Safety Data Sheet – Conductor 3

Section 1
Identification of the substance/mixture and of the company/undertaking

Product identifier:	Conductor 3
Other means of identification:	Conductive ink, conductive paste, silver ink, silver conductor, silver paste
Recommended use of the chemical:	None identified
Restrictions on use:	None identified
Supplier:	Voltera Inc. 180 Northfield Dr W, Suite 2 Waterloo, ON N2L 0C7, Canada Email: support@voltera.io
Emergency phone number:	+1 613-996-6666 or 1-888-CAN-UTEC (226-8832) International Emergency Number, CANUTEC This telephone number is available 24 hours per day, 7 days per week.

Section 2
Hazards identification

Classification of the substance or mixture

Skin sensitization	Category 1
Serious eye damage and eye irritation	Category 2B
Specific target organ systemic toxicity (single exposure)	Category 1
Specific target organ systemic toxicity (repeated exposure)	Category 1

Symbols

Signal word

Danger

Hazard statements

H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H370	Causes damage to respiratory organs.
H372	Causes damage to organs (eye, respiratory organs: inhalation) through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe dust/fumes/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response precautionary statements

P302 + P352 + 313 + 362 IF ON SKIN:	Remove contaminated clothing and the substance. Wash skin with running water. Get medical treatment when a skin stimulus or a rash arises.
P305 + P351 + P338 IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical treatment if you feel unwell.
P308 + P313 + P314 IF EXPOSED:	Get medical treatment if you feel unwell.
P337+313:	If eye irritation persists get medical advice/attention.
P405:	Store locked up.
P501:	Dispose of contents/container to waste in accordance with local/regional/ national/ international regulations.

Describe any hazards not otherwise classified:

None known.

Section 3
Composition/information on ingredients

Chemical name	CAS number	Concentration %
Silver	7440-22-4	70-90
Component “A”	Proprietary	1-10
Component “B”	Proprietary	1-10

Remaining components are non-hazardous or present in amounts below reportable limits. Exact percentage values for components are proprietary in accordance with 29 CFR 1910.1200(i).

Section 4
First-aid measures

Description of first-aid measures

General:
If irritation or other symptoms occur or persist from any route of exposure, remove the affected individual from the area: see a physician/get medical attention. Show this safety data sheet to the doctor in attendance.

Inhalation:
Move person to fresh air and make them blow their nose and gargle immediately. If not breathing, give artificial respiration. Consult a physician.

Skin contact:
Immediately wash the affected area with soap and plenty of running tepid water. Consult a physician.

Eye contact:
Immediately rinse the affected eyes with plenty of clean water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation occurs.

Ingestion:
Give the victim several glasses of water or salt water and induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if symptoms occur. Show label if possible.

Most important symptoms/effects, acute and delayed:
The most important known symptoms and effects are described in Sections 2 and 11 of this Safety Data Sheet.

Section 5
Fire-fighting measures

Suitable (and unsuitable) extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do not use sharp water jet; may spread the fire.

Specific hazards arising from the mixture:
Carbon oxides.

Specific protective equipment and precautions for fire fighters:
Use personal protective equipment. Wear self-contained breathing apparatus and full protective clothing for firefighting if necessary. Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Section 6
Accidental release measures

Personal precautions, protective equipment, and emergency procedures:
Wear suitable protective clothing, gloves and eye/face protection. Avoid contact with skin and inhalation of particulates. Keep personnel removed from and upwind. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. For personal protection see Section 8.

Cautions for environment:
Avoid release to the environment. Attention should be given not to cause damage to the environment by flowing of spillage to rivers. Do not let product enter drains. Spills of material which could reach surface waters must be reported to the United States Coast Guard National Response Center's toll-free phone number (800) 424-8802.

Methods and materials for containment and cleaning up:
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/ national regulations (see section 13). Wash the dispersed place with water.

Section 7
Handling and storage

Precautions for safe handling:
Avoid contact with skin and eyes. Avoid breathing vapors or mist from heated materials. Adequate ventilation and/or engineering control must be employed in high temperature processing. Provide eyewash fountains and safety showers in the work area. Wash thoroughly after handling.

Precautions against fire and explosion:
Keep away from open flames, heat and sparks.

Conditions for safe storage, including any incompatibilities:
Store in a cool, dry, well-ventilated place and tightly closed. Store this material away from incompatible substances (see section 10). Adequate safety container materials:
Glass, polyethylene, polypropylene, etc.
Storage class (TRGS 510): Combustible liquids.

Section 8
Exposure controls / personal protection

CAS No.	Component	Value	Type	Control parameter
7440-22-4	Silver	TWA	ACGIH Threshold Limit Values (TLV)	0.1 mg/m^3
		TWA	OSHA Permissible Exposure Limit (PEL)	0.01 mg/m^3

Engineering measures:
Use only with adequate ventilation and in closed systems. Ensure eyewash station and emergency shower are readily available. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment:
Eye/face protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.

Skin and body protection:
Handle with chemical resistant gloves. Wash and dry hands. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

Respiratory protection:
Where risk assessment by a qualified industrial hygienist shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges.

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

Further information:
Remove respiratory and skin/eye protection only after vapors have been cleared from the area. Avoid breathing dust/vapor/mist/gas/aerosol. Do not eat, drink or smoke when handling. Ensure that eyewash stations and safety showers are close to the workstation location. Use personal protective equipment as required. Wash thoroughly after handling.

