detectortesters
testing technology from No Climb

Ni-MH Battery Pack

SAFETY DATA SHEET

SDS0090UK

SAFETY DATA SHEET ACCORDING TO REGULATION (EC) No. 1907/2006 AS AMENDED

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

1.1 Product identifier

Product Name	Ni-MH Battery Pack.
Trade Name	SCORP50-XXX, SOLO760-XXX,SOLO770-XXX. (XXX denotes customer variant).
CAS No.	Article.
EINECS No.	Article.
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 91 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

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Batteries are articles and therefore exempted from the UN-GHS classification requirements. There are no GHS labelling requirements for articles.

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 Under normal conditions of battery use, internal components will not present a health or environmental hazard. In the extreme or adverse conditions (high over-charge, reverse charge, external short circuit), some electrolyte leakage can occur by the safety vent.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

EC Classification No. 1272/2008

SOLO760, SOLO770, SCORP50

Hazardous Ingredient(s)	%W/W	CAS No.	EC No.
Nickel dihydroxide	25<45	12054-48-7	235-008-5
Nickel oxide		1313-99-1	215-215-7
Nickel		7440-02-0	231-111-4
Potassium hydroxide	5	1310-58-3	215-181-3
Cobalt	2<4.5	7440-48-4	231-158-0

Cobalt Oxide		1307-96-6	215-154-6
Cobalt Hydroxide		21041-93-0	244-166-4
Lanthanum	<10	7439-91-0	231-099-0
Cerium		7440-45-1	231-154-9
Neodymium		7440-00-8	231-109-3
Praseodymium		7440-10-0	231-120-3
Iron	7.5<20	7439-89-6	231-096-4
Sodium hydroxide	<4	1310-73-2	215-185-5

3.3 Additional Information
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 person to fresh air and keep comfortable for breathing.

Skin Contact — No measures required.
Electrolyte leakage:Take off immediately all contaminated clothing. Rinse skin with water/shower.

Eye Contact — Unlikely route of exposure.
Electrolyte leakage: Rinse cautiously with water for several minutes.

Ingestion — Unlikely route of exposure.
Electrolyte leakage: Make victim drink water. Do not induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2 Most important symptoms and effects, both acute and delayed — None anticipated.
Electrolyte leakage: Causes severe skin burns and eye damage.

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, sand or carbon dioxide.
Unsuitable extinguishing media — Water, Water spray.

5.2 Special hazards arising from the substance or mixture — Heating may cause pressure rise with risk of bursting. Hazardous decomposition product(s): Nickel and cobalt compounds.

5.3 Advice for fire-fighters — Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures — Ensure adequate ventilation. Stop leak if safe to do so. Avoid inhalation of vapours. Avoid contact with skin and eyes. Use personal protective equipment as required.

6.2 Environmental precautions — Avoid release to the environment.

6.3 Methods and material for containment and cleaning up — Collect mechanically and dispose of according to Section 13.
Electrolyte leakage: Neutralize with: weak acid such as vinegar or citric acid before proper disposal. In the event of accumulated electrolyte contain and neutralize spill.

6.4 Reference to other sections — See Also Section 8.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling — Do not obstruct safety vent by soldering or welding tabs on the positive top.

7.2 Conditions for safe storage, including any incompatibilities — Store in a cool/low-temperature, well-ventilated (dry) place away from heat and ignition sources.

Storage temperature — Ambient.
Storage life — Stable under normal conditions.
Incompatible materials — None known.

7.3 Specific end use(s) — Battery product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

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
Nickel dihydroxide	12054-48-7	-	0.5	-	-	WEL, Sk
Nickel hydroxide	1313-99-1					WEL
Nickel	7440-02-0					WEL
Potassium hydroxide	1310-58-3	-	-	-	2	WEL
Sodium hydroxide	1310-73-2	-	-	-	2	WEL
Cobalt dihydroxide	21041-93-0	-	0.1	-	-	WEL
Cobalt oxide	1307-96-6					WEL
Cobalt	21041-93-0					WEL
Manganese	7439-96-5	-	1	-	3	WEL

WEL: Workplace Exposure Limit (UK HSE EH40)
Sk - Can be absorbed through skin.

8.1.2 Biological limit value Not established.

8.1.3 PNECs and DNELs 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 protection with side protection (EN166).

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 available.
Melting point/freezing point	199.85°C (Nickel dihydroxide).
Initial boiling point and boiling range	Not available.
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	3.8g/cm³ @ 21°C (Nickel dihydroxide).
Solubility(ies)	Slightly soluble in: Water (Nickel dihydroxide).
Partition coefficient: n-octanol/water	Not applicable.

	Auto-ignition temperature	Not applicable.
	Decomposition Temperature	Not applicable.
	Dynamic viscosity	Not applicable.
	Kinematic Viscosity	Not applicable.
	Explosive properties	Not explosive.
	Oxidising properties	Not oxidising.
9.2	**Other information**	None.

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**	Keep away from heat and sources of ignition. Protect from moisture.
10.5	**Incompatible materials**	None known.
10.6	**Hazardous decomposition product(s)**	No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

This material is unlikely to present a significant health hazard under normal conditions of handling and use.

11.1 Information on toxicological effects

11.1.1 Article

Acute toxicity	Low acute toxicity.
Irritation	Non-irritant.
Corrosivity	Not classified.
Sensitisation	It is not a skin sensitiser.
Repeated dose toxicity	None anticipated.
Carcinogenicity	No evidence of carcinogenicity.
Mutagenicity	There is no evidence of mutagenic potential.
Toxicity for reproduction	None anticipated.

11.2 Other information Contains: Nickel dihydroxide. Harmful if swallowed or if inhaled. Causes severe skin burns and eye damage.

SECTION 12: ECOLOGICAL INFORMATION

12.1	**Toxicity**	Under normal conditions of battery use, internal components will not present a health or environmental hazard.Contains: Nickel dihydroxide. Very toxic to aquatic life with long lasting effects.
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**	None.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1	**Waste treatment methods**	Recover or recycle if possible. To be disposed of as hazardous waste. Disposal should be in accordance with local, state or national legislation.
13.2	**Additional Information**	Waste code (batteries and accumulators): 16 06 01, 16 06 02, 16 06 03

SECTION 14: TRANSPORT INFORMATION

14.1	**UN number**	UN 3496
14.2	**UN proper shipping name**	Batteries, Nickel-metal hydride.
14.3	**Transport hazard class(es)**	
	ADR	Not applicable.
	IMDG	Not applicable under Special Provision: SP117 & SP963
	IATA	Not applicable under Special Provision: A199
	DOT	Not applicable under Special Provision: 130, 49CFR 172.102
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.
14.8	**Additional Information**	None.

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	
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, mixtures 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.

15.2 Chemical Safety Assessment Not applicable.

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: header, 2.

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
Acute Tox. 4	Acute toxicity Category 4
Skin Sens. 1	Respiratory/skin sensitization Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Irrit. 2	Skin corrosion/irritation Category 2
Eye Irrit. 2	Serious eye damage/irritation Category 2
Muta. 2	Mutagenicity Category 2
Resp. Sens. 1	Respiratory/skin sensitization Category 1
Carc. 1A	Carcinogenicity Category 1A
Carcinogen	Carcinogenicity Category 2
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 1	Specific target organ toxicity — repeated exposure Category 1
Aquatic Acute 1	Hazardous to the aquatic environment Acute Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment Chronic Category 1

Hazard Statement(s)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H341	Suspected of causing genetic defects.
H350i	May cause cancer by inhalation.
H351	Suspected of causing cancer.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Ni-MH Battery Pack

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