

SAFETY DATA SHEET

according to Regulation (EC) No. 453/2010

Dental Use



Date Issued : 10/24/2012

SDS No : 317-001.4

Date Revised : 02/17/2016

Revision No : 3

VALO® Cordless Rechargeable Battery**SECTION 1 : Identification of the substance/preparation and of the company/undertaking****1.1. Product identifier**

Product code : 88934
Product name : VALO® Cordless Rechargeable Battery
Product description : Rechargeable Lithium Iron Phosphate Battery for use in VALO Cordless

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : Rechargeable Lithium Iron Phosphate Battery for use in VALO Cordless

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Ultradent Products, Inc.
 505 W. 10200 S.
 South Jordan, UT 84095

Distributor

Ultradent Products GmbH
 Am Westhover Berg 30
 51149 Cologne Germany
 Email: infoDE@ultradent.com
Emergency Phone : +49(0)2203-35-92-0

1.4. Emergency telephone number

CHEMTREC (NORTH AMERICA) :(800) 424 - 9300
(INTERNATIONAL) :+1(703) 527 - 3887

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation(EC) No 1272/2008 [CLP]**

: Emergency overview: Not considered dangerous as manufactured. If battery is damaged, exposure to product components may cause eye, skin, and respiratory tract irritation. Combustion products from a fire involving batteries may be harmful.

Classification according to GHS Not a dangerous substance according to GHS.

Health : Not Classified

2.2. Label elements**Classification according to Regulation(EC) No 1272/2008 [CLP]****Precautionary statement(s)**

Prevention : P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response : P305: IF IN EYES:
 P351: Rinse cautiously with water for several minutes.
 P313: Get medical advice/attention.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P314: Get medical advice/attention if you feel unwell.
 P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
 P330: Rinse mouth.

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P331: Do NOT induce vomiting.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage : P273: Avoid release to the environment.
P103: Read label before use.

Disposal : P501: Dispose of in compliance with governmental regulation. (EC 1975L0442-20/11/2003)

2.3. Other hazards

Immediate concerns : HMIS Ratings:
Health: 0
Fire: 0
HMIS Reactivity: 0
Hazard Scale: 0=minimal 1=slight 2=moderate 3=serious 4=severe *=chronic hazard
Emergency overview: In case of accident or if you feel unwell, seek medical advice immediately. See Section 4 for more information.

SECTION 3: Composition / information on ingredients

3.1. Substances

Not Applicable

3.2. Mixtures

Chemical Name	CAS	EINECS No.	Wt.%	Classification according to Regulation(EC) No 1272/2008 [CLP]
Lithium Iron Phosphate	15365-14-7	N/A	≤ 40	Not classified
Graphite	7440-44-0	231-153-3	≤ 30	Not classified
Copper	7440-50-8	231-159-6	≤ 5	Not classified
Aluminum	7429-90-5	231-072-3	≤ 5	Flam. Sol.,Cat. 1; Water-react,Cat. 2; H228; H261

For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Following eyes : Hold eyelids apart and flush with plenty of lukewarm water for at least 30 minutes. Seek immediate medical care.

Following skin : Remove contaminated clothing, shoes, and leather goods. Flush with water for at least 30 minutes. Seek medical attention if symptoms persist.

Following ingestion : Never give anything by mouth if victim is unconscious. Rinse mouth thoroughly with water. Do not induce vomiting. Seek immediate medical attention.

Following inhalation : Remove person to fresh air away from source of contamination.

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

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Eyes	: None anticipated under normal product use and handling conditions. If battery is damaged, exposure may cause severe irritation or burns.
Skin	: None anticipated under normal product use and handling conditions. If battery is damaged, exposure may cause severe irritation or burns.
Ingestion	: Not considered a likely route of exposure under normal product use and handling conditions. Ingestion of material from a damaged battery may cause serious burns to mouth, esophagus, and gastrointestinal tract.
Inhalation	: None anticipated under normal product use and handling conditions. If battery is damaged, exposure to vapors or mist may cause respiratory irritation.

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

Notes to physician : Not Applicable

SECTION 5: Fire fighting measures

5.1. Extinguishing media

Extinguishing media : Use extinguishing agent suitable for local conditions and the surrounding environment. Such as dry powder, CO₂. For damaged or ruptured cells, use Class D extinguisher or other appropriate agent. Class C fire extinguishers should be used to extinguish electrical fires. Do not use water to extinguish electrical or ruptured cell related fires.

5.2. Special hazards arising from the substance or mixture

General hazard : See section 9 for flammability properties. Battery cells may rupture when exposed to excessive heat.

