







**STL-1267EY-XXZ**

\*\* Note: This SDS applies to products containing 60% metal or greater.

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

<b>Health</b>	: Acute Toxicity (Oral), Category 4 Skin Irritation, Category 2 Eye Corrosion, Category 1 Reproductive Toxicity, Category 2
<b>Environmental</b>	: Acute Hazards to the Aquatic Environment, Category 1 Chronic Hazards to the Aquatic Environment, Category 1

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

<b>Hazard pictogram(s)</b>	:				
		Corrosion	Exclamation mark	Health hazard	Environment

**Signal Word** : DANGER

**Hazard statement(s)** : H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H318: Causes serious eye damage.  
H361: Suspected of damaging fertility or the unborn child.  
H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s)**

<b>General</b>	: P201: Obtain special instructions before use. P310: Immediately call a POISON CENTER or doctor. P280: Wear protective gloves, clothing, eye protection and face protection. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P391: Collect spillage. P273: Avoid release to the environment. P501: Dispose of container in accordance with local, regional and national regulations.
<b>Prevention</b>	: P202: Do not handle until all safety precautions have been read and understood. P264: Wash exposed skin thoroughly after handling. P270: Do not eat, drink or smoke when using this product.
<b>Response</b>	: P302+P352: IF ON SKIN: Wash with plenty of soap and water. P362+P364: Take off contaminated clothing and wash it before reuse. P330: Rinse mouth.
<b>Storage</b>	: P405: Store locked up.

**2.3. Other hazards**

None Expected.

**SECTION 3: Composition / information on ingredients****3.1. Substances**

Not Applicable

**3.2. Mixtures**

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Chemical Name	CAS	EINECS No.	Wt. %	Classification according to Regulation (EC) No 1272/2008 [CLP]
		REACH Registration No.		
Boric Acid (H <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ), dipotassium salt, reaction products with boron and potassium fluoride (K(HF <sub>2</sub> ))	68987-56-4	273-499-8 01-2120817176-56-0000	<35	Skin Corr., Cat. 1C; Eye Corr., Cat. 1; Acute Tox. (O), Cat. 4; Rep. Tox., Cat. 2; H314; H318; H302; H361-1
Silver	7440-22-4	231-131-3 Not Applicable	15 - 76	Aquatic Acute, Cat. 1; Aquatic Chronic, Cat. 1M10; H400; H410
Copper	7440-50-8	231-159-6 01-2119480154-42-0172	5 - 45	Aquatic Acute, Cat. 1; Aquatic Chronic, Cat. 2; H400; H411
Zinc	7440-66-6	231-175-3 Not Applicable	0 - 35	Aquatic Acute, Cat. 1; Aquatic Chronic, Cat. 1; H410
Tin	7440-31-5	231-141-8 01-2119486474-28-0053	0 - 25	Not classified

**Additional information**

: This material does not contain any other substances which are considered hazardous and are included above the appropriate reportable limits.

**Note:** This SDS is prepared to cover multiple alloys with the same GHS Hazard Classification and may list substances not applicable to the named product. Please see the Specification Sheet for product specific alloy composition and melt point range.

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

**SECTION 4: First aid measures****4.1. Description of first aid measures****Following eyes**

: Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low-pressure water for at least 15 minutes. Get medical attention if irritation persists.

**Following skin**

: Immediately remove contaminated clothing. Do not attempt to remove any material bonded to the skin. Flush area of skin contact immediately with large amounts of water for at least 15 minutes. If irritation persists after flushing, get medical attention promptly. Launder contaminated clothing before reuse.

**Following ingestion**

: If swallowed: Do not induce vomiting unless instructed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Following inhalation**

: Remove victim to fresh air. If not breathing, trained personnel may give artificial respiration. If breathing is difficult, give oxygen by trained personnel. Seek medical attention.

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

: Eye contact may cause: irritation and/or burning sensation.

**Skin**

: May cause irritation and burns to exposed tissue. Hot molten metal may cause burns to the skin.

**Ingestion**

: If swallowed, this product may cause gastrointestinal discomfort, nausea, vomiting.

**Inhalation**

: Inhalation of powder, dust or fumes may be irritating to the respiratory system. Inhalation of some metals may cause Metal Fume Fever: See section 11.

**4.3. Indication of any immediate medical attention and special treatment needed****Notes to physician**

: Treat symptomatically. Fluorides can reduce serum calcium levels resulting in potentially fatal hypocalcemia. Focus medical efforts on combating shock and reducing systemic toxicity of fluoride ion.

