

# SAFETY DATA SHEET

Metglas®, Inc.

MBF 15, 20,30, 50, 51, 53, 80, 23

## Section 1. Identification

**GHS product identifier** : MBF 15, 20,30, 50, 51, 53, 80, 23  
**Product code** : Not available.  
**Other means of identification** : Amorphous Braze Foil  
**Product type** : Massive metal.

### Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Brazing.  
**Area of application** : Industrial applications.

**Supplier's details** : Metglas, Inc.  
440 Allied Drive,  
Conway, SC 29526  
United States  
  
Telephone: 843-349-6800  
www.metglas.com

**e-mail address of person responsible for this SDS** : john.schwindel@metglas.com and william.coughlan@metglas.com

**Emergency telephone number (with hours of operation)** : Manufacturer: 800-581-7654 (24/7)  
**CHEMTREC**: 800-424-9300 (24/7)

## Section 2. Hazards identification

**OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

**Classification of the substance or mixture** : H317 SKIN SENSITIZATION - Category 1  
H351 CARCINOGENICITY - Category 2  
H361 TOXIC TO REPRODUCTION - Category 2  
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H317 - May cause an allergic skin reaction.  
H351 - Suspected of causing cancer.  
H361 - Suspected of damaging fertility or the unborn child.  
H372 - Causes damage to organs through prolonged or repeated exposure. (central nervous system (CNS), lungs, respiratory tract)

**Date of issue/Date of revision** : 07/17/2020 **Date of previous issue** : No previous validation **Version** : 1 1/13

## Section 2. Hazards identification

### Precautionary statements

- Prevention** : P201 - Obtain special instructions before use.  
P280 - Wear protective gloves. Wear protective clothing. Wear eye or face protection.  
P260 - Do not breathe dust.  
P270 - Do not eat, drink or smoke when using this product.
- Response** : P308 + P313 - IF exposed or concerned: Get medical advice or attention.  
P363 - Wash contaminated clothing before reuse.  
P302 + P352 - IF ON SKIN: Wash with plenty of water.
- Storage** : Not applicable.
- Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Amorphous Braze Foil

| Ingredient name | Other names | %       | CAS number |
|-----------------|-------------|---------|------------|
| Nickel          | -           | 0 - 100 | 7440-02-0  |
| iron            | -           | 0 - 65  | 7439-89-6  |
| Chromium        | -           | 0 - 20  | 7440-47-3  |
| silicon         | -           | 0 - 8   | 7440-21-3  |
| molybdenum      | -           | 0 - 6   | 7439-98-7  |
| boron           | -           | 0 - 5   | 7440-42-8  |
| manganese       | -           | 0 - 2   | 7439-96-5  |

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.**

## Section 4. First aid measures

### Description of necessary first aid measures

- Eye contact** : Get medical attention.
- Inhalation** : Not applicable.
- Skin contact** : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Cuts should be treated promptly and covered.
- Ingestion** : Not applicable.

### Most important symptoms/effects, acute and delayed

#### Potential acute health effects

- Eye contact** : Not applicable.
- Inhalation** : Not applicable.
- Skin contact** : May cause an allergic skin reaction.
- Ingestion** : Not applicable.

## Section 4. First aid measures

### Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : No specific fire or explosion hazard.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
metal oxide/oxides  
Vapor (Toxic)
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : No special protection is required.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**Environmental precautions** : No specific hazard.

### Methods and materials for containment and cleaning up

- Small spill** : Restack safely. Take care with items that are sharp or heavy.
- Large spill** : Restack safely. Take care with items that are sharp or heavy. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Take care with items that are sharp or heavy.
- Advice on general occupational hygiene** : Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store locked up. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

| Ingredient name                | Exposure limits  |
|--------------------------------|--|
| Nickel<br><br>iron<br>Chromium | <p><b>ACGIH TLV (United States, 3/2019).</b><br/>TWA: 1.5 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p> <p><b>NIOSH REL (United States, 10/2016).</b><br/>TWA: 0.015 mg/m<sup>3</sup>, (as Ni) 10 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b><br/>TWA: 1 mg/m<sup>3</sup>, (as Ni) 8 hours.</p> <p>None.</p> <p><b>ACGIH TLV (United States, 3/2019).</b><br/>TWA: 0.5 mg/m<sup>3</sup>, (measured as Cr) 8 hours. Form: Inhalable fraction</p> <p><b>NIOSH REL (United States, 10/2016).</b><br/>TWA: 0.5 mg/m<sup>3</sup> 8 hours.</p> <p><b>OSHA PEL (United States, 5/2018).</b><br/>TWA: 1 mg/m<sup>3</sup>, (as Cr) 8 hours.</p> |

