

Safety Data Sheet

acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

1 Identification

- **Product identifier**
- **Trade name:** *WAKOL Applicator 90*
- **Application of the substance / the mixture** *Lithium Ion Battery*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
*Loba-Wakol, LLC
2732 Hwy 74 West
Wadesboro, NC 28170, USA
info@loba-wakol.com
+1 704 527 5919*
- **Information department:** *Product safety department.*
- **Emergency telephone number:**
*Emergency CONTACT (24-Hour-Number)
GBK/Infotrac ID 98229: (USA domestic) 1 800 535 5053 or
International (001) 352 323 3500*

2 Hazard(s) identification

- **Classification of the substance or mixture**
*This product is considered an article under the OSHA Hazard Communication Standard [24 CFR 1910.1200].
The product is not classified, according to the Globally Harmonized System (GHS).*

- **Label elements**

*Within the meaning of the OSHA Hazard Communication Standard [24 CFR 1910.1200]:
This mixture is not considered a hazard when used in a manner which is consistent with the labeled directions.
This mixture is considered an article in its final form.
This SDS covers the hazards and information of the material contained within the article, in the event the product is damaged or mishandled.
Under normal conditions of use these chemicals are not anticipated to be available for exposure. Substances within this product may be reactive with water, air, and are flammable if released.
Thermal decomposition of this product may generate corrosive and toxic vapors.
In particular Hydrofluoric acid may be released in case of open cells.
Hydrofluoric acid can cause severe chemical burns, is toxic by all routes of exposure, and is very reactive.
See section "Other hazards" for hazards related to the ingredients encased within this product.
Avoid extremely high or low temperatures, keep away from incompatible materials.
Do not open, puncture, damage, or incinerate container.
Keep out of reach of children.
Store batteries in a dry and cool place!*

- **GHS label elements** *Void*
- **Hazard pictograms** *Void*
- **Signal word** *Void*
- **Hazard statements** *Void*
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



*Health = 2
Fire = 2
Reactivity = 0*

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

(Contd. of page 1)

· **HMIS-ratings (scale 0 - 4)**

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

· **Other hazards**

- H301 - Toxic if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H317 - May cause an allergic skin reaction.
- H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H350 - May cause cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure.
- H410 - Very toxic to aquatic life with long lasting effects.

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

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

· **Dangerous components:**

1313-13-9 manganese dioxide, ore of Chapter 26	10-<20%
⚠ Specific Target Organ Toxicity - Repeated Exposure 2, H373; ⚠ Acute Toxicity - Oral 4, H302; Acute Toxicity - Inhalation 4, H332	
1313-99-1 nickel monoxide	10-<20%
⚠ Carcinogenicity 1A, H350; Specific Target Organ Toxicity - Repeated Exposure 1, H372; ⚠ Sensitization - Skin 1, H317	
1307-96-6 cobalt oxide	10-<20%
⚠ Acute Toxicity - Oral 3, H301; ⚠ Sensitization - Respiratory 1, H334; Carcinogenicity 2, H351; ⚠ Sensitization - Skin 1, H317	
21324-40-3 Lithiumhexafluorophosphat	5%
⚠ Acute Toxicity - Oral 3, H301; ⚠ Specific Target Organ Toxicity - Repeated Exposure 1, H372; ⚠ Skin Corrosion 1A, H314; Eye Damage 1, H318	
7440-50-8 copper	2.5-<10%
7429-90-5 aluminium	2.5-<10%

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.

(Contd. on page 3)

Safety Data Sheet acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

(Contd. of page 2)

- **After inhalation:**
Exposure to the contents of an open or damaged battery:
Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Exposure to the contents of an open or damaged battery:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Exposure to the contents of an open or damaged battery:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Exposure to the contents of an open or damaged battery:
Rinse out mouth. Call a doctor immediately.
- **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:**
CO₂, sand, extinguishing powder. Do not use water.
Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Water
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information** Cool endangered receptacles with water spray.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Keep away from ignition sources
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Keep receptacles tightly sealed.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: **WAKOL Applicator 90**

(Contd. of page 3)

· **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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 section 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

1313-13-9 manganese dioxide, ore of Chapter 26

PEL (USA) Ceiling limit value: 5 mg/m³
as Mn

REL (USA) Short-term value: 3 mg/m³
Long-term value: 1 mg/m³
as Mn

TLV (USA) Long-term value: 0.02* 0.1** mg/m³
as Mn; *respirable **inhalable fraction

IOELV (European Union) Long-term value: 0.2* 0.05** mg/m³
as Mn; *inhalable, **respirable fraction

1313-99-1 nickel monoxide

PEL (USA) Long-term value: 1 mg/m³
as Ni

REL (USA) Long-term value: 0.015 mg/m³
as Ni; See Pocket Guide App. A

TLV (USA) Long-term value: 0.2 mg/m³
as Ni; inhalable fraction

1307-96-6 cobalt oxide

PEL (USA) Long-term value: 0.1* mg/m³
as Co; *for metal dust and fume

REL (USA) Long-term value: 0.05 mg/m³
as Co; metal dust & fume

TLV (USA) Long-term value: (0.02) NIC-0.02* mg/m³
as Co, *inhalable; NIC-DSEN; RSEN; BEI

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

(Contd. of page 4)

7440-50-8 copper

PEL (USA) Long-term value: 1 * 0.1** mg/m³
as Cu *dusts and mists **fume

REL (USA) Long-term value: 1 * 0.1** mg/m³
as Cu *dusts and mists **fume

TLV (USA) Long-term value: 1 * 0.2** mg/m³
*dusts and mists; **fume; as Cu

7429-90-5 aluminium

PEL (USA) Long-term value: 15*; 5** mg/m³
*Total dust; ** Respirable fraction

REL (USA) Long-term value: 10* 5** mg/m³
as Al*Total dust**Respirable/pyro powd./welding f.

