



SAFETY DATA SHEET

CS0209

POLYMER Li-ion BATTERY

Place and date of issue:
Villaverla: 25.05.2023
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Section 1: Identification of the substance / mixture and of the Company

1.1. Identification of the product, substance or mixture

Product identifier 829569 - 829574
Product name Drive 1500 - Drive 1750
Nominal voltage: 11,1V
Typical capacity: 3700mAh - 41,07Wh
Weight: 0,9Kg
Dimension: 17,5 x 7,5 x 3 cm (L x W x T)

1.2 Details of the supplier of the safety data sheet

Supplier TELWIN SPA
Street address Via della Tecnica, 3
Country 36030 VILLAVERLA (VI)
Telephone number +39 0445 858811
Fax +39 0445 858800
e-mail address telwin@telwin.com

1.3 Emergency telephone number

+39 0445 858811 (working hours)

Section 2: Hazards identification

Explosive risk

This article does not belong to the explosion dangerous goods

Flammable risk

This article does not belong to the flammable material

Oxidation risk

This article does not belong to the oxidation of dangerous goods

Toxic risk

This article does not belong to the toxic dangerous goods

Radioactive risk

This article does not belong to the radiation of dangerous goods

Mordant risk

This article does not belong to the corrosion of dangerous goods

other risk

41.07Wh Watt hour rate 41.07Wh, which belong to the Lithium ion batteries (including lithium ion polymer batteries)

Section 3: Composition/information on ingredients

3.1 Polymer Li-ion Battery is a mixture

Hazardous Ingredients (Chemical Name)	Chemical Formula	Weight	CAS Number
Lithium Cobalt Oxide	LiCoO ₂	32.40	12190-79-3
Polyvinylidene Fluoride (PVDF)	(CH ₂ -CF ₂) _n	2.54	24937-79-9
Aluminum	Al	8.95	7429-90-5
Graphite	C ₂₄ X ₁₂	16.55	7782-42-5
Styrene-Butadiene Rubber(SBR)	C ₈ H ₈ .C ₄ H ₆) _x	0.34	9003-55-8
Carboxymethyl cellulose	[C ₆ H ₇ O ₂ (OH) ₂ CH ₂ COONa] _n	0.32	9000-11-7
Copper Foils	Cu	16.20	7440-50-8
Lithium Hexafluorophosphate	LiPF ₆	15.50	21324-40-3
Polyethylene	(C ₂ H ₄) _n	6.55	9002-88-4
EthylenePropylene-Diene Monomer	C ₂ ClF ₃	0.65	24937-16-4



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Section 4: First aid measures

Eye

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

Section 5: Firefighting measures

Flash Point: N/A.

Auto-Ignition Temperature: N/A.

Extinguishing Media: Water, CO₂.

Special Fire-Fighting Procedures: Self-contained breathing apparatus.

Unusual Fire and Explosion Hazards:

Cell may vent when subjected to excessive heat-exposing battery contents.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, lithium oxide fumes.

Protective equipment and precautions for firefighters

As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.

NFPA

Health: 0 Flammability: 0 Instability: 0

Section 6: Accidental release measures

Steps to be Taken in case Material is Released or Spilled

If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Section 7: Handling and storage

The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire.

Do not crush or puncture the battery, or immerse in liquids.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other Precautions

The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures.

Do not short or install with incorrect polarity.



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Section 8: Exposure controls/personal protection

Respiratory Protection

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.

Ventilation

Not necessary under conditions of normal use.

Protective Gloves

Not necessary under conditions of normal use.

Other Protective Clothing or Equipment

Not necessary under conditions of normal use.

Personal Protection is recommended for venting battery

Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields. Not necessary under conditions of normal use.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

PROPERTIES	VALUE
Appearance	Quadrate shape
Odour threshold	If leaking, smells of medical ether.
pH, with indication of the concentration	Not applicable as supplied
Flash point:	Not applicable unless individual components exposed.
Density/relative density	Not applicable unless individual components exposed.
Solubility in Water	Not applicable unless individual components exposed.
Flammability (soil, gas)	Not applicable unless individual components exposed.

Section 10: Stability and reactivity

Stability

Product is stable under conditions described in Section 7.

Conditions to Avoid (e.g. static discharge, shock or vibration)

Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.

Materials to avoid

Oxidising agents, alkalis, water.

Hazardous Decomposition Products

Toxic Fumes, and may form peroxides.

If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.

Section 11: Toxicological information

Signs & symptoms: None, unless battery ruptures.

In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.

Inhalation: Lung irritant.

Skin contact: Skin irritant.

Eye contact: Eye irritant.

Ingestion: Poisoning if swallowed.

Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to severe irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.



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Section 12: Ecological information

General note:

Mammalian effects:

None known at present.

Eco-toxicity:

None known at present.

Bioaccumulation potential:

Slowly Bio-degradable.

Environmental fate:

None known environmental hazards at present.

Section 13: Disposal considerations

Do not incinerate, or subject cells to temperature in excess of 70°C. Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

Section 14: Transport information

Label for conveyance: Lithium Battery Mark

UN Number: UN3480

Packing Group: N/A.

EmS No: F-A, S-I

Marine pollutant: No

Proper Shipping name: 1) Lithium ion batteries; 2) Lithium ion batteries packed with equipment; 3) Lithium ion batteries contained in equipment. (including Lithium ion polymer batteries).

Hazard Classification: The goods shall be complied with the requirements of Section II (or Section IB) of Packing Instructions 965~967 of 61st DGR Manual of IATA (2020 Edition) and Special Provision 188 of IMDG CODE (Amdt. 39-18) 2018 Edition, including the passing of the UN38.3 test.

Section 15: Regulatory information

Further information

The commissioner provides information on the composition of the batteries and promises their integrity and accuracy.

Users should read this file carefully and use the batteries in the correct way. Telwin Spa assumes no responsibility for any damage or loss due to improper use of the batteries.

Section 16: Other information

Law information

Dangerous Goods Regulations

Recommendations on the Transport of Dangerous Goods Model Regulations

International Maritime Dangerous Goods

Technical Instructions for the Safe Transport of Dangerous Goods

Classification and code of dangerous goods

Occupational Safety and Health Act(OSHA)

Toxic Substance Control Act(TSCA)



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Consumer Product Safety Act(CPSA)
Federal Environmental Pollution Control Act(FEPCA)
The Oil Pollution Act(OPA)
Superfund Amendments and Reauthorization Act Title (302/311/312/313)(SARA)
Resource Conservation and Recovery Act(RCRA)
Safety Drinking Water Act(CWA)
California Proposition 65
Code of Federal Regulations(CFR)
In accordance with all Federal, State and local laws.