1. Identification

(a) Product identifier

Product name: Ni-MH Battery

(b) Other means of identification

Product description: Model: Ni-MH AAA300mAh
Nominal Voltage: 1.2V
Typical Capacity: 300mAh

(c) Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Restriction on use: No information available.

(d) Details of the supplier of the product

Company name: XINXIANG BOYAN POWER SOURCE CO.,LTD
Address: XINCHAO DAGUANYUAN, HUIXIAN CITY, HENAN, CHINA
E-mail: 15783825@qq.com
Telephone: +86-18637355269

(e) Emergency phone number

+86-15090409652

2. Hazard(s) identification

(a) Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200) This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity - Oral	Category 4
Acute toxicity - Dermal	Category 4
Skin corrosion/irritation	Category 1 Sub-category B
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

(b) GHS Label elements, including precautionary statements

Emergency Overview

Signal word **Danger**

Hazard Statements

Harmful if swallowed

Harmful in contact with skin

Causes severe skin burns and eye damage

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure

This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the above hazards exist.

Appearance Green **Physical State** Solid **Odor** Odorless

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing

Immediately call a POISON CENTER or doctor/physician

Skin

Call a POISON CENTER or doctor/physician if you feel unwell

Wash contaminated clothing before reuse

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

(c) Hazards not otherwise classified (HNOC)
Not applicable

(d) Unknown Toxicity
14.4 % of the mixture consists of ingredient(s) of unknown toxicity

(e) Other information
Very toxic to aquatic life with long lasting effects

(f) Interactions with Other Chemicals
No information available.

3. Composition/information on ingredients

(a) Mixtures information

Chemical name	CAS No.	Concentration%
Nickel hydroxide	12054-48-7	35
Cobalt	7440-48-4	4
Potassium hydroxide	1310-58-3	3
Polypropylene	9003-07-0	8
Hydrogen atom	12385-13-6	37
Iron	7439-89-6	10
Poly[imino(1-oxo-1,12-dodecanediyl)], (nylon 12 chips)	24937-16-4	3

4. First-aid measures

(a) Description of first aid measures

General Advice	First aid is upon rupture of sealed battery.
Eye contact:	Show this safety data sheet to the doctor in attendance. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Do not rub affected area.
Skin contact:	Remove contaminated clothes and rinse the skin with plenty of water. Get medical advice / attention if you feel unwell.
Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, (trained personnel should) give oxygen. Get medical advice / attention if you feel unwell.
Ingestion:	Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical aid.
Self-protection of the first aider	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

(b) Most important symptoms/effects, acute and delayed

Contact with internal components may cause allergic skin sensitization (rash) and irritate eyes, skin, nose, throat, respiratory system. Cobalt and Cobalt compounds are considered to be possible human carcinogen(s).

(c) Immediate medical attention and special treatment

No information available.

5. Fire-fighting measures

(a) Extinguishing media

Suitable extinguishing media:	Use foam, dry powder or dry sand, CO_2 as appropriate.
Unsuitable extinguishing media:	No information available.

(b) Special hazards arising from the chemical

Under fire conditions, batteries may burst and release hazardous decomposition products when exposed to a fire situation. This could result in the release of flammable or corrosive materials. Hazardous combustion products: CO, CO_2, Metal oxides, Irritating fumes

(c) Hazardous Combustion Products

Carbon oxides.

(d)Explosion Data

Sensitivity to Mechanical Impact: No.
Sensitivity to Static Discharge: No.

(f) Special protective equipment and precautions for fire-fighters

Firefighters must wear fire resistant protective equipment and appropriate breathing apparatus. The staff must equip with filtermask (full mask) or isolated breathing apparatus. The staff must wear the clothes which can defense the fire and the toxic gas. Put out the fire in the upwind direction. Remove the container to the open space as soon as possible. Spray water on the containers in the fireplace to keep them cool until finish extinguishment.

6. Accidental release measures

(a) Personal precautions, protective equipment and emergency procedures

Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

(b) Environmental Precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

(c) Methods and materials 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 off according to the local law and rules. Avoid leached substances to get into the earth, canalization or waters. Pick up and transfer to properly labeled containers.

7. Handling and storage

(a) Precautions for safe handling

Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Avoid deep discharge. Do not short-circuit batteries. Use recommended charging time and current.

