethylene carbonate	96-49-1	Experimental Biodegradation	9 days	CO2 evolution	76.5 % weight	OECD 301B - Modified sturm or CO2
Dimethyl carbonate	616-38-6	Experimental Biodegradation	28 days	BOD	>90 % weight	OECD 301C - MITI test (I)
Diethyl carbonate	105-58-8	Estimated Biodegradation	28 days	BOD	90 % weight	OECD 301C - MITI test (I)
lithium hexafluorophosphate(1-)	21324-40-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
cobalt lithium oxide	12190-79-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A

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Dimethyl carbonate	616-38-6	Experimental Photolysis		Photolytic half-life (in air)	103 days (t 1/2)	Other methods
Diethyl carbonate	105-58-8	Estimated Photolysis		Photolytic half-life (in air)	9.3 days (t 1/2)	Other methods

**12.3 : Bioaccumulative potential**

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Propylene carbonate	108-32-7	Experimental Bioconcentration		Log Kow	-0.41	Other methods
Dimethyl carbonate	616-38-6	Estimated Bioconcentration		Bioaccumulation factor	3.9	Other methods
Diethyl carbonate	105-58-8	Estimated Bioconcentration		Bioaccumulation factor	9.8	Estimated: Bioconcentration factor
Ethylene carbonate	96-49-1	Experimental Bioconcentration		Log Kow	0.11	Other methods
lithium hexafluorophosphate(1-)	21324-40-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
cobalt lithium oxide	12190-79-3	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. Results of the PBT and vPvB assessment**

No information available at this time, contact manufacturer for more details

**12.6. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1 Waste treatment methods**

See Section 11.1 Information on toxicological effects

This product has been classified as a non-hazardous waste. Prior to disposal, consult all applicable authorities and regulations to insure proper classification. Dispose of waste product in a permitted industrial waste facility. If no other disposal options are available, waste product may be placed in a landfill properly designed for industrial waste.

**SECTION 14: Transportation information**

XA-0077-0656-8

**ADR/RID:** UN3480, NOT RESTRICTED, LITHIUM ION BATTERY FULFILLING SP188, HANDLE WITH CARE, FLAMMABLE IF PACKAGE IS DAMAGED, REPACK IF DAMAGED, (--), ADR Classification Code: M4,



ADDITIONAL INFORMATION: 0049(0)2131-140.

**IMDG-CODE:** UN3480, NOT RESTRICTED, AS PER SPECIAL PROVISION 188, LITHIUM ION BATTERY, HANDLE WITH CARE, FLAMMABLE IF PACKAGE IS DAMAGED, REPACK IF DAMAGED, IMDG-Code segregation code:

NONE, ADDITIONAL INFO: 0049-(0)2131-140, EMS: --.

**ICAO/IATA:** FORBIDDEN: NOT ALLOWED FOR AIR FREIGHT

## SECTION 15: Regulatory information

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

#### Global inventory status

Contact 3M for more information.

### 15.2. Chemical Safety Assessment

Not applicable

## SECTION 16: Other information

### List of relevant H statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

### Revision information:

Section 3: Composition/ Information of ingredients table information was modified.

Section 3: Reference to section 15 for Nota info information was deleted.

Section 11: Acute Toxicity table information was modified.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12: Bioaccumulative potential information information was modified.

Section 15: Carcinogenicity information information was deleted.

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