## Section 8. Exposure controls/personal protection

|            |   |
|------------|---|
| silicon    | <p><b>NIOSH REL (United States, 10/2016).</b><br/>TWA: 5 mg/m<sup>3</sup> 10 hours. Form: Respirable fraction<br/>TWA: 10 mg/m<sup>3</sup> 10 hours. Form: Total</p> <p><b>OSHA PEL (United States, 5/2018).</b><br/>TWA: 5 mg/m<sup>3</sup> 8 hours. Form: Respirable fraction<br/>TWA: 15 mg/m<sup>3</sup> 8 hours. Form: Total dust</p> <p><b>ACGIH TLV (United States, 3/2019).</b><br/>TWA: 10 mg/m<sup>3</sup>, (as Mo) 8 hours. Form: Inhalable fraction<br/>TWA: 3 mg/m<sup>3</sup>, (as Mo) 8 hours. Form: Respirable fraction</p> <p>None.</p> <p><b>NIOSH REL (United States, 10/2016).</b><br/>TWA: 1 mg/m<sup>3</sup>, (as Mn) 10 hours. Form: Fume<br/>STEL: 3 mg/m<sup>3</sup>, (as Mn) 15 minutes. Form: Fume</p> <p><b>OSHA PEL (United States, 5/2018).</b><br/>CEIL: 5 mg/m<sup>3</sup>, (as Mn) Form: Fume</p> <p><b>ACGIH TLV (United States, 3/2019).</b><br/>TWA: 0.1 mg/m<sup>3</sup>, (as Mn) 8 hours. Form: Inhalable fraction<br/>TWA: 0.02 mg/m<sup>3</sup>, (as Mn) 8 hours. Form: Respirable fraction</p> |
| molybdenum |   |
| boron      |   |
| manganese  |   |

**Appropriate engineering controls** : No special ventilation requirements. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

**Environmental exposure controls** : Not applicable.

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location. Wash thoroughly after handling.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Use strong, cut-resistant gloves suitable for handling metals.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Not applicable.

## Section 9. Physical and chemical properties

### Appearance

|   |   |
|---|---|
| <b>Physical state</b>                               | : Solid. [foil]   |
| <b>Color</b>  | : Metallic-gray.  |
| <b>Odor</b>   | : Odorless.   |
| <b>Odor threshold</b>                               | : Not available.  |
| <b>pH</b>   | : Not applicable.   |
| <b>Melting point</b>                                | : 965 to 1195°C (1769 to 2183°F)                                  |
| <b>Boiling point</b>                                | : Not available.  |
| <b>Flash point</b>                                  | : Not applicable.   |
| <b>Evaporation rate</b>                             | : Not applicable.   |
| <b>Flammability (solid, gas)</b>                    | : Not available.  |
| <b>Lower and upper explosive (flammable) limits</b> | : Not available.  |
| <b>Vapor pressure</b>                               | : Not available.  |
| <b>Vapor density</b>                                | : Not available.  |
| <b>Relative density</b>                             | : 7.7 to 8.1 [Water = 1]  |
| <b>Density</b>                                      | : Not available.  |
| <b>Solubility</b>                                   | : Insoluble in the following materials: cold water and hot water. |
| <b>Partition coefficient: n-octanol/water</b>       | : Not available.  |
| <b>Auto-ignition temperature</b>                    | : Not available.  |
| <b>Decomposition temperature</b>                    | : Not available.  |
| <b>SADT</b>   | : Not available.  |
| <b>Viscosity</b>                                    | : Not available.  |
| <b>Flow time (ISO 2431)</b>                         | : Not available.  |

## Section 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | : No specific test data related to reactivity available for this product or its ingredients.  |
| <b>Chemical stability</b>                 | : The product is stable.  |
| <b>Possibility of hazardous reactions</b> | : Under normal conditions of storage and use, hazardous reactions will not occur.<br>Under normal conditions of storage and use, hazardous polymerization will not occur. |
| <b>Conditions to avoid</b>                | : No specific data.   |
| <b>Incompatible materials</b>             | : Reactive or incompatible with the following materials: moisture.<br>Corrosive material  |
| <b>Hazardous decomposition products</b>   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  |

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

| Product/ingredient name | Result                          | Species               | Dose        | Exposure |
|-------------------------|---------------------------------|-----------------------|-------------|----------|
| iron                    | LD50 Oral                       | Rat                   | 750 mg/kg   | -        |
| silicon                 | LD50 Oral                       | Rat                   | 3160 mg/kg  | -        |
| molybdenum              | LC50 Inhalation Dusts and mists | Rat                   | >5.84 mg/l  | 4 hours  |
|                         | LD50 Dermal                     | Rat                   | >2000 mg/kg | -        |
|                         | LD50 Oral                       | Rat                   | >5000 mg/kg | -        |
| boron                   | LC50 Inhalation Dusts and mists | Rat - Male,<br>Female | >5.08 mg/l  | 4 hours  |
|                         | LD50 Oral                       | Rat                   | 650 mg/kg   | -        |
| manganese               | LC50 Inhalation Dusts and mists | Rat                   | 5.14 mg/l   | 4 hours  |
|                         | LD50 Oral                       | Rat                   | 9 g/kg      | -        |