**SECTION 5: Fire fighting measures****5.1. Extinguishing media****Extinguishing media**

: For fires involving this product, use dry chemical, carbon dioxide, foam, water spray. Do not use water if metal is molten.

**5.2. Special hazards arising from the substance or mixture**

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**General hazard** : During the soldering/brazing process, hazardous decomposition products may be released: See section 10.

**Explosion hazards** : This material is classed as a non-flammable solid. Product will burn under fire conditions. Emits toxic and corrosive fumes under fire conditions.

**5.3. Advice for firefighters**

**Fire fighting procedures** : Move container from fire area if it can be done without risk. Avoid inhalation of vapors or mists.

**Fire fighting equipment** : Exposure to decomposition products may be a hazard to health. Do not breathe smoke, gases or vapors generated. Wear goggles if eye protection is not provided. Wash away any material that comes into contact with the body, clothing or equipment. When fighting fires involving this product, wear full protective gear. For fires in enclosed areas, fire fighters must use self-contained breathing apparatus.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

**General procedures** : Waste disposal method: Scoop up excess material and wash affected areas with soap and water. Avoid contact with skin and eyes. Collect material into sealed and labeled containers for disposal. Clean contaminated surface thoroughly. Dispose in accordance with federal, state and local regulations.

**Special protective equipment** : Avoid inhaling vapor and/or mists. Do not get spilled material on skin, clothing, or in eyes. Wear full protective clothing. See Section 8. Remove all contaminated clothing.

**6.2. Environmental precautions**

**Water spill** : Avoid contamination of water bodies during cleanup and disposal. Do not flush to sewer. Advise relevant authorities if material enters sewers, water sources or low-lying areas.

**Land spill** : No data available

**Air spill** : No data available

**6.3. Methods and material for containment and cleaning up**

**Large spill** : Recover spilled material. Reclaim this material whenever possible. Collect material into sealed and labeled containers for reclamation or disposal.

**6.4. Reference to other sections**

**Reference to other sections** : See Section 8 for Personal Protective Equipment

See Section 13 for Product Disposal considerations

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

**Handling** : Keep away from sources of ignition.

**Storage** : Keep lid tightly closed except when removing product.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage temperature** : 5°C Minimum to 25°C Maximum

**Shelf life** : See specification sheet or container label.

**7.3. Specific end use(s)**

**Specific end use(s)** : Solder or Braze Paste for joining metals.

**SECTION 8: Exposure controls / personal protection****8.1. Control parameters**

**STL-1267EY-XXZ****Chemical Name:** Silver

Country	Type	ppm	mg/m <sup>3</sup>	Comments
Switzerland	MAK-Wert		0.1	
	KZGW		0.8	

**Chemical Name:** Copper

Country	Type	ppm	mg/m <sup>3</sup>	Comments
Switzerland	MAK-Wert		0.1	
	KZGW		0.2	

**Chemical Name:** Zinc

Country	Type	ppm	mg/m <sup>3</sup>	Comments
Germany	DFG		0.1	[respirable fraction]
Switzerland	MAK-Wert		0.1	[respirable fraction]

**8.2. Exposure controls****Engineering controls**

: The use of local ventilation is required to maintain the concentration of fumes evolved from the soldering/brazing process to well below the occupational exposure limits, within the operator's breathing zone and the general vicinity. Use of process enclosures, exhaust systems, and other engineering/administrative controls should be designed in accordance with local conditions. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices* [most recent edition], for details.

**Eye/face protection**

: Wear safety glasses with side shields as a minimum level of protection. Consult ANSI Z87.1 for more information.

**Skin protection**

: Wear chemical resistant gloves. When material is heated, wear thermal-insulated gloves to protect against burns.

**Respiratory protection**

: When exposure limits (listed above) are exceeded or ventilation is inadequate, wear a NIOSH or European Standard approved respirator, in accordance with OSHA respirator regulations [29 CFR 1910.134] or European Standards [EN149]. Consult ANSI Z88.2 *American National Standard for Respiratory Protection* for guidance on proper selection, use and care of respirators.

**Protective clothing**

: Avoid skin contact. Wear chemical resistant clothing ( long-sleeved shirt buttoned at the wrist) as necessary to prevent contact. For soldering/brazing operations where hot metallic parts are handled and molten metal may be present, wear heat-resistant gloves and clothing to protect from burns.

**Work hygienic practices**

: Minimize exposure in accordance with good hygiene practice. Good general hygienic practices include: Eating, drinking, and smoking should not be permitted in work areas. Wash thoroughly after handling, and before eating, drinking, using tobacco, applying cosmetics, or using the toilet. Keep area clean. Remove contaminated clothing promptly. Launder contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing. Avoid breathing dust, vapor or mist.