Hazardous combustion products : May release toxic fumes if burned or exposed to fire

5.3. Advice for firefighters

Fire fighting procedures : Protective equipment: wear self-contained respirator. Wear fully protective impervious suit.

Additional information : Specific Hazards arising from the chemical:
Special hazards arising from the substance or mixture.
Battery may burst and release hazardous decomposition products when exposed to a fire situation. When damaged or abused (e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in close proximity.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General procedures : Containment Procedures:
Stop the flow of material, if this is without risk
Evacuation Procedures
Isolate area. Keep unnecessary personnel away.
Special Procedures
Avoid skin contact with the spilled material.
Emergency procedures:
Remove ignition sources, evacuate area. Sweep up using a method that does

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not generate dust. Collect as much of the spilled material as possible, place the spilled material into a suitable disposal container. Keep spilled material out of sewers, ditches and bodies of water.

6.2. Environmental precautions

Water spill : Do not allow material to be released to the environment without proper governmental permits.

6.3. Methods and material for containment and cleaning up

: Absorb spill with inert material. Shovel material into appropriate container for disposal. Clean spill area with detergent and water; collect wash water for proper disposal.
Methods and materials for containment and cleaning up:
All waste must refer to the United Nations, the national and local regulations for disposal.

6.4. Reference to other sections

Reference to other sections : See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Handling : Avoid damaging or rupturing battery.
Storage : Store in a dry location at room temperature. Avoid extreme heat or fire. Keep out of reach of children.

7.2. Conditions for safe storage, including any incompatibilities

Shelf life : See product labeling

7.3. Specific end use(s)

Specific end use(s) : Rechargeable Lithium Iron Phosphate Battery for use in VALO Cordless

SECTION 8: Exposure controls / personal protection

8.1. Control parameters

Control parameters : Component Exposure Limits
ACGIH, OSHA, and NIOSH have not developed exposure limits for any of this product's components.

8.2. Exposure controls

Engineering controls : Not necessary under normal product use conditions.
Eye/face protection : Not necessary under normal product use conditions. Wear safety glasses if handling a damaged battery.
Skin protection : Not necessary under normal product use conditions. Wear neoprene or natural rubber gloves when handling a damaged battery.
Respiratory protection : Not necessary under normal product use conditions.

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Other precautions : Personal Protective Equipment: General
Eyewash fountains and emergency showers are required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Various shaped battery
Odour : None
pH : NA
Melting temperature : NA
Boiling temperature : NA
Flash point : NA
Flammable limits : NA to NA
Specific gravity : NA
Solubility in water : Insoluble
Auto-ignition temperature : NA

9.2. Other information

VOC : NA
Additional information : Octanol/H₂O Coeff. NA
Burning Rate: NA

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity : Stable

10.2. Chemical stability

Chemical stability : This is a stable material under normal use.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions : Not Available

10.4. Conditions to avoid

Conditions to avoid : Avoid exposure to elevated temperatures and fire.

10.5. Incompatible materials

Incompatible materials : Not Available

10.6. Hazardous decomposition products

Hazardous decomposition products : May release toxic fumes if burned or exposed to fire.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute

Notes : There is no available data on the product itself. The information of the internal

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cell material is as follows.

Lithium cobaltate - LiFePO₄

Acute toxicity: No applicable data.

Local effects: Unknown.

Sensitization: The nervous system of respiratory organs may be stimulated sensitively.

Chronic toxicity/Long term toxicity: No applicable data.

Skin causticity: Although it is very rare, the rash of the skin and allergic erythema may result.

Aluminum

Local effects: Aluminum itself has no toxicity. When it goes into a wound, dermatitis may be caused.

Chronic toxicity/Long term toxicity: By the long-term inhalation of coarse particulate or fume, it is possible to cause lung damage (aluminum lungs).

Graphite

Acute toxicity: Unknown.

Local effects: When it goes into one's eyes, it stimulates one's eyes; conjunctivitis, thickening of corneal epithelium or edematous inflammation palpebra may be caused.

Chronic toxicity/Long term toxicity: Since the long-term inhalation of high levels of graphite coarse particulate may become a cause of a lung disease or a tracheal disease.

Carcinogenicity: Graphite is not recognized as a cause of cancer by research organizations and natural toxic substance research organizations of cancer.

Copper

Acute toxicity: 60-100mg sized coarse particulate causes a gastrointestinal disturbance with nausea and inflammation. TDLo, hypodermic - Rabbit 375mg/kg

Local effects:

Coarse particulate stimulates a nose and a tracheal. When it goes into one's eyes, the symptoms of the reddening and pain is caused.