(b) Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. It is at -10℃~+45℃ for long period storage. Do not storage the Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

8. Exposure controls/personal protection

(a)Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel hydroxide 12054-48-7	TWA: 0.2 mg/m3 Ni inhalable fraction	TWA: 1 mg/m3 Ni (vacated) TWA: 1 mg/m3 Ni	IDLH: 10 mg/m3 Ni TWA: 0.015 mg/m3 except Nickel carbonyl Ni
Potassium hydroxide 1310-58-3	Ceiling: 2 mg/m3	(vacated) Ceiling: 2 mg/m3	Ceiling: 2 mg/m3

ACGIH TLV: American Conference of Governmental Industrial Hygienists -Threshold Limit Value
OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits NIOSH IDLH Immediately Dangerous to Life or Health

(b) Appropriate engineering controls

Engineering Measures: 1.Showers
2.Eyewash stations
3.Ventilation systems

(c) Individual protection measures, such as personal protective equipment

Eye/Face Protection: Not necessary under normal conditions, wear safety glasses if handling an open or leaking battery.

Skin and body Protection: Not necessary under normal conditions, Wear protective gloves and protective clothing such as long sleeved clothing, impervious gloves, chemical resistant apron, and antistatic boots if handling an open or leaking battery.

Respiratory Protection: Not necessary under normal conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink, or smoke in work area. Maintain good housekeeping.

9. Physical and chemical properties

(a) Appearance	Green Solid
(b) Odor	Odorless
(c) Odor threshold	No data available.
(d) pH	No data available.
(e) Melting point/freezing point	No data available.
(f) Initial boiling point and boiling range	No data available.
(g) Flash point	No data available.
(h) Evaporation rate	No data available.
(i) Flammability	No data available.
(j) Upper/lower flammability or explosive limits	No data available.

(k) Vapor pressure	No data available.
(l) Vapor density	No data available.
(m) Relative density	No data available.
(n) Solubility(ies)	Insoluble in water.
(o) Partition coefficient: n-octanol/water	No data available.
(p) Auto-ignition temperature	No data available.
(q) Decomposition temperature	No data available.
(r) Viscosity	No data available.

10. Stability and reactivity

(a) Reactivity

Stable under recommended storage and handling conditions.

(b) Chemical stability

Stable under normal conditions.

(c) Possibility of hazardous reactions

When heated above 150°C the risk of rupture occurs. Due to special safety construction, rupture implies controlled release of pressure without ignition.

(d) Conditions to avoid

Do not subject the battery to mechanical shock. Keep away from open flames, high temperature.

(e) Incompatible materials

Strong oxidizer, strong acid.

(f) Hazardous decomposition products

Under fire conditions, the electrode materials can form carcinogenic nickel and cobalt oxides.

11. Toxicological information

(a) Information on the likely routes of exposure

Inhalation:	Inhalation of a large number of vapors or fumes released due to heat may cause respiratory.
Ingestion:	Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.
Skin contact:	Contact with battery electrolyte may cause burns and skin irritation.
Eye contact:	Contact with battery electrolyte may cause burns. Eye damage is possible.

Under normal conditions release of ingredients does not occur. If accidental release occurs see information in section 4. Swallowing of a battery can be harmful. Call the local Poison Control Centre for advice and follow-up.

(b) Information on toxicological characteristics

Acute toxicity:	No data available.
Skin corrosion/irritation:	The liquid in the battery irritates.
Serious eye damage/irritation:	The liquid in the battery irritates.
Respiratory sensitization:	The liquid in the battery may cause sensitization to some person.

Skin sensitization:	The liquid in the battery may cause sensitization to some person.
Carcinogenicity:	No data available.
Germ Cell Mutagenicity:	No data available.
Reproductive Toxicity:	No data available.
STOT-Single Exposure:	No data available.
STOT-Repeated Exposure:	No data available.
Aspiration Hazard:	No data available.

(c) Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization:	No data available.
Mutagenic Effects:	No data available.
Carcinogenicity:	No data available.
Reproductive Toxicity:	No data available.
Chronic Toxicity:	No data available.
Target Organ Effects:	No data available.
Aspiration Hazard:	No data available.

12. Ecological information

(a) Ecotoxicity

Water hazard class 1(Self-assessment): slightly hazardous for water.

(b) Persistence and Degradability

No information available.

(c) Bioaccumulative potential

No information available.

(d) Mobility in soil

No information available.

(e) Other adverse effects

No information available.

13. Disposal considerations

Safe handling and methods of disposal

Disposal should be in accordance with applicable regional, national and local laws and regulations.
Local regulations may be more stringent than regional or national requirements.

Product disposal recommendation: Observe local, state and federal laws and regulations.

Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

The potential effects on the environment and human health of the substances used in batteries and accumulators; the desirability of not disposing of waste batteries and accumulators as unsorted municipal waste and of participating in their separate collection so as to facilitate treatment and recycling.

14. Transport information

According to 2019 IATA Dangerous Goods Regulations 60th Edition and IMO IMDG Code (inc Amdt 39-18).