#### Irritation/Corrosion

| Product/ingredient name | Result               | Species | Score | Exposure        | Observation |
|-------------------------|----------------------|---------|-------|-----------------|-------------|
| silicon                 | Eyes - Mild irritant | Rabbit  | -     | 3 mg            | -           |
| manganese               | Eyes - Mild irritant | Rabbit  | -     | 24 hours 500 mg | -           |
|                         | Skin - Mild irritant | Rabbit  | -     | 24 hours 500 mg | -           |

#### Sensitization

Not available.

#### Mutagenicity

**Conclusion/Summary** : Not available.

#### Carcinogenicity

**Conclusion/Summary** : Not available.

#### Classification

| Product/ingredient name | OSHA | IARC | NTP  |
|-------------------------|------|------|--|
| Nickel                  | -    | 1    | Reasonably anticipated to be a human carcinogen. |
| Chromium                | -    | 3    | -  |

#### Reproductive toxicity

**Conclusion/Summary** : Not available.

#### Teratogenicity

**Conclusion/Summary** : Not available.

#### Specific target organ toxicity (single exposure)

| Name       | Category   | Route of exposure | Target organs                |
|------------|------------|-------------------|------------------------------|
| molybdenum | Category 3 | -                 | Respiratory tract irritation |

#### Specific target organ toxicity (repeated exposure)

| Name      | Category   | Route of exposure | Target organs                       |
|-----------|------------|-------------------|-------------------------------------|
| Nickel    | Category 1 | inhalation        | respiratory tract                   |
| manganese | Category 2 | -                 | central nervous system (CNS), lungs |

## Section 11. Toxicological information

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Dermal, Inhalation.

### Potential acute health effects

**Eye contact** : Not applicable.  
**Inhalation** : Not applicable.  
**Skin contact** : May cause an allergic skin reaction.  
**Ingestion** : Not applicable.

### Symptoms related to the physical, chemical and toxicological characteristics

**Eye contact** : No specific data.  
**Inhalation** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
**Skin contact** : Adverse symptoms may include the following:  
irritation  
redness  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations  
**Ingestion** : Adverse symptoms may include the following:  
reduced fetal weight  
increase in fetal deaths  
skeletal malformations

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Long term exposure

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

#### Potential chronic health effects

**General** : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.  
**Carcinogenicity** : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** :

### Numerical measures of toxicity

#### Acute toxicity estimates



## Section 11. Toxicological information

| Product/ingredient name           | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapors) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|-----------------------------------|--------------|----------------|--------------------------|----------------------------|-------------------------------------|
| MBF 15, 20,30, 50, 51, 53, 80, 23 | N/A          | 2500           | N/A                      | N/A                        | N/A                                 |
| iron                              | 750          | N/A            | N/A                      | N/A                        | N/A                                 |
| silicon                           | 3160         | N/A            | N/A                      | N/A                        | N/A                                 |
| molybdenum                        | N/A          | 2500           | N/A                      | N/A                        | N/A                                 |
| boron                             | 650          | N/A            | N/A                      | N/A                        | N/A                                 |
| manganese                         | 9000         | N/A            | N/A                      | N/A                        | 5.14                                |

**Other information** : Adverse symptoms may include the following: Metal fume fever if exposed to high concentration of fumes.