Section 9
Physical and chemical properties

Appearance: Silver
Odor: No data available
Odor threshold: No data available
pH: No data available
Melting point/freezing point: No data available
Initial boiling point and boiling range: No data available
Flash point: 108°C (226°F) – closed cup (lowest flash point of any component)
Evaporation rate: No data available
Flammability (solid, gas): No data available
Upper/lower flammability or explosive limits: No data available
Vapor pressure: No data available

Vapor density: No data available
Relative density: No data available
Solubility: No data available
Partition coefficient: n-octanol/water: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Other information: Amounts listed are typical and do not represent a specification

Section 10
Stability and reactivity

Reactivity:
Although stable to water and oxygen, ozone generates black peroxidation silver. Not to be reacted in hydrogen, nitrogen, carbon, etc. in high temperature conditions. Is invaded comparatively easily by halogen. Combines with sulfur directly. Especially hydrogen sulfide generates a silver sulfide easily at normal temperature. It does not dissolve in alkali hydroxide. If oxygen lives together, it will dissolve well in melted sodium hydroxide. It generates silver oxide and dissolves by melted sodium peroxide.

Chemical stability:
Stable under normal usage and storage conditions.

Possibility of hazardous reactions:
No data available.

Conditions to avoid:
Rainwater, the direct rays of the sun, open flames.

Incompatible materials:
Strong oxidizing agents, strong reducing agents, strong acids, bases.

Hazardous decomposition products:
Carbon oxides, silver oxide.

Section 11
Toxicological information

Toxicological information appears in this section when such data is available for the individual components.

Acute toxicity

Component information:

Component	LD50 Oral - Rat	LC50 - Rat	LD50 Dermal - Rat
Silver	>5,000 mg/kg	No data available	>2,000 mg/kg
Component "A"	>2,000 mg/kg	No data available	>5,000 mg/kg
Component "B"	>5,000 mg/kg	No data available	>2,000 mg/kg

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

Skin/irritation
Silver: skin sensitization

Serious eye damage/eye irritation
Silver: Causes eye irritation (Category 2B).
Component "B": Irritating to eyes (OECD Test Guideline 405).

Respiratory or skin sensitization
Silver: May cause allergic skin reaction (Category 1).

Reproductive toxicity
No data available.

Specific target organ systemic toxicity single exposure
Silver: Cause damage to organs (respiratory organs) (category 1).

Specific target organ systemic toxicity single exposure
Silver: Cause damage to organs (eye, respiratory organs: Inhalation) (category 1).

Carcinogenicity

IARC
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC.

ACGIH
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by ACGIH.

NTP
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by NTP.

OSHA
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by OSHA.

Additional information
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12
Ecological information

Toxicological information appears in this section when such data is available for the individual components.

Ecotoxicity

Component "A"
Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 – Daphnia magna (Water flea) – 100mg/l – Exposure time: 48 h. (OECD Test Guideline 202)

Toxicity to algae: Growth Inhibition EC50 – Pseudokirchneriella subcapitata – >100 mg/l – Exposure time: 72 h. (OECD Test Guideline 201)

Component "B"
Toxicity to fish: Semi-static test LC50 – Cyprinus carpio (Carp) – >1,000mg/l – Exposure time: 96 h.

Toxicity to fish: Semi-static test LC50 – Cyprinus carpio (Carp) – >1,000mg/l – Exposure time: 96 h.

Toxicity to daphnia and other aquatic invertebrates: Static test EC50 – Daphnia magna (Water flea) – > 1,000mg/l – Exposure time: 48h. (OECD Test Guideline 202)

Toxicity to algae: EC50 – Desmodesmus subspitacus (green algae) – > 900mg/l – Exposure time: 72h. (OECD Test Guideline 201)

Toxicity to bacteria: EC10 – Pseudomonas putida – 7,400 mg/l – Exposure time: 16h. (DIN 38 412 Part 8)

Persistance and degradability

Component "A"
Biodegradability: Aerobic – Exposure time 28d (OECD Test Guideline 301A)

Component "B"
Biodegradability: Result: > 90% - Readily biodegradable.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Other adverse effects (such as hazardous to the ozone layer)

Silver: Very toxic for aquatic organisms.

General notes

There is no additional data available for this product.

Section 13
Disposal conditions

Dispose of container and unused contents in accordance with federal, state and local regulations.

Section 14
Transport information

a. **UN number:** UN3077
b. **UN proper shipping name:** Environmentally Hazardous Substance, Solid, N.O.S. (Contains Silver)
c. **Transport hazard class:** 9
d. **Packing group:** III

Section 15
Regulatory information

Safety, health and environment regulations / legislation specific for the product:

U.S. federal and state regulations / legislation:
This SDS has been prepared in accordance with the hazard criteria of the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. Superfund Amendments and Reauthorization Act (SARA) – SARA section 313:
This product contains the following toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know act of 1986 and 40 CFR 372: Silver.

SARA 302 Components:
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Hazards:
Component "A" – Acute health hazard.
Component "B" – Acute health hazard.

U.S. TSCA Inventory (TSCA).
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

PRTR
Class I Designated Chemical Substance (Cabinet Order No. 64) (before revision).

California Proposition 65:
This product does not contain chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm above reportable limits.

Section 16
Other information

Revision date:
January 22, 2026

Nomenclature:
LC = Lethal concentration
LD = Lethal dose
ND = No Data
STEL = Short Term Exposure Limit
TWA = Time weighted average

Other information:

Disclaimer notice:
This product is a complex mixture of liquids and solids. This SDS was prepared based upon the SDS of the raw materials used in the mixture. The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Additionally, Voltera Inc. assumes no responsibility for injury to the end user proximately caused by the material even if reasonable safety procedures are followed. The end user assumes the risk in their use of this material.