**Other precautions**

: Educate and train employees in the safe use and handling of this product.

**Additional information**

: See American National Standard ANSI Z49.1, *Safety in Welding, Cutting and Allied Processes*, published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126; OSHA *Safety and Health Standards*, 29 CFR 1910, available from the U.S. Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	: Viscous paste
<b>Colour</b>	: Various
<b>Odour</b>	: Characteristic odor.
<b>pH</b>	: Not Applicable
<b>Melting point</b>	: Alloy Melting Range: > 538°C (1000°F) (See Spec. Sheet for specific alloy melt point)
<b>Boiling point</b>	: Not Determined

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<b>Flash point</b>	: Not Applicable
<b>Evaporation rate</b>	: No data available
<b>Explosion limits</b>	: LEL/UEL: Not Determined
<b>Vapor pressure</b>	: No data available
<b>Vapor density</b>	: No data available
<b>Specific gravity</b>	: > 2 (water=1)
<b>Solubility in water</b>	: Negligible
<b>Partition coefficient: n-octanol/water</b>	: No data available
<b>Auto-ignition temperature</b>	: Not Determined
<b>Decomposition temperature</b>	: No data available
<b>Explosive properties</b>	: No data available
<b>Oxidising properties</b>	: No data available

**9.2. Other information**

**Additional information** : Not Available

**SECTION 10: Stability and reactivity****10.1. Reactivity**

**Reactivity** : This material is not expected to be reactive at ambient conditions.

**10.2. Chemical stability**

**Chemical stability** : Stable under normal conditions of use.

**10.3. Possibility of hazardous reactions**

**Hazardous polymerization** : Will not occur.

**10.4. Conditions to avoid**

**Conditions to avoid** : Avoid contact with incompatible materials. Avoid extreme heat. Avoid prolonged exposure to air and moisture.

**10.5. Incompatible materials**

**Incompatible materials** : Materials to avoid: strong reducing agents such as metal hydrides or alkali metals (Reaction with these materials may generate hydrogen gas, which could create an explosive hazard), acids, alkalies, oxidizing agents, strong oxidizers, acetylene, ammonia, hydrogen peroxide, bromine azide, chlorine trifluoride, ethyleneimine, oxalic acid, tartaric acid, nitric acid, sulfuric acid, bromates, strong bases, magnesium, chlorates, iodates, sodium azide, halogens, halogenated hydrocarbons, moisture, strong oxidizing agents, sulfur compounds.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** : Decomposition products may include, but are not limited to: carbon oxides (CO, CO<sub>2</sub>), smoke & fumes, hydrogen fluoride. Metallic decomposition products may include: metal oxide fumes, copper fume, zinc oxide fumes, tin oxides.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute**

Chemical Name	Oral LD <sub>50</sub>	Dermal LD <sub>50</sub>	Inhalation LC <sub>50</sub>
Boric Acid (H <sub>2</sub> B <sub>4</sub> O <sub>7</sub> ), dipotassium salt, reaction products with boron and potassium fluoride (K(HF <sub>2</sub> ))	500 ATE (Acute Toxicity Estimate)	Not established	Not established

**Dermal LD<sub>50</sub>** : Not Classified.  
The calculation method was used for this evaluation.

**Oral LD<sub>50</sub>** : Classified as Acute Toxicity (Oral), Category 4  
The calculation method was used for this evaluation.

**Inhalation LC<sub>50</sub>** : Not Classified.  
The calculation method was used for this evaluation.

**Notes** : If excessive quantities of copper fume or zinc oxide fume are inhaled, it can result in the condition called metal fume fever. The symptoms of metal fume fever will occur within 3 to 10 hours, and include immediate dryness and irritation of the throat, tightness of the chest, and

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coughing which may later be followed by flu-like symptoms of fever, malaise, perspiration, frontal headache, muscle cramps, low back pain, occasionally blurred vision, nausea, and vomiting. There are no recognized complications, after effects, or chronic effects that result from this condition.

