Material Safety Data Sheet for Rechargeable Lithium-ion Battery

Document reference LL_A03184283SE Rev.: 07

Battery IDENTITY (As Used on Label and List)

Model:	INR18650-28HE
Description:	Lithium ion Battery (Rechargeable)
Specified data:	3.6 V, 2800 mAh, 10.08 Wh
Dimensions:	18650 cylindrical cell
Weight:	46.98 g
Note(s):	Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.
Disclaimer:	This document is provided as Battery Safety Information for a sealed battery (article). It is not a Safety Data Sheet (SDS) according to Article 31 of REACH (EC) No 1907/2006 and Annex II. The battery contains substances/mixtures in a closed housing; exposure may occur only in case of damage, overheating, fire or leakage.
Article(s):	082.234A - VideoInspector 3DM 082.235A - VideoInspector 3DX (9 mm; 1 m) 082.236A - VideoInspector 3DL 082.237A - VideoInspector Mini 082.238A - VideoInspector XXL 082.240A - VideoFlex G4 Ultra 082.241A - VideoFlex G4 Micro 082.242A - VideoFlex G4 082.243A - VideoFlex G4 XXL 082.244A - VideoFlex G4 Duo 082.245A - VideoFlex G4 ArcView 082.246A - VideoFlex G4 Max 082.247A - VideoFlex G4 Vario 082.248A - VideoFlex G4 Fix

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Section 1 - Identification

EU Manufacturer's Name	
Umarex GmbH & Co. KG -Laserliner- Gut Nierhof 2 59757 Arnsberg Germany	Laserliner Compliance team: Phone: +49 2932-9004-266 EMail: compliance@laserliner.com Emergency Contact: Phone: +86 574-88272838 EMail: N/A

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Section 2 - Hazards Identification

Classification of danger: See Section 14.	
Classification according to GHS:	Not a dangerous substance according to GHS.
Emergency overview:	N/A However, if the batteries are subjected to misuse such as mechanical damage, exposure to fire, overcharging or short circuit, they may rupture and release internal materials, which may be hazardous. Abuse may include (but is not limited to): long charge, short circuit, fire exposure, whacked, punctured, crushed, and broken.
Hazard pictogram(s):	Not Applicable
Signal word:	Not Applicable
Hazard statement(s):	Not Applicable
Precautionary statement(s) – Prevention:	Not Applicable
Precautionary statement(s) – Response:	Not Applicable
Precautionary statement(s) – Disposal:	Not Applicable
Environmental hazards:	No relevant information.
Important symptoms:	See Section 11 for more information.
Primary route(s) of exposure:	Eye contact, skin contact, inhalation, ingestion.
Health hazard:	The batteries are not hazardous when used according to the directions for use of the product. However, if the batteries are subjected to misuse such as mechanical damage, exposure to fire, overcharging or short circuit, they may rupture and release internal materials, which may be hazardous. Abuse may include (but is not limited to): opening, destroying, incinerating, short circuiting terminals, overcharging, forced over-discharge, throwing into fire, crushing, puncturing, or immersing in liquids.

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Section 3 - Composition/Information on Ingredients

Cell chemistry:	Lithium ion (LiCoO2 / graphite), rechargeable.		
Ingredients (approximate content by weight):			
Lithium cobaltate	(LiCoO2)	CAS 12190-79-3	15 – 40%
Graphite	(C24X12)	CAS 7782-42-5	10 – 30%
Phosphate(1-), hexafluoro-, lithium	(LiPF6)	CAS 21324-40-3	10 – 30%
Copper	(Cu)	CAS 7440-50-8	7 – 13%
Aluminium	(Al)	CAS 7429-90-5	5 – 10%
Nickel	(Ni)	CAS 7440-02-0	1 – 5%

No symbol and hazard phrase required (sealed product).

Potential hazards may occur only in case of leakage/rupture, short circuit, overcharge, overheating or fire.

Note: CAS number is Chemical Abstract Service Registry Number. N/A = Not applicable.

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N/A=Not apply.

Section 4 - First Aid Measures

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

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Section 5 - Fire-Fighting Measures

Flash point:	N/A
Auto-ignition temperature:	N/A
Extinguishing media:	H2O, 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.

Section 6 - Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:	If the battery is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. The preferred response is to leave the area and allow the vapors to dissipate. Avoid skin and eyes contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate. If leakage of the battery happens, liquid could be absorbed by using sand, earth or other inert substance and contaminated area should be ventilated in the meantime.
Environmental precautions:	Do not allow product to reach sewage system or any water source. Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers, surface or ground water.
Methods for containment and cleaning up:	If battery casing is dismantled, small amounts of electrolyte may leak. Collect all released material in a plastic lined container. Dispose according to local law and rules. Avoid leached substances to get into the earth, canalization or waters.

