

Safety Data Sheet: STEELBOND SOLDER

Supersedes Date 02/10/2011

Issuing Date 11/14/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name STEELBOND SOLDER
Recommended use Soldering
Information on Manufacturer
X-ERGON by Partsmaster, Div of NCH Corp.
P.O. Box 655326
Dallas, TX 75265-5326

Product Code 28140000
Chemical nature Inorganic solid blend
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
800-336-0450

2. HAZARD IDENTIFICATION

Color Gray

Physical State Solid

Odor Odorless

GHS

Classification

Physical Hazards

None

Health Hazard

Acute Oral Toxicity

Skin Sensitization

Category 4

Category 1

Other hazards

None

Labeling

Signal Word

WARNING



Hazard Statements

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

Precautionary Statements

P261 - Avoid breathing dust or fume.

P270 - Do not eat, drink or smoke when using this product

P280 - Wear protective gloves, protective clothing and eye protection.

P264 - Wash face, hands and any exposed skin thoroughly after handling.

P272 - Contaminated work clothing should not be allowed out of the workplace

P321 - Specific treatment (see supplemental first aid instructions on this label)

P302+ P352 - IF ON SKIN: Wash with plenty of soap and water

P363 - Wash contaminated clothing before reuse

P333 + P313 - If skin irritation or rash occurs, get medical attention

P301+ P312 - IF SWALLOWED: Call a physician if unwell

P330 - Rinse mouth

P501 - Dispose of contents and container to an approved waste disposal plant.

1 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS-No | Weight % |
|-------------------|------------|----------|
| Tin | 7440-31-5 | 94-99 |
| Silver | 7440-22-4 | 1-6 |
| Ammonium chloride | 12125-02-9 | 1-3 |
| Urea | 57-13-6 | 1-3 |

4. FIRST AID MEASURES

General advice

No information available

| | |
|---------------------------|---|
| Eye Contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists, consult a specialist . |
| Skin Contact | In case of contact, immediately flush skin with soap and plenty of water. If skin irritation persists, call a physician. |
| Inhalation | Remove person to fresh air. If signs/symptoms continue, get medical attention. |
| Ingestion | If swallowed, do not induce vomiting - seek medical advice. Rinse mouth. |
| Notes to physician | Treat symptomatically |

5. FIRE-FIGHTING MEASURES

| | | | |
|---|-------------------|-----------------------|----------------------|
| Flash Point | Not applicable | Method | Not applicable |
| Upper | No data available | Lower | No data available |
| Suitable Extinguishing Media | | | |
| Use extinguishing measures that are appropriate to local circumstances and the surrounding environment | | | |
| Specific hazards arising from the chemical | | | |
| The product causes burns of eyes, skin and mucous membranes | | | |
| 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 | | | |
| NFPA | Health 2 | Flammability 0 | Instability 0 |
| HMIS | Health 2 | Flammability 0 | Instability 0 |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|---|
| Personal Precautions | Ensure adequate ventilation |
| Environmental Precautions | Prevent further leakage or spillage if safe to do so |
| Methods for Containment | No information available |
| Methods for Cleaning Up | Sweep up or vacuum up spillage and collect in suitable container for disposal. Take up mechanically and collect in suitable container for disposal. Avoid dust formation. |
| Neutralizing Agent | Not applicable. |

7. HANDLING AND STORAGE

| | | | | |
|----------------------------|--|---------|----------------|-----------------------------------|
| Handling | Do not eat, drink or smoke when using this product. Ensure adequate ventilation. | | | |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place | | | |
| Storage Temperature | Minimum | °F / °C | Maximum | 85 °F / 29 °C |
| Storage Conditions | Indoor | X | Outdoor | Heated Refrigerated |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

