



SAFETY DATA SHEET (SDS)

Amerway 1000_Flux

Date: 1/1/2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Amerway 1000 Flux

CAS No: 7646-85-7 Zinc Chloride

Index No:

EC No: 231-592-0

CAS No: 12125-02-9 Ammonium Chloride

Index number:

EC number: 235-186-4

CAS No: 7647-01-0 Hydrochloric Acid

Index No:

EC No: 231-595-7

RECOMMENDED USE: Soldering Flux

Details of the supplier of the safety data sheet:

MANUFACTURER:

Amerway Inc.
3701 Beale Ave.,
Altoona, PA 16601

PHONE: 814-944-0200

FAX PHONE: 814-944-1463

EMERGENCY TELEPHONE NUMBER:

CHEMTREC: 800-424-9300

CHEMTREC (Outside US & Canada): 703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

CLASSIFICATION OF CHEMICAL:

This substance is classified and labeled according to the Globally Harmonized System (GHS).



GHS08 Health Hazard.



GHS05 Corrosive

SIGNAL WORD: Danger

HAZARD STATEMENT:

H302 Harmful if swallowed.



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- H315** Causes skin irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs with prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENT:

- P210** Keep away from heat/spark/open flames/hot surfaces. No Smoking.
P261 Avoid breathing vapors or spray.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P264 Wash face, hands and any exposed skin thoroughly after handling.
P271 Use only outdoors or in well ventilated area
P270 Do not eat, drink or smoke when using this product.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:

| <u>CAS NO.</u> | <u>DESCRIPTION</u> | <u>% WT</u> |
|----------------|--------------------|-------------|
| 7646-85-7 | Zinc Chloride | 30-45 |
| 12125-02-9 | Ammonium Chloride | 4-15 |
| 7647-01-0 | Hydrochloric Acid | 2-4 |

SECTION 4: FIRST AID MEASURES

EMERGENCY OVERVIEW: Call a POISON CENTER or physician if you feel unwell.

POTENTIAL HEALTH EFFECTS FOLLOWING

EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. If eye irritation persists, get medical advice or attention.

SKIN or HAIR CONTACT: Immediately remove all contaminated clothing. Rinse skin with water. If skin irritation occurs, get medical advice or attention.

INGESTION: Rinse mouth with water. Do not induce vomiting. Call a POISON CENTER or physician if you feel unwell.

INHALATION: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

ACUTE HEALTH HAZARDS: No information available.

CHRONIC HEALTH HAZARDS: No information available.

MOST IMPORTANT SYMPTOMS/EFFECTS: No further relevant information available.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: No further relevant information available.

SECTION 5: FIRE-FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: CO₂, dry chemical, dry sand, alcohol-resistant foam.

UNSUITABLE EXTINGUISHING MEDIA: No information available.

FLASH POINT: No information available.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: When heated to decomposition, may emit irritating gases and vapors, Carbon oxides. The product causes burns of eyes, skin and mucous membranes. Do not allow run-off from fire-fighting to enter drains or water courses.



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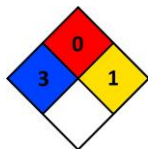
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HAZARDOUS COMBUSTION PRODUCTS: No further relevant information available.

NFPA HAZARD CLASSIFICATION

HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 1



HMIS HAZARD CLASSIFICATION

HEALTH: 3 FLAMMABILITY: 0 REACTIVITY: 1

| | |
|------------|---|
| HEALTH | 3 |
| FIRE | 0 |
| REACTIVITY | 1 |

SPECIAL FIRE FIGHTING EQUIPMENT/PROCEDURES: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS AND PROTECTIVE EQUIPMENT: Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

ENVIRONMENTAL PRECAUTIONS: Should not be released into the environment. Do not allow to enter sewers/surface or ground water. Do not flush into surface water or sanitary sewer system.

CONTAINMENT AND CLEANUP: Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING: Use in well ventilated area. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance.

STORAGE: Store in a cool location, Keep receptacle tightly sealed. Store in cool, dry conditions in well sealed receptacle.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES:

ENGINEERING CONTROLS: Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location.

PERSONAL PROTECTIVE EQUIPMENT

SKIN AND BODY PROTECTION : Wear appropriate protective gloves and clothing to prevent skin exposure.

RESPIRATORY PROTECTION: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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.



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OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None.

WORK HYGIENIC PRACTICES: Handle in accordance with good industrial hygiene and safety practice.

EXPOSURE CONTROLS:

| | | |
|-----------------------|-------------------|---------------------|
| ACGIH TLV-TWA: | Zinc Chloride | 1mg/cu ACGIH/OSHA |
| | Ammonium Chloride | 10 mg/cu ACGIH/OSHA |
| | Hydrochloric Acid | 7 mg/m3 ACGIH/OSHA |

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Fluid

APPEARANCE: Clear

ODOR: Odorless

ODOR THRESHOLD: No data available.

pH No data available.

MELTING POINT/RANGE: 293 °C / 559.4 °F

BOILING POINT/RANGE: 732 °C / 1349.6 °F

FLASH POINT: No data available.

FREEZING POINT/RANGE:

EVAPORATION RATE: No data available.

FLAMMABILITY (SOLID, GAS): Not applicable.

FLAMMABILITY OR EXPLOSIVE LIMITS

UPPER: No data available.

LOWER: No data available.

VAPOR PRESSURE: 1.3 mbar @ 428 °C

VAPOR DENSITY: No data available.

RELATIVE DENSITY: No data available.

SOLUBILITY IN WATER: 20°C (68°F): 1 g/l

PARTITION COEFFICIENT; N-OCTANOL/WATER: No data available.

