



Section 1. Product and Company Identification.

1.1 Model Number; CP6002 v1
1.2 Description; Cordless Ratchet Wrench 14.4V 2Ah Lithium-ion 3/8" Sq Drive 68Nm 4-Pole Motor
14.4 Volts. 2 Ah. 320 grams.

1.3 Manufacturer;

Sealey Group.
Kempson Way,
Bury St. Edmunds,
Suffolk.
IP32 7AR

1.4 Emergency telephone number; 44 (0) 1284 757 500 (Office Hours)

Date of source compilation; 20 March 2015

Section 2. Hazards Identification.

2.1 Classification of the substance or mixture.

This product is not considered a hazard when used correctly.

2.2 Label elements.

Not relevant to the product as stated in 1.1 and 1.2.

2.3 Other hazards.

- H301 - Toxic if swallowed
- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H318 - Causes serious eye damage
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H350 - May cause cancer
- 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

This Safety Data Sheet covers the hazards and information of the materials contained within the article.

Under normal conditions of use these chemicals are not anticipated to be exposed.

In the event the product is damaged or mishandled, substances within this product may be reactive with water, air, and are flammable if released.

Thermal decomposition of this product may generate corrosive, and toxic vapours.

In particular Hydrofluoric acid may be released in the case of open cells.

Hydrofluoric acid can cause severe chemical burns, is toxic by all routes of exposure, and is very reactive.

Avoid extremely high or low temperatures, keep away from incompatible materials.

Do not open, puncture, damage, or incinerate container.



Section 3. Substances.

3.1 Chemical Name (substance)	3.1 CAS No.	3.2 Concentration	Classification	
			Hazard Class & Category Code	Hazard Statements
Manganese dioxide	1313-13-9	<30%	Acute Tox. 4 Acute Tox. 4 Xn; R20/22	H332 H302
Carbon	7440-44-0	<30%	-	-
Nickel oxide	1313-99-1	<30%	Skin Sens. 1 Aquatic Chronic 4 Carc. Cat. 1; R49 R43 R53	H350i H317 H413
Cobalt(II) oxide	1307-96-6	<30%	Acute Tox. 4 Skin Sens. 1 Aquatic Acute 1 Aquatic Chronic 1 Xn; R22 R43	H302 H317 H400 H410
Electrolyte	See composition below			
Phosphate(1-), hexafluoro-, lithium	21324-40-3	<20%	-	-
Dimethyl carbonate	616-38-6		-	-
Carbonate, methyl ethyl	623-53-0		-	-
Ethylene carbonate	96-49-1		-	-
1,1-Difluoroethylene polymer	24937-79-9	<10%	-	-
Aluminium and inert materials	-	5-10%	-	-
Aluminium Foil	7429-90-5	2-10%	-	-
Copper	7440-50-8	2-10%	-	-

For full text of Phrases and Statements, see Section 16.



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;

4.1 Description of first aid measures

Inhalation

If breathing difficulties develop, remove the person to fresh air.

Loosen close fitting clothing.

Ensure that person is warm.

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.

Skin Contact

Remove contaminated clothing.

Flush affected area(s) with copious amounts of water for at least 15 minutes.

Get medical attention.

Eye Contact

Irrigate eyes with water for at least 15 minutes while raising eyelid(s).

Get medical attention.

Ingestion

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

Protection of First Aiders:

Use personal protective equipment.

Avoid contact with skin, eyes and clothing.

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

Under normal conditions of use there are no physical or health hazards associated with this product.

The following symptoms apply in the event of exposure to materials within this product.

Contact with materials within this product may cause immediate severe irritation progressing quickly to chemical burns.

Materials within this product may cause cancer.

Exposure to materials within this product may produce an allergic reaction.

Materials within this product cause damage to organs through prolonged or repeated exposure.

Symptoms/Injuries After Inhalation: Exposure to materials housed in battery cells may cause allergy or asthma symptoms or breathing difficulties.

Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

Symptoms/Injuries After Skin Contact: Exposure to materials housed in battery cells may cause an allergic skin reaction, may cause chemical burns.

Symptoms/Injuries After Eye Contact: Exposure to materials housed in battery cells causes serious eye damage.

Symptoms/Injuries After Ingestion: Toxic if materials housed in battery cells are swallowed.

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

If exposed to materials encased within the product get medical attention immediately.



Section 5. Fire Fighting Measures.

Recommended practice;

Always ensure that Personal Protection Equipment (PPE) is used.

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.

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

Extinguishers;

Only use Graphite based CO₂ (Carbon dioxide), Dry Powder or Foam.

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

If possible, use a **LITH-X (powdered graphite)** extinguisher on small fires. This material acts as a smothering agent. *A sodium chloride powder extinguisher IS NOT suitable for use on Lithium Batteries.*

It may not be possible to extinguish burning lithium 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.

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

Explosion hazard; if heated above 125°C (257°F) cells can explode.

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

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

Thermal decomposition generates: corrosive vapours, flammable gas, toxic gas, hydrofluoric acid.

Product itself is stable.

If the product is damaged or opened; can release hydrofluoric acid on contact with water which can cause severe chemical burns, is toxic by all routes of exposure, and is very reactive.

5.3. Advice for fire-fighters

Fragments may be ejected from a fire.

Fire Fighters should wear self-contained breathing apparatus and appropriate Personal Protective Equipment.



Section 6. Accidental Release Measures.

6.1. Personal precautions, protective equipment and emergency procedures

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.

6.2. Environmental precautions

No information available.

6.3. Methods and material for containment and cleaning up

Absorb released materials with inert absorbent (dry sand or soil).

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

Do not allow product to enter ground water, water course or sewerage system.

Dispose of released materials in accordance with local authority regulations.

6.4. Reference to other sections

See Section 7 for information on Safe Handling

See Section 8 for information of Personal Protective Equipment.

See Section 13 for information on disposal.

Section 7. Handling and Storage.

7.1. Precautions for safe handling

Never dismantle or modify a battery.

Do not short circuit a battery. A short circuit causes heating and can lead to ignition of surrounding materials.

Physical contact with a short-circuited battery can cause skin burn.

When charging the battery, use dedicated chargers and follow the specified conditions.

Improperly charging a battery may cause the battery to combust.

Lithium batteries for transport by air in a state of charge must have no more than 30% charge of their rated capacity.

7.2. Conditions for safe storage, including any incompatibilities

Always store batteries in an appropriate container to prevent contact with conductive materials.

Do not allow contact with water.

Store in original container. Keep container tightly closed.

Store in a dry, cool place.

Store at 20 °C (68°F); room temperature

Store away from ignition sources, heat, and incompatible materials.

7.3. Specific end use(s)

Intended for use as the battery for the Model Number identified in 1.1 with Description stated in 1.2.



Section 8. Exposure Controls/Personal Protection.

8.1. Control parameters

In the event of battery rupture and leakage:

Ventilate the area.

Remove sources of ignition.

8.2. Exposure controls

The use of Personal Protective Equipment (PPE) is not necessary under conditions of normal use.

If handling a leaking or ruptured battery, ensure that the following Personal Protective Equipment (PPE) is used.

Eye/Face Protection

Chemical grade full face shield

Skin Protection

Acid resistant, natural rubber or neoprene gloves.

Protective rubber apron

Appropriate Personal Protection with long sleeves and long trousers.

Respiratory Protection

Acid gas filter mask or self-contained breathing apparatus.



Section 9. Physical and Chemical Properties.

9.1. Information on basic physical and chemical properties

The following information is not a technical specification or sales specification.

