SOLO 370 LITHIUM ION BATTERY

SAFETY DATA SHEET

SDS0096UK

ACCORDING TO EC-REGULATIONS 1907/2006 (REACH), 1272/2008 (CLP) & 2015/830

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), Solo 365-001 (included as the battery for device)
CAS No.	Mixture.
EINECS No.	Mixture.
REACH Registration No.	None assigned.

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 Only representative

Company Identification	Shift-Consult Hubert Scherzinger, 79108 Freiburg, Germany
Telephone	+49 7665 81 21 74

Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

Emergency Phone No.	+44 (0) 1707 282760
Mon-Thur (08:30-17:00), Fri (08:30-15:00)	

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) 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 According to Regulation (EC) No. 1272/2008 (CLP)

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

3.2 Mixtures

EC Classification No. 1272/2008

Hazardous Ingredient(s)	%W/W	CAS No.	EC No.	REACH Registration No.	Hazard Pictogram(s) and Hazard Statement(s)
Cobalt oxide	<15	1307-96-6	215-154-6	Not available	GHS06, H301, H330; GHS08, H317, H334; GHS09, H410.
Maganese dioxide	<15	1313-13-9	215-202-6	Not available	GHS07, H302+H332.
Nickel Oxide	<15	1313-99-1	215-215-7	Not available	GHS07, H317, H350i, H372; GHS08, H413
Electrolyte(*)	<15	None	None	None assigned	GHS05; GHS06, H301; GHS08, H314, H372;

(*) Main Ingredients: Lithium hexafluorophosphate, organic carbonates

3.3 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 Rroute 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.

5.2 Special hazards arising from the substance or mixture — Hazardous decomposition product(s) include: Hydroflouric 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.	LTEL (8 hr TWA ppm)	LTEL (8 hr TWA mg/m³)	STEL (ppm)	STEL (mg/m³)	Note
Cobalt oxide	1307-96-6	-	0.1	-	-	WEL,Sen
Manganese dioxide	1313-13-9	-	0.5	-	-	WEL
Nickel oxide	1313-99-1	-	0.5	-	-	WEL,Carc
Lithium hexaflourophosphate	21324-40-3	-	2.5	-	-	WEL,Corr
Carbon	7440-44-0	-	10	-	-	WEL

WEL: Workplace Exposure Limit (UK HSE EH40)

8.1.2 Biological limit value Not established.

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 (EN374).

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.
Density	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.

SECTION 10: STABILITY AND REACTIVITY

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

SECTION 11: TOXICOLOGICAL INFORMATION]

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

11.1 Information on toxicological effects

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

11.2 Other information None.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Under normal conditions of battery use, internal components will not present a health or environmental hazard.
12.2	**Persistence and degradability**	Not applicable.
12.3	**Bioaccumulative potential**	Not applicable.
12.4	**Mobility in soil**	Not applicable
12.5	**Results of PBT and vPvB assessment**	Not classified as PBT or vPvB.
12.6	**Other adverse effects**	Do not flush spilt material into any public water system.

SECTION 13: DISPOSAL CONSIDERATIONS

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

SECTION 14: TRANSPORT INFORMATION

14.1	**UN number**	UN 3480 (when supplied as Solo 370-XXX) UN 3481 (when supplied as part of Solo 365-001)
14.2	**UN proper shipping name**	Lithium Ion Batteries (UN3480) Lithium Ion Batteries packed with equipment (UN3481)
14.3	**Transport hazard class(es)**	
	ADR	Both UN3480 & UN3481 are NOT considered hazardous due to compliance to SP188.
	IMDG	Both UN3480 & UN3481 are NOT considered hazardous due to compliance to SP188.
	IATA	UN 3480 (when supplied as Solo 370-XXX) UN 3481 (when supplied as part of Solo 365-001) Lithium-ion batteries in compliance with Section II of PI966.
	DOT	Not applicable.
14.4	**Packing group**	Not applicable.
14.5	**Environmental hazards**	Not applicable.
14.6	**Special precautions for user**	Not applicable.
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**	Not applicable.

SECTION 15: REGULATORY INFORMATION

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

15.1.1 EU regulations

Authorisations and/or Restrictions On Use	All chemicals are not listed.
Candidate List of Substances of Very High Concern for Authorisation	All chemicals are not listed.
REACH: ANNEX XVII restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles	All chemicals are not listed.
REACH: ANNEX XIV list of substances subject to authorisation	All chemicals are not listed.
Community Rolling Action Plan (CoRAP)	All chemicals are not listed.
15.1.2 National regulations	None known.
VOC-CH	0%
VOC-EU	0%
15.2 Chemical Safety Assessment	Not applicable.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1, 3.

LEGEND

LTEL	Long Term Exposure Limit
STEL	Short Term Exposure Limit
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration
PBT	Persistent, Bioaccumulative and Toxic
vPvB	very Persistent and very Bioaccumulative
VOC	Volatile Organic Compounds

Hazard Statement(s)

H301	Toxic if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if swallowed.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350i	May cause cancer by inhalation.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

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Annex to the extended Safety Data Sheet (eSDS)

No information available.