Section 1. Product and Company Identification.

1.1 Model Number; LED307 v2

1.2 Description; Rechargeable Inspection Lamp 24 SMD + 7 LED Lithium-ion 4.44 watt hour battery. 33 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; 10 March 2014

Section 2. Hazards Identification.

Invasion routes; eyes, skin contact, ingestion.
Health Hazard; Harmful if swallowed. Safe under normal conditions of use. Contents are non-reactive when the battery integrity and seals remain intact. DO NOT OPEN or DISMANTLE. DO NOT EXPOSE TO FIRE or NAKED FLAME. Burn / Explosion / Fire risks; do not mix with varying chemistries, sizes & types of battery.
Do not crush or incinerate.
Environmental hazard; the internal electrolyte may cause adverse environmental impact.
Danger of fire and explosion; risk is increased by high temperature and short circuit.

Section 3. Substances.

3.1 Chemical Name (substance)	**3.1 CAS No.**	**3.2 Concentration**	**Classification**	
			Hazard Class & Category Code	**Hazard Statements**
Lithium Cobalt $LiCoO_2$	12190-79-3	35%	-	-
Graphite C	7782-82-5	19%	-	-
Iron Fe	7439-89-6	16%	-	-
Lithium Hexafluorophosphate Electrolyte $LipF_6$	21324-40-3	12%	-	-
Copper Cu	7440-50-8	7%	-	-
Aluminium Powder Al	7429-90-5	4%	H261 H250	In contact with water releases flammable gas. Catches fire spontaneously if exposed to air.
Polyethylene PE	9002-88-4	3%	-	-
Polypropylene PP	9003-07-0	3%	-	-
Nickel Ni	7440-02-0	1%	H351 H317	Suspected of causing cancer. May cause an allergic skin reaction.

Section 4. First Aid Measures.

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 takes 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. Seek medical attention.

Eye Contact Irrigate eyes with water for at least 15 minutes while raising eyelid(s).
Seek medical attention.

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

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

No information available.

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

No information available.

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 batteries are present, flood the area with water. Important; read Section 5.1.
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;
Only use Graphite based CO_2 (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

Hazard characteristics; thermal decomposition can lead to the release of toxic fumes.
Hazardous combustion products; carbon dioxide, carbon monoxide.

5.3. Advice for fire-fighters
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 to prevent eye and skin contact and to prevent inhalation of vapours or fumes.
- remove sources of ignition.

6.2. Environmental precautions
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.

6.3. Methods and material for containment and cleaning up
In the event of battery rupture and leakage,

- absorb released materials with inert absorbent (dry sand or soil).
- collect released materials into sealed plastic bag or container.

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 immerse or expose a battery to water.
In the event of a battery becoming damaged and the battery contents are released, see section 8.
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. A short circuit will reduce the life of the battery.
To minimize the risk of a short circuit, always store batteries in an appropriate container to prevent contact with conductive materials.
Do not allow contact with water.
Do not remove the battery label.
Lithium batteries should be between 10% and 50% of full charge when being transported.
Batteries are designed to be recharged.
Improperly charging a battery may cause the battery to combust.
When charging the battery, use dedicated chargers and follow the specified conditions.
Batteries emit flammable gases during the charging process.
Ensure that the area is well ventilated and away from sources of ignition.
Do not eat, drink or smoke when handling batteries.

7.2. Conditions for safe storage, including any incompatibilities
Store battery (ies) away from heat, spark hazards, fire risk and open flames and other sources of ignition.
Store battery (ies) at room temperature (<30°C) and in a well ventilated and dry environment.
Do not store in direct sunlight.
Keep batteries away from children.
Do not eat, drink or smoke in battery storage area.

7.3. Specific end use(s)
Intended for use as a 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
No information available.

8.2. Exposure controls
Appropriate Engineering Controls
Ventilation;
Not necessary under conditions of normal use.
In case of a damaged battery, provide adequate general and/or local exhaust ventilation to control airborne levels of battery gas and fumes.
Eye/Face Protection
Wear chemical grade full face shield should be worn if handling a leaking or ruptured battery.
Skin Protection
Use a protective rubber apron when handling a leaking or ruptured battery.
Use chemical resistant, natural rubber or neoprene acid resistant gloves, with elbow length gauntlet, if handling a leaking or ruptured battery.
Respiratory Protection
In case of a damaged battery, use 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:	Silver, rectangular, solid battery
(b) Odour:	Odourless
(c) Odour threshold;	Not relevant.
(d) pH:	No information available.
(e) Melting point/freezing point;	Not relevant.
(f) Initial boiling point and boiling range;	Not relevant.
(g) Flash point;	No information available.
(h) Evaporation rate;	Not relevant.
(i) Flammability (solid, gas);	No information available.
(j) Upper/lower flammability or explosive limits;	No information available.
(k) Vapour pressure;	Not relevant.
(l) Vapour density;	Not relevant.
(m) Relative density;	Not relevant.
(n) Solubility(ies);	No information available.
(o) Partition coefficient: n-octanol/water;	Not relevant.
(p) Auto-ignition temperature;	No information available.
(q) Decomposition temperature;	No information available.
(r) Viscosity;	Not relevant.
(s) Explosive properties;	No information available.
(t) Oxidising properties.	Not relevant.

Section 10. Stability and Reactivity.

10.1. Reactivity	No information available.
10.2. Chemical stability	Product is stable under normal storage and handling conditions.
10.3. Possibility of hazardous reactions	No information available.
10.4. Conditions to avoid	High temperatures, incineration, mutilation, deformation, crushing, piercing, short circuit, long term exposure to humid conditions. If leaked, avoid contact with strong oxidiser, mineral acids, strong alkalis, water.
10.5. Incompatible materials	Oxidising agents, alkalis, water.
10.6. Hazardous decomposition products	No information available.

Section 11. Toxicological Information.

11.1. Information on toxicological effects

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.

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.

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 contained in 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		Not applicable to UN 3481
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 contained in equipment		
	Hazard Label.		Miscellaneous
	Excepted Quantity		E0
	Packaging Instructions	Passenger	967 Section II
		Ltd Qty	Forbidden
		Cargo	967 Section II
		ERG Code	9F
	Special Provisions		A48 A99 A154 A164 A181 A185
14.3. Transport hazard class(es)	Class or Division		9
14.4. Packing group	Not applicable to UN 3481		
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 contained in equipment	
	Special Provisions	188 230 348 360 957
	Limited Quantities	0
	Excepted Quantities	E0
	Packaging Instructions	P903
	Packing Provisions	Not applicable to UN 3481
14.3. Transport hazard class(es)	Class or Division	9
	Subsidiary Risk(s)	Not applicable to UN 3481
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.

No information available.

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.

Issue level	Date	Revisions
1	06/01/16	First issue.
2	23/03/16	Section 3

End of Safety Data Sheet.