TLV (USA) Long-term value: 1* mg/m³
as Al; *as respirable fraction

· Ingredients with biological limit values:

1307-96-6 cobalt oxide

BEI (USA) 15 µg/L
Medium: urine
Time: end of shift at end of workweek
Parameter: Cobalt (background)

1 µg/L
Medium: urine
Time: end of shift at end of workweek
Parameter: Cobalt (background, semi-quantitative)

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Wash hands before breaks and at the end of work.

· **Breathing equipment:**

Not required under normal conditions of use.

When handling damaged batteries:

Use a NIOSH-approved self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

· **Protection of hands:**

Not required under normal conditions of use.

When handling damaged batteries:

Wear chemically resistant protective gloves.

· **Eye protection:**

Not required under normal conditions of use.

When handling damaged batteries:

Chemical goggles or safety glasses.

· **Body protection:**

Not required under normal conditions of use.

When handling damaged batteries:

Wear suitable protective clothing.

US

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: **WAKOL Applicator 90**

(Contd. of page 5)

9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· **Form:** Solid
· **Color:** According to product specification

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· **Melting point/Melting range:** Undetermined.

· **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Contact with water liberates extremely flammable gases.

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** 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:** Insoluble.

· **organic solvents:** well soluble

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· **Dynamic:** Not applicable.

· **Kinematic:** Not applicable.

· **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.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

· **Hazardous decomposition products:** No dangerous decomposition products known.

(Contd. of page 6)

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **Primary irritant effect:**

· **on the eye:** Based on available data, the classification criteria are not met.

· **Sensitization:** Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Carcinogenic if inhaled.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

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

1313-99-1 nickel monoxide: 1

1307-96-6 cobalt oxide: 2B

· **NTP (National Toxicology Program)**

1313-99-1 nickel monoxide: K

· **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.

· **Ecotoxicological effects:**

· **Remark:** Very toxic for fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

US

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: **WAKOL Applicator 90**

(Contd. of page 7)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number** UN3481
- **DOT, ADR, IMDG, IATA** UN3481
- **UN proper shipping name**
- **ADR** Void
- **IMDG, IATA** LITHIUM ION BATTERIES PACKED WITH EQUIPMENT
- **Transport hazard class(es)**
- **DOT, ADR, IMDG, IATA**
- 
- **Class** 9 Miscellaneous dangerous substances and articles
- **Label** 9
- **Packing group**
- **DOT, ADR, IMDG, IATA** Void
- **Environmental hazards:** Not applicable.
- **Special precautions for user** Warning: Miscellaneous dangerous substances and articles
- **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**
- **Remarks:** not regulated
- **ADR** Transportation according to special provision 188
- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
- **Remarks:** not regulated
- **IMDG** Transportation according to special provision 188
- **Remarks:** not regulated
- **IATA** Transportation according to special provision 188
- **Remarks:** not regulated

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

· UN "Model Regulation":

Void

(Contd. of page 8)

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

1313-13-9 manganese dioxide, ore of Chapter 26

1313-99-1 nickel monoxide

1307-96-6 cobalt oxide

7440-50-8 copper

7429-90-5 aluminium

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

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

1313-13-9 manganese dioxide, ore of Chapter 26

1313-99-1 nickel monoxide

1307-96-6 cobalt oxide

21324-40-3 Lithiumhexafluorophosphat

1,1-Difluoroethylene polymer

7440-50-8 copper

7429-90-5 aluminium

616-38-6 dimethyl carbonate

623-53-0 Carbonate, methyl ethyl

96-49-1 ethylene carbonate

· **Proposition 65**

· **Chemicals known to cause cancer:**

1313-99-1 nickel monoxide

1307-96-6 cobalt oxide

· **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.

· **New Jersey Right-to-Know List:**

1313-99-1 nickel monoxide

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

(Contd. of page 9)

7440-50-8 copper

7429-90-5 aluminium

616-38-6 dimethyl carbonate

· **New Jersey Special Hazardous Substance List:**

1313-99-1 nickel monoxide: CA

7429-90-5 aluminium: F3, R1

616-38-6 dimethyl carbonate: F3, R1

· **Pennsylvania Right-to-Know List:**

1313-99-1 nickel monoxide

7440-50-8 copper

7429-90-5 aluminium

616-38-6 dimethyl carbonate

96-49-1 ethylene carbonate

· **Pennsylvania Special Hazardous Substance List:**

1313-99-1 nickel monoxide: ES

7440-50-8 copper: E

7429-90-5 aluminium: E

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **National regulations:**

· **VOC:**

· **VOC (EU)** 0.0 g/l

· **VOC (USA):** 0.0 g/l / 0.00 lb/gal

· **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.

· **Relevant phrases**

H301 Toxic if swallowed.

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H350 May cause cancer.

H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 02/22/2024

Reviewed on 02/22/2024

Trade name: WAKOL Applicator 90

(Contd. of page 10)

H373 May cause damage to organs through prolonged or repeated exposure.

· **Contact:**

· **Date of preparation / last revision** 02/22/2024

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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)

HMS: Hazardous Materials Identification System (USA)

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit

Acute Toxicity - Oral 3: Acute toxicity – Category 3

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

Sensitization - Skin 1: Skin sensitisation – Category 1

Carcinogenicity 1A: Carcinogenicity – Category 1A

Carcinogenicity 2: Carcinogenicity – Category 2

Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2