



## Section 1. Product and Company Identification.

- 1.1 Model Number;** CP36S v2
- 1.2 Description;** Cordless Lithium-ion Screwdriver Set 46pc 3.6V
- 1.3 Manufacturer;**  
Sealey Group.  
Kempson Way,  
Bury St. Edmunds,  
Suffolk.  
IP32 7AR
- 1.4 Emergency telephone number;** 44 (0) 1284 757 500

**Date of source compilation;** 15/01/2012

## Section 2. Hazards Identification.

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

**Risk phrases;**

No information available.

**Safety phrases;**

No information available

## Section 3. Substances.

3.1 Substance & 3.2 Mixture need be included as appropriate

3.1 Chemical Name (substance)	3.1 CAS No.	3.2 Percentage of Content (mixture)
Lithium-Nickel-Cobalt-Manganese Oxide	—	25-40 %
Max Lithium Equivalent content	7439-93-2	20Wh/cell 100Wh/battery
Aluminium foil	7429-90-5	2-6 %
Graphite	7782-42-5	11-21 %
Copper foil	7440-50-8	6-16 %
Organic electrolyte	—	8-18 %
Lithium hexafluorophosphate	21324-40-3	1-4 %
Steel and inert components	7439-89-6	balance



## Section 4. First aid measures.

Lithium Batteries do not pose a risk to eyes or skin under normal circumstances.

In the case of contact with internal substances;

**EYE CONTACT:** irrigate eyes with water for at least 15 minutes while raising eyelid(s).  
Seek medical attention.

**SKIN CONTACT:** Remove contaminated clothing. Flush affected area(s) with copious amounts of water for at least 15 minutes. Seek medical attention.

**INGESTION:** If swallowed, do not induce vomiting. Give large amounts of water but *do not* do this if casualty is unconscious.

**INHALATION:** If breathing difficulties develop, remove the person to fresh air. Loosen close fitting clothing.  
If breathing is difficult, give oxygen.  
If mouth to mouth resuscitation is necessary, the person conducting this must take steps to reduce the risk of contamination from toxic / corrosive substances that may be present.

## Section 5. Fire Fighting Measures.

**Recommended practice;** if a battery becomes hot, immediately remove it from flammable materials and place on a non-combustible surface. If possible, place a disintegrating device outdoors and allow it to burn out.

**Fire condition; NB; ensure that electrical devices are turned off. Prevent electric shock risk.**

In case of fire where lithium ion batteries are present, flood the area with water. If any batteries are burning, water may not extinguish them, but will cool the adjacent batteries and control the spread of fire.

### 5.1. Extinguishing media

Fragments may be ejected from a fire.

**Extinguishers;**

If possible, use a **LITH-X (powdered graphite)** extinguisher on small fires. This material acts as smothering agents. Only use Graphite based CO<sub>2</sub> (Carbon dioxide) or Dry Powder. Foam.

It may not be possible to extinguish burning lithium ion batteries. Burning batteries will burn themselves out.

Do not use water with **LITH-X (powdered graphite)**.

If a LITH-X (powdered graphite) extinguisher is not available;

Use copious amounts of water in a fine spray to swamp a fire.

Continue to use copious amounts of water until the fire is extinguished and the batteries are cooled.

**NB: Lithium reacts with water to form Hydrogen.** The fire will not be extinguished immediately.

Be aware of the increased risk of explosion.

Copper powder fire extinguishers, sand, dry ground dolomite or soda ash may also be used. These materials act as smothering agents.

**NB;** fire-fighting water runoff may be corrosive / toxic and may cause adverse environmental impact.

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

**Hazard characteristics;** thermal decomposition can lead to the release of toxic fumes.

Batteries emit flammable gases during the charging process.

Ensure that the area is well ventilated and away from sources of ignition.

**Hazardous combustion products;** carbon dioxide, carbon monoxide, lithium oxide fumes.

### 5.3. Advice for fire-fighters

**Fire fighting Safety Measures;** Fire Fighters should wear self-contained breathing apparatus and Personal Protective Equipment.



## Section 6. Accidental Release Measures.

In the event of battery rupture and leakage,

- ventilate the area.
- wear appropriate protective clothing (see Section 7) to prevent eye and skin contact and to prevent inhalation of vapours or fumes.
- remove sources of ignition.
- collect released materials into sealed plastic bag or container.

Prevent material from contaminating soil or entering sewers or waterways.

Do not dispose of released materials with domestic waste

Dispose of released materials in accordance with local authority regulations.

## Section 7. Handling and Storage.

### Handling;

1. Batteries are designed to be recharged. However, improperly charging a battery may cause the battery to combust. When charging the battery, use dedicated chargers and follow the specified conditions.
2. Never dismantle or modify a battery.
3. Do not immerse or expose a battery to water.
4. In the event of a battery becoming damaged and the battery contents are released, see section 8.
5. Do not short circuit a battery. A short circuit causes heating and can lead to ignition of surrounding materials. Physical contact with to short-circuited battery can cause skin burn. A short circuit will reduce the life of the battery.
6. To minimize the risk of a short circuit, always store batteries in an appropriate container to prevent contact with conductive materials.
7. Lithium batteries should be between 10% and 50% of full charge when being transported.
8. Do not allow contact with water.
9. Do not remove the battery label.