<b>Skin corrosion/irritation</b>	: Classified as Skin irritation, Category 2 The classification is based on testing this material or a similar material.
<b>Serious eye damage/irritation</b>	: Classified as Eye Corrosion, Category 1. The calculation method was used for this evaluation.
<b>Respiratory or skin sensitisation</b>	: Not Classified. This material was not made with any components known to be skin or respiratory sensitizers.
<b>Germ cell mutagenicity</b>	: Not Classified. This material was not made with components identified as being mutagenic.
<b>Carcinogenicity</b>	: Not Classified. This product was not formulated with any ingredients that are classified as carcinogenic by IARC, NTP, ACGIH, OSHA or the UK HSC.
<b>Reproductive toxicity</b>	: Classified as Reproductive toxicity Category 2 The calculation method was used for this evaluation.
<b>STOT-single exposure</b>	: Not Classified. The calculation method was used for this evaluation.
<b>STOT-repeated exposure</b>	: Not Classified. The calculation method was used for this evaluation.
<b>Aspiration Hazard</b>	: Not Applicable

**11.2. Information on other hazards**

**Information on other hazards** : None Expected.

**SECTION 12: Ecological information****12.1. Toxicity**

**Toxicity** : Material - Expected to be toxic to aquatic organisms.  
Material - Expected to be toxic with long-term adverse effects in the aquatic environment.

**Aquatic toxicity (acute)** : No data available

**12.2. Persistence and degradability**

**Persistence and degradability** : No data available

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** : No data available

**12.4. Mobility in soil**

**Mobility in soil** : No data available

**12.5. Results of PBT and vPvB assessment**

**Results of PBT and vPvB assessment** : No data available

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** : No data available

**12.7. Other adverse effects**

**General comments** : No data available

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Product disposal** : Disposal of waste material from the use of this product may be subject to federal, state and local regulations. Waste characterizations and compliance with applicable laws are the sole responsibility of the waste generator. Reclaimed scrap metal has monetary value. Contact a commercial reclaimer for information on recycling scrap metals. All recovered material should be packaged, labeled, transported and disposed or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices.

**Disposal method** : Dispose of in accordance with EC, national and local regulations, or sell to refiner.

**Empty container** : Do not reuse empty containers. Dispose of empty container in accordance with EC, national and local regulations.

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Waste codes

: 16 03 03\*: Inorganic wastes containing dangerous substances

**SECTION 14: Transport information****14.1. UN number or ID number**

UN number : 3077

**14.2. UN proper shipping name**

UN proper shipping name : Environmentally hazardous substances, solid, n.o.s. [Copper, Silver]

**14.3. Transport hazard class(es)**

Primary hazard class/division : 9 Environmentally Hazardous Substance

**14.4. Packing group**

Packing group : III

**14.5. Environmental hazards**

Marine pollutant #1 : Copper metal powder

Marine pollutant #2 : Silver metal powder

**14.6. Special precautions for user**

**IMDG - sea** : Marine Pollutants having a net quantity of 5 L or less for liquids or a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provision of the Code relevant to marine pollutants.

**IATA - air** : A197: May be shipped as "Not restricted" provided that the net quantity in any receptacle does not exceed 5 kg or 5 L.

**14.7. Maritime transport in bulk according to IMO instruments**

Transport in bulk : No further instructions, see above.

Additional information : This product is classified for transport per US DOT, ADR/RID, ICAO/IATA, and IMO/IMDG.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

**RoHS** : This product was not made with any components regulated under the RoHS Directive 2011/65/EU.

**International regulations** :  
**European Union:**  
 This safety datasheet complies with the requirements of Regulations (EC) No. 1907/2006 and No. 1272/2008.

**15.2. Chemical safety assessment**

Chemical safety assessment : A Chemical Safety Assessment has not been completed for this material.

**SECTION 16: Other information**

**Relevant H-statements (number and full text)** : Acute Tox. (O), Cat. 4: Acute Toxicity (Oral), Category 4  
 Aquatic Acute, Cat. 1: Acute Hazards to the Aquatic Environment, Category 1  
 Aquatic Chronic, Cat. 1M10: Chronic Hazards to the Aquatic Environment, Category 1, M=10  
 Aquatic Chronic, Cat. 1: Chronic Hazards to the Aquatic Environment, Category 1  
 Aquatic Chronic, Cat. 2: Chronic Hazards to the Aquatic Environment, Category 2  
 Eye Corr., Cat. 1: Eye Corrosion, Category 1  
 Rep. Tox., Cat. 2: Reproductive Toxicity, Category 2  
 Skin Corr., Cat. 1C: Skin Corrosion, Category 1C  
 H302: Harmful if swallowed.  
 H314: Causes severe skin burns and eye damage.  
 H318: Causes serious eye damage.  
 H361-1: Suspected of damaging fertility or the unborn child.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.  
 H411: Toxic to aquatic life with long lasting effects.

Approved by : Regulatory Affairs

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Revision summary : This SDS replaces the 04/14/2021 SDS. Revised: **Section 3: COMMENTS. Section 9:**



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VAPOR DENSITY, VAPOR PRESSURE.

**Manufacturer disclaimer**

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