AUTOIGNITION TEMPERATURE: No data available.

DECOMPOSITION TEMPERATURE: 350 °C

VISCOSITY: 20°C (68°F): No data available.

MOLECULAR FORMULA:

MOLECULAR WEIGHT:

SECTION 10: STABILITY AND REACTIVITY

HAZARDOUS REACTIONS: Stable under recommended storage conditions.

CONDITIONS TO AVOID: Excess heat. Avoid dust formation. Exposure to moist air or water.

INCOMPATIBILITY (MATERIAL TO AVOID): Avoid contact with strong oxidizers, Reducing agents, Bases, Metals, Strong bases, Strong acids, Cyanides, Sulfides

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Zinc, Hydrogen chloride gas

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity



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Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------------|-------------------------|-------------------------|---|
| Zinc chloride | 350 mg/kg (Rat) | Not listed | LC50 <= 1975 mg/m ³ (Rat) 10 min |
| Ammonium chloride | 1650 mg/kg (Rat) | > 2000 mg/kg | Not listed |
| Hydrochloric acid | 238 - 277 mg/kg (Rat) | > 5010 mg/kg (Rabbit) | 1.68 mg/L (Rat) 1 h |

Toxicologically Synergistic Products: No information available

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

Irritation: Zinc Chloride-Causes burns by all exposure routes.

Sensitization: No information available

Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|-------------------|------------|------------|------------|------------|------------|------------|
| Zinc chloride | 7646-85-7 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Ammonium chloride | 12125-02-9 | Not listed | Not listed | Not listed | Not listed | Not listed |
| Hydrochloric acid | 7647-01-0 | Not listed | Not listed | Not listed | Not listed | Not listed |

Mutagenic Effects No information available

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure Zinc & Ammonium Chloride - Respiratory system

STOT - repeated exposure Ammonium Chloride-Kidney Heart spleen Blood

Aspiration hazard No information available

Symptoms / effects, both acute and delayed: **Zinc Chloride**-Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|-------------------|----------------------------|--|------------|----------------------------|
| Zinc chloride | EC50: 0.027-0.105 mg/L/72h | LC50: 0.4-2.2 mg/L/96h | Not listed | EC50: 0.2 mg/L/48h |
| Ammonium chloride | - | Cyprinus carpio: LC50 = 209 mg/L | - | EC50 = 202 mg/L/24h |
| Hydrochloric acid | - | 282 mg/L LC50 96 h Gambusia affinis mg/L LC50 48 h Leuciscus idus | - | 56mg/L EC50 72h Daphnia |

PERSISTENCE AND DEGRADABILITY: Soluble in water Persistence is unlikely based on information available.

BIOACCUMULATIVE POTENTIAL: No data available.

MOBILITY IN SOIL: Will likely be mobile in the environment due to its water solubility.

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Disposal must be made according to all federal, state and local regulations that may apply.

SECTION 14: TRANSPORT INFORMATION



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LAND TRANSPORT (DOT/ADR/RID)

UN/NA NUMBER: UN1789, UN2331
UN PROPER SHIPPING NAME: Hydrochloric Acid solution, Zinc Chloride
TRANSPORT HAZARD CLASS(ES):
HAZARD LABEL(S): 8
PACKING GROUP: III

INLAND WATERWAY TRANSPORT (ADN)

UN/NA NUMBER: UN1789, UN2331
UN PROPER SHIPPING NAME: Hydrochloric Acid solution, Zinc Chloride
TRANSPORT HAZARD CLASS(ES):
HAZARD LABEL(S): 8
PACKING GROUP: III

SEA TRANSPORT (IMDG)

UN/NA NUMBER: UN1789, UN2331
UN PROPER SHIPPING NAME: Hydrochloric Acid solution, Zinc Chloride
TRANSPORT HAZARD CLASS(ES):
HAZARD LABEL(S): 8
PACKING GROUP: III

AIR TRANSPORT (ICAO-TI/IATA-DGR)

UN/NA NUMBER: UN1789, UN2331
UN PROPER SHIPPING NAME: Hydrochloric Acid solution, Zinc Chloride
TRANSPORT HAZARD CLASS(ES):
HAZARD LABEL(S): 8
PACKING GROUP: III

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations

TSCA 12(b) All components listed for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSAC Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.

SARA 313 Zinc Chloride and Ammonium Chloride are listed.

SARA 311/312 Hazardous Categorization

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard No

Proposition 65

Chemicals known to cause cancer: None of the ingredients listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients listed.

Chemicals known to cause developmental toxicity: This product contains a chemical(s) known to the State of California to cause birth defects and/or other reproductive harm.



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CERCLA This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|-------------------|--------------------------|----------------|
| Zinc chloride | 1000 lb | - |
| Ammonium chloride | 5000 lb | - |
| Hydrochloric acid | 5000 lb | 5000 lb |

Carcinogenic Categories

EPA (Environmental Protection Agency):

TLV (Threshold Limit Value established by ACGIH)

NIOSH-Ca (National Institute of Occupational Safety and Health)

OSHA-Ca (Occupational Safety & Health Administration)

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION

NAME: Terry Buck
COMPANY: Amerway, Inc.
EMAIL: tbuck@amerway.com

CREATION DATE: 01/01/2012

REVISION DATE: 11/25/2019

REVISION SUMMARY: This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

DISCLAIMER:

This information is given in good faith, no warranty, express or implied is made. Amerway Inc. makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchasers use. The data on this Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Safety Data Sheet as a source for hazard information.

End of SDS