

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

| | | |
|---|---------|---|
| MANUFACTURER'S NAME Thermacote Welco Co. | | EMERGENCY TELEPHONE NO. 1-704-739-6421 |
| ADDRESS (Number, Street, City, State, and ZIP Code) Hwy 161, York Road, Kings Mountain, N.C. 28086 | | |
| CHEMICAL NAME AND SYNONYMS Flux- Brazing | | TRADE NAME AND SYNONYMS #200 Silver Brazing Flux |
| CHEMICAL FAMILY A.W.S. 3A | FORMULA | |

SECTION II - HAZARDOUS INGREDIENTS

| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Units) | ALLOYS AND METALLIC COATINGS | % | TLV (Units) |
|---|---|-------------|--|---|-------------|
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS | | | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Units) |
| Ingredients: Boric Acid | | | H ₂ O | | |
| Potassium Bifluoride | | | Wetting Agent | | |
| Potassium Fluoborate | | | | | |
| Tetraborate | | | | | |

SECTION III - PHYSICAL DATA

| | | | |
|-------------------------|-----------------------|---------------------------------------|-----|
| BOILING POINT (°F.) | 800-1600 ⁰ | SPECIFIC GRAVITY (H ₂ O=1) | n/a |
| VAPOR PRESSURE (mm Hg.) | n/a | PERCENT, VOLATILE BY VOLUME (%) | n/a |
| VAPOR DENSITY (AIR=1) | n/a | EVAPORATION RATE (_____ =1) | n/a |
| SOLUBILITY IN WATER | good | | |
| APPEARANCE AND ODOR | White paste, no odor | | |

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

| | | | | |
|------------------------------------|-----|------------------|-----|-----|
| FLASH POINT (Method used) | n/a | FLAMMABLE LIMITS | Lel | Uel |
| EXTINGUISHING MEDIA | n/a | | | |
| SPECIAL FIRE FIGHTING PROCEDURES | n/a | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | | | | |

| SECTION V - HEALTH HAZARD DATA | |
|------------------------------------|---|
| THRESHOLD LIMIT VALUE | Fumes generated during soldering are irritating to respiratory system. Harmful if swallowed, can burn eyes and irritate skin. |
| EFFECTS OF OVEREXPOSURE | Eye contact: Burning |
| | Skin contact: burning (mild) Fumes: Nausea and burning in respiratory system |
| EMERGENCY AND FIRST AID PROCEDURES | Eye contact: Flush with water at least 15 minutes. |
| | Skin: Flush with water at least 15 minutes Fumes: Move to well ventilated area |
| | Seek medical attention in all or any isolated cases |

| SECTION VI - REACTIVITY DATA | | | |
|--------------------------------------|----------------|-----|---------------------|
| STABILITY | UNSTABLE | | CONDITIONS TO AVOID |
| | STABLE | X | |
| INCOMPATIBILITY (Materials to avoid) | | | |
| HAZARDOUS DECOMPOSITION PRODUCTS | | | |
| HAZARDOUS POLYMERIZATION | MAY OCCUR | | CONDITIONS TO AVOID |
| | WILL NOT OCCUR | X X | |

| SECTION VII - SPILL OR LEAK PROCEDURES | |
|--|--|
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED | |
| Neutralize with baking soda or tri-sodium phosphate, Clean residue with hot water | |
| WASTE DISPOSAL METHOD | |
| Flush to chemical waste disposal according to Federal, State and Local regulations | |

| SECTION VIII - SPECIAL PROTECTION INFORMATION | | |
|---|-----------------------|----------------|
| RESPIRATORY PROTECTION (Specify type) | | |
| VENTILATION | LOCAL EXHAUST | SPECIAL |
| | Adequate ventilation | |
| | MECHANICAL (General) | OTHER |
| | General | |
| PROTECTIVE GLOVES | Safety welding gloves | EYE PROTECTION |
| | | Safety goggles |
| OTHER PROTECTIVE EQUIPMENT | | |

| SECTION IX - SPECIAL PRECAUTIONS | |
|---|---------------------|
| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING | |
| Store in closed container, Avoid contact with skin, eyes and mucous membranes | |
| OTHER PRECAUTIONS | Wash after handling |

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

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SECTION I

| | | |
|--|-----------------|---|
| MANUFACTURER'S NAME THERMACOTE - WELCO COMPANY | | EMERGENCY TELEPHONE NO. 704-739-6421 |
| ADDRESS (Number, Street, City, State, and ZIP Code) HWY 161 YORK ROAD POB 112 KINGS MOUNTAIN NORTH CAROLINA | | |
| CHEMICAL NAME AND SYNONYMS N.A. | | TRADE NAME AND SYNONYMS WELCO 201 |
| CHEMICAL FAMILY Alloy of Silver, Copper, Zinc | FORMULA N.A. | |

SECTION II - HAZARDOUS INGREDIENTS

| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Units) | ALLOYS AND METALLIC COATINGS | % | TLV (Units) |
|---|---|-------------|------------------------------|----|---|
| PIGMENTS | | | Ag - CAS #7440-22-4 (2, 4) | 45 | .01 Mg/M ³ as Ag |
| CATALYST | | | Cu - " #7440-50-8 (2, 4) | 30 | .1 Mg/M ³ as Cu |
| VEHICLE | | | Zn - " #7440-66-6 (5) | 25 | 5 Mg/M ³ as Zn Oxide Fume |
| SOLVENTS | | | | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Units) |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

SECTION III - PHYSICAL DATA

| | | | | |
|-------------------------|---------------------|------------------|---|------|
| BOILING POINT (°F.) | Liquidus Solidus | 1370°F 1225°F | SPECIFIC GRAVITY (H ₂ O = 1) | 9.15 |
| VAPOR PRESSURE (mm Hg.) | | N.A. | PERCENT VOLATILE BY VOLUME (%) | N.A. |
| VAPOR DENSITY (AIR = 1) | | N.A. | EVAPORATING RATE (_____ = 1) | N.A. |
| SOLUBILITY IN WATER | Negligible | | | |
| APPEARANCE AND ODOR | | | | |

SECTION IV - FIRE AND EXPLOSION HAZARD DATA N.A.

| | | | |
|------------------------------------|------------------|-----|-----|
| FLASH POINT (Method used) | FLAMMABLE LIMITS | Lel | Uel |
| EXTINGUISHING MEDIA | | | |
| SPECIAL FIRE FIGHTING PROCEDURES | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS | | | |

(Continued on reverse side)