(a)Not Restricted good for transportation

(b)Separate nickel metal hydride batteries when shipping to prevent short-circuiting, they should be packed in strong for support during transport, take in a cargo of them without falling, dropping, and breakage

(c)Prevent collapse or cargo piles and wet by rain, the container must be handled carefully

(d)Do not give shocks that result in a mark of hitting on a cell

(e)Please refer to Section 7 - Handling and storage also

UN No.		3496
Name and description		Batteries, nickel-metal hydride
Class or division		9
Un packing group		N/A
Excepted quantities		N/A
Limited quantities		Forbidden
Special provision		A199
Packing	Packing instruction	N/A
	Special packing provisions	N/A

15. Regulatory information

With regard to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization (ICAO) Technical Instructions.
- The International Air transport Association (IATA) Dangerous Goods Regulations.
- The International Maritime Dangerous Goods (IMDG) Code.
- The Office of Hazardous Materials Safety within the US Department of Transportation (DOT)
- Research and Special Programs Administration (RSPA)

16. Other information, including date of preparation or last revision

(a) Preparation and revision information

Date of previous revision: 2015.04.29 Date of this revision: 2019.01.01

Revision summary: The Second New SDS

(b) Abbreviations and acronyms

TSCA:	Toxic Substances Control Act, The American chemical inventory.
DSL	Domestic Substances List
EINECS:	European Inventory of Existing Commercial chemical Substances
ENCS	Japanese Existing and New Chemical Substances
ECL:	Existing Chemicals List, the Korean chemical inventory.
IECSC:	Inventory of existing chemical substances in China.

(c) Disclaimer

Because all of our batteries are defined as "articles", they are exempted from the requirements of the Hazard Communication Standard. The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage.

---------- End of the SDS ----------

VVery truly yours,

Ella Qiu
Engineer
Engineering Services

Reviewed by:

Holly Wang
Senior Project Engineer
Engineering Services

Safety Data Sheets (SDSs)

Client	XINXIANG HENGLI POWER SUPPLY CO., LTD
Add. of Client	CHENBAO INDUSTRIAL AREA, FENGQUAN DISTRICT, XINXIANG
Description	Ni-MH Battery
Model /Type	AA300mAh 1.2V
Manufacturer	XINXIANG HENGLI POWER SUPPLY CO., LTD
Add. of Manufacturer	CHENBAO INDUSTRIAL AREA, FENGQUAN DISTRICT, XINXIANG
Nominal Voltage	1.2V, 300mAh
Date of Receipt	2020-07-21

ZRLK WERCS Special Seal
ZRLK WERCS

Laboratory	Dongguan ZRLK Testing Technology Co., Ltd.	
Address	Building D, No.2, Jinyuyuan Mansion, No.18, Industrial West Road, Songshan Lake High-tech Industrial Development Zone, Dongguan, Guangdong, China	
Approved Signatory	Maggie.Gao	Maggie Gao
Inspected by	Ailis.Ma	Ailis Ma
Censored by	Lahm Peng	Lahm Peng

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product name: Ni-MH Battery

Model: AA300mAh 1.2V

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advidsed against:

a) Do not dismantle, open or shred secondary cells or batteries.

b) Keep batteries out of the reach of children

Battery usage by children should be supervised. Especially keep small batteries out of reach of small children.

c) Seek medical advice immediately if a cell or a battery has been swallowed.

d) Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.

e) Do not short-circuit a cell or a battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

f) Do not remove a cell or battery from its original packaging until required for use.

g) Do not subject cells or batteries to mechanical shock.

h) In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.

i) Do not use any charger other than that specifically provided for use with the equipment.

j) Observe the plus (+) and minus (–) marks on the cell, battery and equipment and ensure correct use.

k) Do not use any cell or battery which is not designed for use with the equipment.

l) Do not mix cells of different manufacture, capacity, size or type within a device.

m) Always purchase the battery recommended by the device manufacturer for the equipment.

n) Keep cells and batteries clean and dry.

o) Wipe the cell or battery terminals with a clean dry cloth if they become dirty.

p) Secondary cells and batteries need to be charged before use. Always use the correct charger and refer to the manufacturer’s instructions or equipment manual for proper charging instructions.

q) Do not leave a battery on prolonged charge when not in use.

r) After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.

s) Retain the original product literature for future reference.

t) Use the cell or battery only in the application for which it was intended.

u) When possible, remove the battery from the equipment when not in use.

v) Dispose of properly.