Sensitization: Sensitization of the skin may be caused by long-term or repetitive contact.

Reproductive effects: TDLo, oral - Rat 152mg/kg

Organic Electrolyte

Acute toxicity: LD₅₀, oral - Rat 2,000mg/kg or more

Local effects: Unknown.

SECTION 12: Ecological information

12.1. Toxicity

Aquatic toxicity (acute)	: Do not allow to enter sewers or drains that may lead to waterways.
96-hour LC₅₀	: Not Determined
48-hour EC₅₀	: Not Determined
96-hour EC₅₀	: Not Determined

12.2. Persistence and degradability

Persistence and degradability	: Since a battery cell and the internal materials remain in the environment, do not
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bury or throw out into the environment.

12.3. Bioaccumulative potential

Bioaccumulative potential : Not Determined

12.4. Mobility in soil

Mobility in soil : Not Determined

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment : Not Determined

12.6. Other adverse effects

Environmental data : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal method : Recommended methods for safe and environmentally disposal:
Product (waste from residues)
Specified collection or disposal of lithium iron phosphate battery is required by the law like as "battery control law" in several nations. Collection or recycle of the battery is mainly imposed on battery's manufacturer or importer in the nations recycle is required.
Contaminated packaging
Neither a container or packing is contaminated during normal use. When internal materials leaked from a battery cell contaminates, dispose as industrial wastes subject to special control.

SECTION 14: Transport information

14.1. UN number

UN number : 3480, 3481

14.2. UN proper shipping name

UN proper shipping name : lithium Ion batteries

14.3. Transport hazard class(es)

Hazard classification : 9

14.4. Packing group

Packing group : N/A

14.5. Environmental hazards

Marine pollutant #1 : N/A

14.6. Special precautions for user

ADR - road : ADR [special provision 188]

RID - rail : N/A

IMDG - sea : [special provision 188]

IATA - air : -DGR [As non-DANGEROUS GOODS: 'packing instruction 965 section I/
Almost as above however displayed as DANGEROUS GOODS: 'packing

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instructions 965 section IB"] (When batteries are packaged with equipment or contained in equipment I, refer packing instruction 966 or 967 instead of 965.)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk : N/A

Additional information : Lithium iron phosphate batteries comply with all applicable shipping regulations as prescribed by industry and legal standards which include UN Recommendations on the Transport of Dangerous Goods; IATA Dangerous Goods Regulations and US DOT requirements. Cells and Batteries have been tested to section 38.3 of the U.N Recommendations on the Transport of Dangerous Goods Manual of Tests and Criteria. All of the batteries listed in this Safety Data Sheet are less than 100 Whrs; therefore, air shipment of up to 2 batteries without equipment in a package can be shipped as an "excepted" quantity and does not require being shipped as fully regulated Class 9 Hazardous Material. If more than 2 batteries without equipment are being shipped in one package, using air transportation, then the package is considered a fully regulated shipment and must meet the more stringent documentation, marking and labeling requirements. Proper shipping name is "lithium ion batteries", UN ID number is 3840. For lithium ion batteries contained in equipment or lithium ion batteries packed with equipment, UN ID number is 3481. The consignment should be fully described by proper shipping name and packed, marked and in proper condition for carriage by air. The consignment is not classified as dangerous under the current edition of the IATA 56th Edition (effective January 01, 2015), Dangerous goods regulation and all applicable carrier and government regulations.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

RoHS : Item complies with RoHS Requirements

15.2. Chemical safety assessment

Chemical safety assessment : See Section 11

Additional information : US Federal Regulations
A: General Product Information
All components are on the U.S. EPA TSCA Inventory List.
B. Component Analysis
None of the product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

SECTION 16: Other information

Relevant H-statements (number and full text) : Flam. Sol., Cat. 1: Flammable Solids, Category 1
Water-react, Cat. 2: Water-reactivity, Category 2
H228: Flammable solid.
H261: In contact with water releases flammable gas.

Prepared by : Anu Kattoju

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Revision summary

: This SDS replaces the 08/20/2015 SDS. Revised: **Section 1:** Date-Revised. **Section 15:** RoHS.

General statements

: N/A = Not Applicable NA = Not Applicable

Manufacturer disclaimer

: Use as directed. The information and recommendations are taken from sources (raw material SDS(s) and manufacturer's knowledge) believed to be accurate; however, the manufacturer, makes no warranty with respect to the accuracy of the information or the suitability of the recommendation and assumes no liability to any user thereof. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.