(a) Appearance:	Solid battery cell.
(b) Odour:	Odourless.
(c) Odour threshold;	Not relevant to product as stated in 1.1 / 1.2.
(d) pH:	No information available.
(e) Melting point/freezing point;	Not relevant to product as stated in 1.1 / 1.2.
(f) Initial boiling point and boiling range;	Not relevant to product as stated in 1.1 / 1.2.
(g) Flash point;	No information available.
(h) Evaporation rate;	Not relevant to product as stated in 1.1 / 1.2.
(i) Flammability (solid, gas);	No information available.
(j) Upper/lower flammability or explosive limits;	No information available.
(k) Vapour pressure;	Not relevant to product as stated in 1.1 / 1.2.
(l) Vapour density;	Not relevant to product as stated in 1.1 / 1.2.
(m) Relative density;	Not relevant to product as stated in 1.1 / 1.2.
(n) Solubility(ies);	Insoluble in water.
(o) Partition coefficient: n-octanol/water;	Not relevant to product as stated in 1.1 / 1.2.
(p) Auto-ignition temperature;	No information available.
(q) Decomposition temperature;	No information available.
(r) Viscosity;	Not relevant to product as stated in 1.1 / 1.2.
(s) Explosive properties;	If heated above 125°C (257°F) cells can explode.
(t) Oxidising properties.	No information available.

9.2 Other information

No information available.

Section 10. Stability and Reactivity.

10.1. Reactivity

Thermal decomposition generates: corrosive vapours, flammable gas, toxic gas, hydrofluoric acid.

Product itself is stable but, if damaged or opened, can release hydrofluoric acid on contact with water which can cause severe chemical burns, is toxic by all routes of exposure, and is very reactive.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions will not occur under normal conditions.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Ignition sources. Incompatible materials.

Damaging, puncturing, or opening the battery cell.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizers, water, seawater, moisture.

10.6. Hazardous decomposition products

Thermal decomposition generates: carbon oxides (CO, CO₂), corrosive vapours, toxic vapours. Can also release hydrofluoric acid on contact with water which can cause severe chemical burns, is toxic by all routes of exposure, and is very reactive.



Section 11. Toxicological Information.

11.1. Information on toxicological effects

The information below reflects the hazards of the individual ingredients within the product which, if the product damaged, may be released.

Manganese dioxide (1313-13-9)	LD50 Oral Rat	9000 mg/kg
Dimethyl carbonate (616-38-6)	LD50 Oral Rat	13000 mg/kg
	LD50 Dermal Rabbit	> 5 g/kg
	LC50 Inhalation Rat (mg/l)	140 mg/l/4h
Carbon (7440-44-0)	LD50 Oral Rat	> 10000 mg/kg
Nickel oxide (1313-99-1)	LD50 Oral Rat	> 5000 mg/kg

Symptoms/Injuries After Inhalation: Exposure to materials housed in battery cells: may cause allergy or asthma symptoms or breathing difficulties if inhaled. Inhalation may cause immediate severe irritation progressing quickly to chemical burns.

Symptoms/Injuries After Skin Contact: Exposure to materials housed in battery cells: may cause an allergic skin reaction, may cause chemical burns.

Symptoms/Injuries After Eye Contact: Exposure to materials housed in battery cells: Causes serious eye damage.

Symptoms/Injuries After Ingestion: Exposure to materials housed in battery cells: toxic if swallowed.



Section 12. Ecological Information.

12.1. Toxicity

Ecotoxicological information applies to the materials encased within the product. Very toxic to aquatic life with long lasting effects.

