

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

1 Identification

- **Product identifier**
- **Trade name:** VALO™ X Rechargeable Lithium-Ion Battery
- **Article number:** SDS 471-001.01, 5437
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Ultradent Products Inc.
505 W. Ultradent Drive (10200 S)
South Jordan, UT 84095-3942
USA
onlineordersupport@ultradent.com
- **Information department:** Customer Service
- **Emergency telephone number:**
CHEMTREC (NORTH AMERICA) : (800) 424-9300
(INTERNATIONAL) : +(703) 527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS07

Acute Toxicity - Oral 4 H302 Harmful if swallowed.

- **Label elements**
- **GHS label elements** The product is classified according to the Globally Harmonized System (GHS)
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Health Hazard-determining components of labeling:**
Lithium Hexafluorophosphate
- **Hazard statements**
H302 Harmful if swallowed.
- **Precautionary statements**
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P330 Rinse mouth.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 2
Fire = 0
Reactivity = 0

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

12190-79-3	Lithium Cobaltate	≥0.1-<40%
7782-42-5	Graphite	<40%
21324-40-3	Lithium Hexafluorophosphate	>10-≤25%
7440-50-8	Copper Foil	1-10%
7440-02-0	nickel	≥0.1-<1%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
See Section 7 for information on safe handling.

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 2)

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** See product labeling.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

7782-42-5 Graphite

PEL	Long-term value: 15 mppcf* mg/m ³ *impinger samples counted by light field techn.
REL	Long-term value: 2.5* mg/m ³ *respirable dust
TLV	Long-term value: 2* mg/m ³ all forms except graphite fibers; *resp. fraction

7440-50-8 Copper Foil

PEL	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
REL	Long-term value: 1* 0.1** mg/m ³ as Cu *dusts and mists **fume
TLV	Long-term value: 1* 0.2** mg/m ³ *dusts and mists; **fume; as Cu

7440-02-0 nickel

PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 0.015 mg/m ³ as Ni; See Pocket Guide App. A
TLV	Long-term value: 1.5* mg/m ³ elemental, *inhalable fraction, A5, BEI

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 3)

· Ingredients with biological limit values:

7440-02-0 nickel

BEI 5 µg/L
 Medium: urine
 Time: post-shift at end of workweek
 Parameter: Nickel (background)

30 µg/L
 Medium: urine
 Time: post-shift at end of workweek
 Parameter: Nickel (background)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material is based on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Not required.

· **Body protection:** Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Solid
Color:	According to product specification
Odor:	Not Applicable
Odor threshold:	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	2,597 °C

· **Flash point:** Not applicable

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 4)

· Flammability (solid, gaseous):	Not determined.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined
· Relative density	Not determined
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Soluble
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· Solvent content:	
VOC content:	0.00 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
ATE (Acute Toxicity Estimate)		
Oral	LD50	>500 mg/kg
Dermal	LD50	>250 mg/kg

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

(Contd. on page 6)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 5)

- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:** Harmful
- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

12190-79-3	Lithium Cobaltate	2B
7440-02-0	nickel	2B
9002-86-2	polyvinyl chloride	3
9002-88-4	Polyethylene low density	3

· **NTP (National Toxicology Program)**

7440-02-0	nickel	R
-----------	--------	---

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Dispose of contents/container in accordance with international, federal, state, and local regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN3480
· UN proper shipping name	
· DOT	Lithium ion batteries

(Contd. on page 7)

US

Safety Data Sheet


acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 6)

· IMDG, IATA	LITHIUM ION BATTERIES
· Transport hazard class(es)	
· DOT, IMDG, IATA	
	
· Class	9 Miscellaneous dangerous substances and articles
· Label	9A
· Packing group	
· DOT, IMDG, IATA	Not Regulated
· Environmental hazards:	Not Applicable.
· Special precautions for user	Warning: Miscellaneous dangerous substances and articles
· Hazard identification number (Kemler code):	-
· EMS Number:	F-A,S-I
· Stowage Category	A
· Stowage Code	SW19 For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not Applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: Forbidden On cargo aircraft only: 35 kg
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 3480 LITHIUM ION BATTERIES

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **Sara**

· Section 355 (extremely hazardous substances):
--

None of the ingredients is listed.

· Section 313 (Specific toxic chemical listings):
--

12190-79-3	Lithium Cobaltate
------------	-------------------

7440-50-8	Copper Foil
-----------	-------------

7440-02-0	nickel
-----------	--------

· TSCA (Toxic Substances Control Act):

12190-79-3	Lithium Cobaltate
------------	-------------------

	ACTIVE
--	--------

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 7)

7782-42-5	Graphite	ACTIVE
21324-40-3	Lithium Hexafluorophosphate	ACTIVE
7440-50-8	Copper Foil	ACTIVE
7440-02-0	nickel	ACTIVE

· **Hazardous Air Pollutants**

12190-79-3	Lithium Cobaltate
------------	-------------------

· **Proposition 65**

· **Chemicals known to cause cancer:**

7440-02-0	nickel
-----------	--------

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.	
------------------------------------	--

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.	
------------------------------------	--

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.	
------------------------------------	--

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

7440-50-8	Copper Foil	D
-----------	-------------	---

· **ACGIH Carcinogenicity (American Conference of Governmental Industrial Hygienists)**

7440-02-0	nickel	A5
9002-86-2	polyvinyl chloride	A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

7440-02-0	nickel
-----------	--------

· **Chemical safety assessment:** A chemical safety assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environmental, Health, and Safety

· **Contact:** Customer Service

· **Date of preparation / last revision** 07/07/2022 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/07/2022

Reviewed on 06/28/2022

Trade name: VALO™ X Rechargeable Lithium-Ion Battery

(Contd. of page 8)

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

· * Data compared to the previous version altered.

US