| Component | ACGIH TLV | OSHA PEL | NIOSH |
|-------------------|--|-----------------------------|---|
| Tin | TWA: 2 mg/m ³ | TWA: 2 mg/m ³ | 100 mg/m ³ TWA: 2 mg/m ³ |
| Silver | TWA: 0.1 mg/m ³ dust and fume | TWA: 0.01 mg/m ³ | 10 mg/m ³ dust TWA: 0.01 mg/m ³ dust |
| Ammonium chloride | TWA: 10 mg/m ³ fume STEL: 20 mg/m ³ | No data available | STEL 20 mg/m ³ TWA: 10 mg/m ³ fume |

| | |
|---------------------------------------|--|
| Engineering Measures | Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gases below the TLV's in the worker's breathing zone and in the general area. Train the worker to keep his head out of the fumes . |
| Personal Protective Equipment | |
| Eye/Face Protection | Wear a helmet or use face shield with filter lens of appropriate shade number (SEE ANSI/ASCZ49.1) provide protective screen and flash goggles, if necessary, to shield others. As a rule of thumb, start a shade that is too dark to see the weld zone. Then go next lighter shade which gives sufficient view of the weld zone . |
| Skin Protection | Protective gloves |
| Respiratory Protection | Use enough ventilation, local exhaust at the arc, or both to keep the fumes and gasses below the TLV's in the workers' breathing zone and the general area. Train the worker to keep his head out of the fumes. Use MSHA/NIOSH approved or equivalent fume respirator or air supplied respirator when welding in a confined space or when local exhaust or ventilation does not keep exposure below TLV. |
| General Hygiene Considerations | Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|--------------------------------------|---------------------------|----------------------------------|--------------------------|
| Physical State | Solid | Viscosity | Not applicable |
| Color | Gray | Odor | Odorless |
| Odor Threshold | Not applicable | Appearance | Opaque |
| pH | Not applicable | Specific Gravity | 7.1 |
| Evaporation Rate | Not applicable | Percent Volatile (Volume) | No information available |
| VOC Content (%) | No information available | Vapor Pressure | Not applicable |
| Vapor Density | Not applicable | Solubility | Insoluble |
| n-Octanol/Water Partition | No data available | Melting Point/Range | 429 °F / 221 °C |
| Decomposition Temperature | No data available | Boiling Point/Range | 4082 °F / 2250 °C |
| Flammability (solid, gas) | No data available | Method | Not applicable |
| Flash Point | Not applicable | | |
| Autoignition Temperature | No information available. | | |
| Upper No data available Lower | No data available | | |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Chemical Stability | Stable under normal conditions |
| Conditions to Avoid | None known |
| Incompatible Products | No materials to be especially mentioned |
| Hazardous Decomposition Products | Fumes and gasses produced by welding, brazing and similar processes cannot be classified simply. The composition and quantity of both are dependent upon the metal being welded, the process, the procedures and the filler metal being used. Other conditions which also influence the composition and quantity of fumes and gases to which the worker may be exposed include: coatings on the metal being welded, the number of welders and the volume of the work space, the quality and amount of ventilation used, the position of the welder's head in relation to the fume plume, as well as the presence of contaminants in the atmosphere when the filler metal is consumed. The fume and gas decomposition products generated are different in percent and form the product ingredients listed in Section III. The products formed in normal operation include those originating from the volatilization, reaction and oxidation of the filler metal, the metal being welded, the coatings, etc. as noted above. One recommended way to determine the composition and quality of fumes and gases to which workers are exposed is to take an air sample inside the welders helmet if worn or in the workers breathing zone. See ANSI/AWS F1.1 "Method For Sampling Airborne Particles Generated By Welding And Allied Processes" available from the American Welding Society, P.O. Box 35140, Miami, FL 33135 |
| Possibility of Hazardous Reactions | None under normal processing |