Copper (7440-50-8)	
LC50 Fish 1	0.0068 (0.0068 - 0.0156) mg/l (Exposure time: 96 h - Species: Pimephales promelas)
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 Other Aquatic Organisms 1	0.0426 (0.0426 - 0.0535) mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata [static])
LC 50 Fish 2	0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Other Aquatic Organisms 2	0.031 (0.031 - 0.054) mg/l (Exposure time: 96 h - Species: Pseudokirchneriella subcapitata [static])
Nickel oxide (1313-99-1)	
LC50 Fish 1	> 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])
EC50 Daphnia 1	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Other Aquatic Organisms 1	> 127.3 mg/l (Exposure time: 72 h - Species: Pseudokirchneriella subcapitata)

12.2. Persistence and degradability

Rechargeable Lithium Ion Battery Pack	
Persistence and Degradability	May cause long-term adverse effects in the environment.
Copper (7440-50-8)	
Persistence and Degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

Rechargeable Lithium Ion Battery Pack	
Bioaccumulative Potential	Not established.
Manganese dioxide (1313-13-9)	
BCF fish 1	(no bioaccumulation expected)
Log Pow	< 0 (at 20 °C)

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

Avoid release to the environment.

Section 13. Disposal Considerations.

Disposal of the battery must be in accordance with local authority regulation requirements for hazardous waste treatment and hazardous waste transportation.

The battery should be completely discharged prior to disposal and the terminals taped or capped to prevent short circuit.

Do not dispose of batteries at landfill sites.

Do not incinerate batteries.



Section 14. Transport Information.

ADR. International Carriage of Dangerous Goods by Road.

14.1. UN number	UN 3481
14.2. Name and Description	Lithium ion batteries packed with equipment
	Label 9
	Special Provisions 188 230 348 376 377 360 636
	Limited Quantities 0
	Excepted Quantities E0
	Packing Instructions P903 P908 P909 LP903 LP904
	Special Packaging Provisions -
14.3. Transport hazard class(es)	Class 9
	Classification Code M4
	Transport Category 2
	Tunnel restriction code E
14.4. Packing group	P903 P908 P909 LP903 LP904
14.5. Environmental hazards	Does not present an environmental hazard.
14.6. Special precautions for user	No special precautions necessary.

IATA. International Air Transport Association.

14.1. UN number	UN 3481
14.2. UN Proper Shipping Name/Description	Lithium ion batteries packed with equipment
	Hazard Label. Miscellaneous
	Excepted Quantity E0
	Packaging Instructions Passenger 966 Section II
	Ltd Qty Forbidden
	Cargo 966 Section II
	ERG Code 9F
	Special Provisions A88 A99 A154 A164
	A181 A185
14.3. Transport hazard class(es)	Class or Division 9
14.4. Packing group	-
14.5. Environmental hazards	Does not present an environmental hazard.
14.6. Special precautions for user	No special precautions necessary.

IMDG. International Maritime Dangerous Goods.

14.1. UN number	UN 3481
14.2. UN proper shipping name	Lithium ion batteries packed with equipment
	Special Provisions 188 230 348 360 957
	Limited Quantities 0
	Excepted Quantities E0
	Packaging Instructions P903
	Packing Provisions -
14.3. Transport hazard class(es)	Class or Division 9
	Subsidiary Risk(s) -
14.4. Packing group	II
14.5. Environmental hazards	Does not present an environmental hazard.
14.6. Special precautions for user	No special precautions necessary.
14.7. Transport in bulk – Maritime only.	Bulk transport is not applicable to this product



Section 15. Regulatory Information.

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
No information available.

15.2. Chemical safety assessment
No information available.

Section 16. Additional Information.

Full text of Phrases and Statements used in Section 3;

- H302 Harmful if swallowed
- H317 May cause an allergic skin reaction
- H332 Harmful if inhaled
- H350 May cause cancer
- H400 Very toxic to aquatic life
- H410 Very toxic to aquatic life with long lasting effects
- H413 May cause long lasting harmful effects to aquatic life

- R20 Harmful by inhalation
- R22 Harmful if swallowed
- R43 May cause sensitisation by skin contact
- R49 May cause cancer by inhalation
- R53 May cause long-term adverse effects in the aquatic environment

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.

Issue level	Date	Revisions
1	04/05/16	First issue.

End of Safety Data Sheet.