Details of the supplier of the safety data sheet:

Supplier Name: XINXIANG HENGLI POWER SUPPLY CO., LTD

Address: CHENBAO INDUSTRIAL AREA, FENGQUAN DISTRICT, XINXIANG

Telephone number of the supplier: 0086-0373-5418911

Postcode: 453000

E-mail address: jenny_henglipower@hotmail.com

Emergency telephone number

Company Emergency Phone Number: 0086-0373-5418911

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements

Toxic in contact with skin

Causes serious eye irritation

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure

Precautionary statements-Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Wear protective gloves/protective clothing/eye protection/face protection

Wash face, hands and any exposed skin thoroughly after handling

Do not breathe dust/fume/gas/mist/vapors/spray

Do not eat, drink or smoke when using this product

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap

Call a POISON CENTER or doctor if you feel unwell

Take off immediately all contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

harmful if swallowed. Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterixation: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	Concentration (%)	CAS Number
Nickel hydroxide	31.6	12054-48-7
Potassium hydroxide	20	1310-58-3
Water	18.3	7732-18-5
Ferrous oxide	16.7	1345-25-1
Lanthanum, compound with nickel (1:5)	8	12196-72-4
Sodium hydroxide	2.8	1310-73-2
Graphite	2.6	7782-42-5

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

4. FIRST-AID MEASURES

First aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Swallowing Do not induce vomiting. Get medical attention.

Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

CO_2, dry chemical powder, water spray.

Unsuitable Extinguishing Media:No information available.

Specific Hazards Arising from the Chemical

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge No

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

Special hazards arising from the substance or mixture:

Battery may burst and release hazardus decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150℃), When damaged or abused(e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Environmental precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.
Wash thoroughly after handling. Use this material with adequate ventilation.
The product is not explosive.

Conditions for safe storage, including any incompatibilities

If the Battery is subject to storage for such a long term as more than 3 months.
3 months: -10℃~+40℃, 45 to 85%RH
And recommended at 0℃~+35℃ for long period storage.
The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.
The voltage for a long time storage shall be 3.7V~4.2V range.
Do not storage Lithium-ion Battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.
Keep out of reach of children.
Do not expose Lithium ion battery to heat or fire. Avoid storage in direct sunlight.
Do not store together with oxidizing and acidic materials**.**
Keep ignition sources away- Do not smoke.
Store in cool, dry and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

Ingredients with limit values that require monitoring at the workplace:	
TLV (USA)	0.02mg/m^3
MAK (Germany)	0.1mg/m^3

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers
Eyewash stations
Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection:

Tightly sealed goggles

Body protection:

Protective work clothing.

Skin protection:

Protective gloves

Material of gloves:

The selection of the 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 break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Form: Cylindrical	
	Color: Green	
	Odour: Odourless	
	Odor Threshold: No information available	
Change in condition:		
pH, with indication of the concentration		Not determined.
Melting point/freezing point		Not determined.
Initial boiling point and Boiling range:		Not determined.

Flash Point	Not determined.
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapor Pressure:	Not determined.
Vapor Density:	Not determined.
relative density:	Not determined.
Solubility in Water:	Not determined.
Solubility in other solvents	Not determined.
n-octanol/water partition coefficient	Not determined.
Auto-ignition temperature	Product is not self-igniting.
Decomposition temperature	Not determined.
Odout threshold	Not determined.
Evaporation rate	Not determined.
Viscosity	Not determined.
Other Information	No further relevant information available.

10. STABILITY AND REACTIVITY

Reactivity: Stable under recommended storage and handling conditions (see section 7, Handling and storage).

Chemical stability: Stable under normal conditions of use, storage and transport.

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: None under normal processing.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to avoid: Strong heating, fire, Incompatible materials.

Incompatible materials: Strong oxidizing agents. Strong acids.Base metals.

Hazardous Decomposition Products: Carbon oxides, Other irritating and toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute toxiciy: No data available.

LD/LC50 values relevant for classification:
Not available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

12. Ecological Information

Toxicity:

Acquatic toxicity:
No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects: No information available.

13. DISPOSAL CONSIDERATIONS

· **Waste treatment methods**

Recommendation: Must not be disposed together with household garbage.

Do not allow product to reach sewage system

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Environmental hazards: Not applicable.

Special precautions for user: Not applicable.

Transport/Additional information: Not restricted goods according to the above specifications.

Meets the requirements of 49 CFR 173.185 to be transported as non-dangerous goods for road, rail, air, and vessel (Effective October 1, 2016)

The package must be handled with care and that a flammability hazard exists if the package is damaged;

15. REGULATORY INFORMATION

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

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

Regulatory information

CAS No.	EU (EINECS)	**US (TSCA)**	**Japan (ENCS)**	**Canada (DSL/ NDSL)**	**Austrlia (AICS)**	**Korea (ECL)**	**China (IECSC)**

12054-48-7	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
1310-58-3	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7732-18-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed
1345-25-1	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
12196-72-4	Not listed	Listed	Not listed	DSL	Listed	Listed	Listed
1310-73-2	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed
7782-42-5	Listed	Not listed	Not listed	NDSL	Not listed	Not listed	Not listed

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.

**********End of SDS**********