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Section 7 - Handling and Storage

Handling:	The battery should not be opened, destroyed or incinerated, 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 overcharge the battery, force over-discharge, or throw into fire. Do not crush or puncture the battery, or immerse in liquids.
Storage:	Avoid mechanical or electrical abuse. Store preferably in a 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 circuit or install with incorrect polarity.

Section 8 - Exposure Controls / Personal Protection

Engineering controls:	Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor.
	Keep away from heat and open flame. Store in a cool, dry place.
Personal protective equipment (if leakage / rupture):	
Respiratory protection:	Not necessary under normal conditions.
Skin and body protection:	Not necessary under normal conditions. Wear suitable protective clothing and gloves if handling an open or leaking battery.
Hand protection:	Wear suitable gloves if handling an open or leaking battery.
Eye protection:	Not necessary under normal conditions. Wear safety glasses if handling an open or leaking battery.
	Other protective equipment:

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Section 9 - Physical / Chemical Properties

Physical state / form:	Solid
Colour:	Blue
Odour:	Not Applicable
pH:	Not Applicable
Melting point / freezing point:	Not Applicable
Boiling point and boiling range:	Not Applicable
Flash point:	Not Applicable
Upper/lower flammability or explosive limits:	Not Applicable
Vapour pressure:	Not Applicable
Vapour density:	Not Applicable
Relative density:	Not Applicable
Solubility in water:	Not Applicable
Auto-ignition temperature:	Not Applicable
Decomposition temperature:	Not Applicable
Evaporation rate:	Not Applicable
Flammability (solid, gas):	Not Applicable
Viscosity:	Not Applicable

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Section 10 - Stability and Reactivity

Chemical stability:	The product is stable under conditions described in Section 7.
Conditions to avoid:	Heat above 70°C or incineration. Deformation, mutilation, crushing, disassembly, overcharging, short circuit, exposure over a long period to humid conditions.
Incompatible materials:	Oxidizing agents, acid, base.
Hazardous decomposition products:	Carbon monoxide, carbon dioxide, lithium oxide fumes.
Possibility of hazardous reactions:	Not Applicable

Section 11 - Toxicological Information

Irritation:	Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.
Sensitization:	Not Applicable
Neurological effects:	Not Applicable
Teratogenicity:	Not Applicable
Reproductive toxicity:	Not Applicable
Mutagenicity (genetic effects):	Not Applicable
Toxicologically synergistic materials:	Not Applicable

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Section 12 - Ecological Information

Ecological toxicity:	Not Applicable
Mobility in soil:	Not Applicable
Persistence and degradability:	Not Applicable
Bioaccumulation potential:	Not Applicable
Other adverse effects:	Not Applicable
Ecological note:	Do not allow undiluted product or large quantities to reach ground water, water courses or sewage system.

Section 13 - Disposal Considerations

Product disposal recommendation:	Observe local, state and federal laws and regulations.
Packaging disposal recommendation:	Disposal must be made according to official regulations.

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Section 14 - Transportation Information

Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance either within or outside their premises.		
Label for conveyance:	Lithium Battery Label	
UN number:	UN 3480 – Lithium ion Batteries (including lithium ion polymer batteries)	
	UN 3481 – Lithium ion Batteries packed with equipment / contained in equipment (including lithium ion polymer batteries)	
	UN proper shipping name:	Lithium ion Batteries (Including lithium ion polymer batteries) Lithium ion Batteries packed with equipment (Including lithium ion polymer batteries) Lithium ion Batteries contained in equipment (Including lithium ion polymer batteries)
	Transport hazard class(es):	9
Packing group:	N/A	
Marine pollutant:	No	
Air transport (ICAO/IATA):	Can be shipped by air in accordance with International Civil Aviation Organization (ICAO) TI or International Air Transport Association (IATA) DGR 65th edition, Packing Instructions Section IB of PI 965 or Section II of PI 966–967 as appropriate.	
Sea transport (IMDG):	International Maritime Dangerous Goods Code under Special Provision 188. IMDG Code (Amdt 41-22).	
Road transport (ADR):	European Agreement concerning the International Carriage of Dangerous Goods by Road under Special Provision 188.	

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Section 15 - Regulatory Information

Dangerous Goods Regulations
Recommendation 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
Consumer Product Safety Act (CPSA)
Federal Environmental Pollution Control Act (FEPCA)
Resource Conservation and Recovery Act (RCRA)
European Agreement concerning the International Carriage of Dangerous
Regulations concerning the International Carriage of Dangerous
In according with all Federal, State and local laws.

Section 16 - Other Information

MSDS creation date (original):	2024.04.16
MSDS Version:	V1.7
	Risk assessment verified on source report reference
Source report reference:	A03184283SE
Revision:	Rev. 07
Issue date:	2024.04.16

Disclaimer: To the best of our knowledge, the information contained herein is accurate. However, no liability is assumed for the accuracy or completeness of the information. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.