### Storage;

1. Store battery (ies) away from heat, spark hazards, fire risk and open flames.
2. Store battery (ies) at room temperature (<30°C) and in a well ventilated and dry environment.
3. Do not store in direct sunlight.

## Section 8. Exposure Controls/Personal Protection.

Reduce exposure.

Use with adequate ventilation.

Use personal protective equipment.

### Eye/Face protection:

Avoid contact with the eyes.

Wear chemical goggles and have eye flushing equipment available.

### Skin protection:

Minimize skin contamination.

Wear protective rubber gloves.

Wash hands and contaminated skin thoroughly after handling.

### Respiratory protection:

Avoid breathing dust and processing vapours.

Wear approved respirator to protect against inorganic dusts.



## Section 9. Physical and Chemical Properties.

### 9.1. Information on basic physical and chemical properties

(a) Appearance:	No information available.
(b) Odour:	No information available.
(c) Odour threshold:	No information available.
(d) pH:	No information available.
(e) Melting point/freezing point;	No information available.
(f) Initial boiling point and boiling range;	No information available.
(g) Flash point;	No information available.
(h) Evaporation rate;	No information available.
(i) Flammability (solid, gas);	No information available.
(j) Upper/lower flammability or explosive limits;	No information available.
(k) Vapour pressure;	No information available.
(l) Vapour density;	No information available.
(m) Relative density;	No information available.
(n) Solubility(ies);	No information available.
(o) Partition coefficient: n-octanol/water;	No information available.
(p) Auto-ignition temperature;	No information available.
(q) Decomposition temperature;	No information available.
(r) Viscosity;	No information available.
(s) Explosive properties;	No information available.
(t) Oxidising properties.	No information available.

## Section 10. Stability and Reactivity.

10.1. Reactivity	No information available.
10.2. Chemical stability	No information available.
10.3. Possibility of hazardous reactions	No information available.

### 10.4. Conditions to avoid

- Crushing, direct sunlight, high humidity, modification, short-circuit, temperatures above 100°C.

### 10.5. Incompatible materials

- Conductive materials, water, seawater, strong oxidizers and strong acids.

### 10.6. Hazardous decomposition products

- Acrid or harmful gas is emitted during fire.



## Section 11. Toxicological Information.

**Sensitisation** ; no information available.

**Potential health risks;**

**Eye;** Contact with battery contents may cause severe irritation and burns. Eye damage is possible.

**Skin;** Contact with battery contents may cause severe irritation and burns.

Absorption through the skin will cause localized inflammation.

**Ingestion;** may cause severe and permanent damage to the digestive tract. May cause circulatory system failure.

Contents of an open battery can cause serious chemical burns to the mouth, oesophagus and gastrointestinal tract.

**Inhalation;** Inhalation of vapours or fumes released due to heat or leaking batteries may cause respiratory irritation. Irritation may lead to chemical pneumonitis. Inhalation can produce chronic productive cough and shortness of breath.

## Section 12. Ecological Information.

1. When properly used and disposed of correctly, the battery does not present environmental hazard.
2. Do not release internal components into water ways, wastewater or ground water.

## Section 13. Disposal Considerations.

1. Disposal of the battery must be in accordance with local authority regulation requirements for hazardous waste treatment and hazardous waste transportation.
2. The battery should be completely discharged prior to disposal and the terminals taped or capped to prevent short circuit.



**Section 14. Transport Information.**

<b>14.1. UN number</b>	UN 3481
<b>14.2. UN proper shipping name</b>	<u>ADR:</u> Lithium ion Batteries contained / packed with Equipment Class Class 9 Label 9 Packaging Instructions P903 P908 P909 LP903 LP904 Special provision 188 230 348 360 376 377 636 <u>IATA:</u> Lithium ion batteries contained in equipment Class. 9 Hazard Label. Miscellaneous Packaging Instructions Passenger & Cargo See 967 Ltd Qty Forbidden Cargo Only See 967 ERG Code 9F <u>IATA:</u> Lithium ion batteries packed with equipment Class. 9 Hazard Label. Miscellaneous Packaging Instructions Passenger & Cargo See 966 Ltd Qty Forbidden Cargo Only See 966 ERG Code 9F <u>IMDG:</u> Lithium metal batteries contained in equipment or Lithium metal batteries packed with equipment Class. 9 Packaging Instructions. P903 Properties and observations. Electrical batteries containing lithium encased in a rigid metallic body. Lithium batteries may also be shipped in, or packed with, equipment. Electrical lithium batteries may cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.
<b>14.3. Transport hazard class(es)</b>	ADR 9 IATA IMDG
<b>14.4. Packing group</b>	ADR; II IATA; II IMDG; II
<b>14.5. Environmental hazards</b>	
<b>14.6. Special precautions for user</b>	
<b>14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	IBC Code Instructions Provisions -

The battery must be securely packaged so as to prevent the possibility of short circuiting. -  
All Lithium batteries are class 9, Miscellaneous Dangerous Goods.



## Section 15. Regulatory Information.

Air; IATA DGR Packing Instructions 968 – 970.  
ICAO Technical Instructions for the safe transport of dangerous goods by air.  
Road (Europe); ADR special provision 188.  
Sea (Ferry); IMDG code special provision 188.

## Section 16. Additional Information.

The above information is believed to be accurate and represents the best information currently available.

No warranty is expressed or implied by the above information.

We assume no liability resulting from use of the above information.

The end user should conduct their own investigations to determine the suitability of the above information for their particular purpose.