

# SOLO 370 LITHIUM ION BATTERY SAFETY DATA SHEET

SDS0096US-EN  
ACCORDING TO US CFR 1910.1200

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

### 1.1 Product identifier

Product Name Solo 370  
Trade Name Solo 370-XXX (XXX denotes customer variant)  
CAS No. Mixture.  
EINECS No. Mixture.

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

Identified Use(s) Battery product.  
Uses Advised Against None known.

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

Company Identification SDi, LLC, 3535 State Highway 66, Parkway 100 Building 6, Neptune, NJ 07753, USA  
Telephone (732) 751 9266  
Fax (732) 751 9241  
E-mail sales@sdfire.com

### 1.4 Emergency telephone number

Info Trac 1-800-535-5053

### 1.5 Details of the Manufacturer

Company Identification Detectortesters (No Climb Products Ltd), Edison House, 163 Dixons Hill Road, Welham Green, Hertfordshire AL9 7JE, United Kingdom.  
Telephone +44 (0) 1707 282760  
Fax +44 (0) 1707 282777  
E-mail SDS@detectortesters.com

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

**US CFR 1910.1200** Not classified as dangerous for supply/use. The battery is a sealed unit and therefore the ingredients present have no hazard potential except in a situation where the battery has been violated or dismantled.

### 2.2 Label elements

Hazard Pictogram(s) None.  
Signal Word(s) None.  
Hazard Statement(s) None.  
Precautionary Statement(s) None.

### 2.3 Other hazards

None.

### 2.4 Additional Information

There is no hazard when the measures for handling and storage are followed. In case of cell damage, possible release of dangerous substances and a spontaneous flammable gas mixture may be released. Battery content must not get in contact with water. Contact with water liberates extremely flammable gases.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Mixtures

Hazardous Ingredient(s)	%W/W	CAS No.
Cobalt oxide	<15	1307-96-6
Maganese dioxide	<15	1313-13-9
Nickel Oxide	<15	1313-99-1
Electrolyte(*)	<15	None

(\*) Main Ingredients: Lithium hexafluorophosphate, organic carbonates



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### 3.2 Additional Information

During the charge process a lithium carbon intercalation phase is formed, which is highly flammable and corrosive, but not released under normal usage.

- Mercury content: Hg<0.1mg/kg
- Cadmium content: Cd<1mg/kg
- Lead content: Pb<10mg/kg

For full text of H/P statements see section 16.

## SECTION 4: FIRST AID MEASURES



### 4.1 Description of first aid measures

- Inhalation: Unlikely route of exposure. Electrolyte leakage: Remove to fresh air immediately. Seek medical treatment.
- Skin Contact: Unlikely route of exposure. Electrolyte leakage: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.
- Eye Contact: Unlikely route of exposure. Electrolyte leakage: Flush eyes with water for at least 15 minutes. Seek medical treatment.
- Ingestion: Unlikely route of exposure. Electrolyte leakage: Make victim drink plenty of water. Do not induce vomiting. Seek medical treatment.

### 4.2 Most important symptoms and effects, both acute and delayed

None anticipated.  
Electrolyte leakage Can cause damage to the eyes and skin.

### 4.3 Indication of any immediate medical attention and special treatment needed

Unlikely to be required but if necessary treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

- Suitable Extinguishing media: Extinguish preferably with dry chemical or sand.
- Unsuitable extinguishing media: Water, Water spray.

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

Hazardous decomposition product(s) include: Hydrofluoric acid (upon contact with water), Hydrogen fluoride (HF) gas, Carbon monoxide and Carbon dioxide.

### 5.3 Advice for fire-fighters

In case of major fire and large quantities: A self contained breathing apparatus should be worn. If possible, remove cell(s) from fire fighting area. If heated above 125°C, cell(s) can explode/vent. Cell is not flammable but internal organic material will burn if the cell is incinerated.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Use PPE. Avoid contact with skin, eyes or clothing. Avoid breathing fumes.

### 6.2 Environmental precautions

Prevent entry into drains.

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

Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal.

### 6.4 Reference to other sections

See Also Section: 8, 13

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid mechanical damage to the cell. Do not open or disassemble. Do not throw batteries in water. Keep away from: Children. Avoid overheating.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep away from open flames, heat and sources of ignition.

Storage temperature

Ambient.

Storage life

Stable under normal conditions.

Incompatible materials

None anticipated.

### 7.3 Specific end use(s)

Battery product.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters** Under normal conditions of battery use, internal components will not present a health or environmental hazard.

### 8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LEL (8 hr TWA ppm)	LEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Cobalt oxide	1307-96-6	-	5*	-	-	OSHA, Sen,
Manganese dioxide	1313-13-9	-	5*	-	-	OSHA
Nickel oxide	1313-99-1	-	5*	-	-	OSHA, Carc
Carbon	7440-44-0	-	5*	-	-	OSHA

Source:

OSHA = Occupational Safety and Health Administration \*Respirable Dust.

### 8.2 Exposure controls

**8.2.1 Appropriate engineering controls** Provide adequate ventilation.

#### 8.2.2 Personal protection equipment

Eye/ face protection



Not normally required.

Electrolyte leakage: Wear eye/face protection.

Skin protection (Hand protection/ Other)



Not normally required.