11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| Product Information | No information available. |
| The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009): | |
| Oral LD50 | 731 |
| Dermal LD50 | No information available |
| Inhalation LC50 | |
| Gas | No information available |
| Mist | No information available |
| Vapor | No information available |
| Principle Route of Exposure | Inhalation |
| Primary Routes of Entry | None known |
| Acute Effects | |
| Eyes | Welding arc may damage eyes . |
| Skin | May cause eye/skin irritation. |
| Inhalation | Irritating to respiratory system. May cause drowsiness and dizziness. Welding fumes may result in discomfort such as: dizziness, nausea, or dryness or irritation of nose, throat, or eyes. Fumes can aggravate asthma, bronchial conditions, or allergies. Individuals with allergies or impaired respiratory function may have symptoms worsen by exposure to welding fumes . |
| Ingestion | May be harmful if swallowed. |
| Chronic Toxicity | Harmful if inhaled and may cause delayed lung injury. Prolonged exposure may cause chronic effects. |
| Target Organ Effects | Nasal Septum, Respiratory system. |
| Aggravated Medical Conditions | Pre-existing respiratory and skin conditions such as asthma, emphysema, and dermatitis. |
| Component Information | |
| Acute Toxicity | |

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation | Draize Test | Other |
|-------------------|---------------------------|-------------------|-------------------|-------------------|-------------------|
| Tin | = 700 mg/kg (Rat) | no data available | no data available | no data available | no data available |
| Silver | > 2000 mg/kg (Rat) | no data available | no data available | no data available | no data available |
| Ammonium chloride | = 1650 mg/kg (Rat) | no data available | no data available | no data available | no data available |
| Urea | 14,300-15,000 mg/kg (rat) | no data available | no data available | no data available | no data available |

| Component | Mutagenicity | Sensitization | Developmental Toxicity | Reproductive Toxicity | Target Organ Effects |
|-------------------|-------------------|-------------------|------------------------|-----------------------|--------------------------------|
| Tin | no data available | no data available | no data available | no data available | eyes, respiratory system, skin |
| Silver | no data available | no data available | no data available | no data available | nasal septum, skin, eyes |
| Ammonium chloride | no data available | no data available | no data available | no data available | eyes, respiratory system, skin |

Carcinogenicity There are no known carcinogenic chemicals in this product.

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

| Component | Toxicity to Algae | Toxicity to Fish | Microtox | Water Flea | log Pow |
|-------------------|-------------------|--|-------------------------|--|---------|
| Silver | no data available | LC50 0.00155 - 0.00293 mg/L Pimephales promelas 96 h LC50 = 0.0062 mg/L Oncorhynchus mykiss 96 h LC50 = 0.064 mg/L Lepomis macrochirus 96 h | no data available | 0.00024: 48 h Daphnia magna mg/L EC50 Static | N/A |
| Ammonium chloride | no data available | LC50 = 209 mg/L Cyprinus carpio 96 h | no data available | no data available | N/A |
| Urea | no data available | LC50 16200 - 18300 mg/L Poecilia reticulata 96 h | EC50 = 23914 mg/L 5 min | 3910: 48 h Daphnia magna mg/L EC50 Static | -1.59 |

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.

Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

Inventories

TSCA Complies

DSL Complies

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Component | CAS-No | Weight % | SARA 313 - Threshold Values |
|-----------|--------|----------|-----------------------------|
|-----------|--------|----------|-----------------------------|

| | | | |
|-------------------|------------|-----|-----|
| Silver | 7440-22-4 | 1-6 | 1.0 |
| Ammonium chloride | 12125-02-9 | 1-3 | 1.0 |

SARA 311/312 Hazardous Categorization

| | | | | |
|----------------------------|------------------------------|--------------------|--|------------------------|
| Acute Health Hazard | Chronic Health Hazard | Fire Hazard | Sudden Release of Pressure Hazard | Reactive Hazard |
| No | No | No | No | No |

CERCLA

| | | |
|-------------------|---------------------------------|-----------------------|
| Component | Hazardous Substances RQs | CERCLA EHS RQs |
| Silver | 1000 lb | Not applicable |
| Ammonium chloride | 5000 lb | Not applicable |

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

| | |
|----------------------------|---------------------------|
| Prepared By | Christopher Drogin |
| Supersedes Date | 02/10/2011 |
| Issuing Date | 11/14/2014 |
| Reason for Revision | No information available. |
| Glossary | No information available. |
| List of References. | No information available. |

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