Electrolyte leakage: Wear impervious gloves.

Respiratory protection



No personal respiratory protective equipment normally required.

Electrolyte leakage: Wear suitable respiratory protective equipment.

Thermal hazards

Not applicable.

**8.2.3 Environmental Exposure Controls** Avoid release to the environment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Solid.
Colour	Not applicable.
Odour	Odourless.
Odour threshold	Not applicable.
pH	Not determined.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash Point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Non-flammable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	Not applicable.
Solubility(ies)	Insoluble
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not applicable.
Kinematic Viscosity	Not applicable.
Explosive properties	Not explosive when used as intended.
Oxidising properties	Not oxidising when used as intended.



## SOLO 370 LITHIUM ION BATTERY

**SECTION 10: STABILITY AND REACTIVITY**

10.1	<b>Reactivity</b>	Stable under normal conditions.
10.2	<b>Chemical stability</b>	Stable under normal conditions.
10.3	<b>Possibility of hazardous reactions</b>	No hazardous reactions known if used for its intended purpose.
10.4	<b>Conditions to avoid</b>	Do not heat the product.
10.5	<b>Incompatible materials</b>	Stable under normal conditions.
10.6	<b>Hazardous decomposition product(s)</b>	No hazardous decomposition products known when used as intended. See Section: 5 Firefighting measures

**SECTION 11: TOXICOLOGICAL INFORMATION**

Unlikely to cause harmful effects under normal conditions of handling and use.

11.1	<b>Information on toxicological effects</b>	
	<b>Acute toxicity</b>	Low acute toxicity.
	<b>Skin corrosion/irritation</b>	Non-irritant.
	<b>Serious eye damage/irritation</b>	Not classified.
	<b>Respiratory or skin sensitization</b>	It is not a skin sensitiser.
	<b>Germ cell mutagenicity</b>	There is no evidence of mutagenic potential.
	<b>Carcinogenicity</b>	No evidence of carcinogenicity.
	<b>Reproductive toxicity</b>	None anticipated.
	<b>STOT - single exposure</b>	Not classified.
	<b>STOT - repeated exposure</b>	Not classified.
	<b>Aspiration hazard</b>	None anticipated.
11.2	<b>Other information</b>	None.

**SECTION 12: ECOLOGICAL INFORMATION**

12.1	<b>Toxicity</b>	Under normal conditions of battery use, internal components will not present a health or environmental hazard.
12.2	<b>Persistence and degradability</b>	Not applicable.
12.3	<b>Bioaccumulative potential</b>	Not applicable.
12.4	<b>Mobility in soil</b>	Not applicable
12.5	<b>Other adverse effects</b>	Do not flush spilt material into any public water system.

**SECTION 13: DISPOSAL CONSIDERATIONS**

13.1	<b>Waste treatment methods</b>	Consult an accredited waste disposal contractor or the local authority for advice.
13.2	<b>Additional Information</b>	Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION**

14.1	<b>UN number</b>	UN 3480, UN3481
14.2	<b>UN proper shipping name</b>	Batteries, Lithium Ion
14.3	<b>Transport hazard class(es)</b>	
	<b>ADR</b>	Under special provision 188.
	<b>IMDG</b>	Under special provision 188.
	<b>IATA</b>	UN 3480, UN 3481
	<b>DOT</b>	Not applicable.
14.4	<b>Packing group</b>	Not applicable.
14.5	<b>Environmental hazards</b>	Not applicable.
14.6	<b>Special precautions for user</b>	Not applicable.
14.7	<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.



**SECTION 15: REGULATORY INFORMATION**

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

**15.1.1 OSHA**

Toxic and hazardous substances (29 CFR 1910; Subpart Z) All chemicals are not listed  
National emission standards for hazardous air pollutants (40 CFR 61.01) All chemicals are not listed

**15.1.2 Title III Consolidated List of Lists Sec 313**

Cobalt oxide (Cobalt compounds), Manganese dioxide (Manganese compounds), Nickel oxide (Nickel compounds)

**15.1.3 OSPAR List of Chemicals for Priority Action**

All chemicals are not listed

**15.1.4 State Right to Know Lists**

Cobalt oxide (cobalt compounds) - New Jersey  
Nickel oxide (nickel compounds) – New Jersey, Pennsylvania

**15.1.5 TSCA (Toxic Substance Control Act)**

Cobalt oxide (Cas 1307-96-6), Manganese dioxide (Cas 1313-13-9),  
Nickel oxide (Cas 1313-99-1), Carbon (Cas 7440-44-0).

**15.1.6 Proposition 65 (California)**

Cobalt oxide (Cas 1307-96-6), Nickel oxide (Cas 1313-99-1)

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: None.

**USA**

NFPA		HMIS	
Health	0	Health	0
Fire	1	Flammability	1
Instability	0	Physical hazards	0

**LEGEND**

- LTEL Long Term Exposure Limit
- STEL Short Term Exposure Limit
- OSPAR Oslo and Paris Convention
- OSHA Occupational Safety and Health Administration
- NFPA National Fire Protection Association
- HMIS Hazardous Material Information System
- DNEL Derived No Effect Level
- PNEC Predicted No Effect Concentration
- VOC Volatile Organic Compounds

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**Annex to the extended Safety Data Sheet (eSDS)**

No information available.