## Section 12. Ecological information

### Toxicity

| Product/ingredient name | Result                                       | Species   | Exposure |
|-------------------------|--|---|----------|
| Nickel                  | Acute EC50 2 ppm Marine water                | Algae - <i>Macrocystis pyrifera</i> - Young   | 4 days   |
|                         | Acute EC50 450 µg/l Fresh water              | Aquatic plants - <i>Lemna minor</i>   | 4 days   |
|                         | Acute EC50 1000 µg/l Marine water            | Daphnia - <i>Daphnia magna</i>  | 48 hours |
|                         | Acute IC50 0.31 mg/l Marine water            | Crustaceans - <i>Americamysis bahia</i> - Juvenile (Fledgling, Hatchling, Weanling) | 48 hours |
| iron                    | Acute LC50 47.5 ng/L Fresh water             | Fish - <i>Heteropneustes fossilis</i>   | 96 hours |
|                         | Chronic NOEC 100 mg/l Marine water           | Algae - <i>Glenodinium halli</i>  | 72 hours |
|                         | Chronic NOEC 3.5 µg/l Fresh water            | Fish - <i>Cyprinus carpio</i>   | 4 weeks  |
|                         | Acute EC50 3700 µg/l Fresh water             | Aquatic plants - <i>Lemna minor</i>   | 4 days   |
| Chromium                | Acute LC50 33000 to 100000 µg/l Marine water | Crustaceans - <i>Crangon crangon</i>  | 48 hours |
|                         | Acute LC50 6.48 µg/l Marine water            | Fish - <i>Periophthalmus waltoni</i> - Adult  | 96 hours |
|                         | Chronic NOEC 100 mg/l Marine water           | Algae - <i>Glenodinium halli</i>  | 72 hours |
|                         | Acute EC50 0.2 ppm Marine water              | Algae - <i>Bacillariophyta</i>  | 72 hours |
| molybdenum              | Acute EC50 5 ppm Marine water                | Algae - <i>Macrocystis pyrifera</i> - Young   | 4 days   |
|                         | Acute EC50 35000 µg/l Fresh water            | Aquatic plants - <i>Lemna minor</i>   | 4 days   |
|                         | Acute LC50 45 µg/l Fresh water               | Crustaceans - <i>Ceriodaphnia reticulata</i>  | 48 hours |
|                         | Acute LC50 22 µg/l Fresh water               | Daphnia - <i>Daphnia magna</i>  | 48 hours |
| manganese               | Acute LC50 13.9 ppm Fresh water              | Fish - <i>Anguilla rostrata</i>   | 96 hours |
|                         | Chronic NOEC 50 mg/l Marine water            | Algae - <i>Glenodinium halli</i>  | 72 hours |
|                         | Chronic NOEC 0.19 µg/l Fresh water           | Fish - <i>Cyprinus carpio</i>   | 4 weeks  |
|                         | Acute LC50 >200000 µg/l Fresh water          | Daphnia - <i>Daphnia magna</i>  | 48 hours |
| manganese               | Acute LC50 800 mg/l Fresh water              | Fish - <i>Oncorhynchus mykiss</i>   | 96 hours |
|                         | Chronic NOEC 500 mg/l Marine water           | Algae - <i>Glenodinium halli</i>  | 72 hours |
|                         | Acute EC50 31000 µg/l Fresh water            | Aquatic plants - <i>Lemna minor</i>   | 4 days   |
|                         | Acute LC50 29000 µg/l Fresh water            | Daphnia - <i>Daphnia magna</i>  | 48 hours |
| manganese               | Acute LC50 28 mg/l Fresh water               | Fish - <i>Pimephales promelas</i>   | 96 hours |
|                         | Chronic NOEC 1.7 mg/l Fresh water            | Daphnia - Water Flea-<br><i>Ceriodaphnia dubia</i>                                  | 8 days   |

**Conclusion/Summary** : Not available.

## Section 12. Ecological information

### Persistence and degradability

Not available.

### Bioaccumulative potential

| Product/ingredient name | LogP <sub>ow</sub> | BCF | Potential |
|-------------------------|--------------------|-----|-----------|
| silicon                 | 57 to 77           | -   | high      |

### Mobility in soil

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

## Section 14. Transport information

|                                   | DOT Classification | IMDG           | IATA           |
|-----------------------------------|--------------------|----------------|----------------|
| <b>UN number</b>                  | Not regulated.     | Not regulated. | Not regulated. |
| <b>UN proper shipping name</b>    | -                  | -              | -              |
| <b>Transport hazard class(es)</b> | -                  | -              | -              |
| <b>Packing group</b>              | -                  | -              | -              |
| <b>Environmental hazards</b>      | No.                | No.            | No.            |

### Additional information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to IMO instruments** : Not available.

## Section 15. Regulatory information

**U.S. Federal regulations** : TSCA 8(a) CDR Exempt/Partial exemption: Not determined  
 United States inventory (TSCA 8b): All components are active or exempted.  
 Clean Water Act (CWA) 307: Nickel; Chromium

**Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs)** : Listed

**Clean Air Act Section 602 Class I Substances** : Not listed

**Clean Air Act Section 602 Class II Substances** : Not listed

**DEA List I Chemicals (Precursor Chemicals)** : Not listed

**DEA List II Chemicals (Essential Chemicals)** : Not listed

### SARA 302/304

#### Composition/information on ingredients

No products were found.

**SARA 304 RQ** : Not applicable.

### SARA 311/312

**Classification** : SKIN SENSITIZATION - Category 1  
 CARCINOGENICITY - Category 2  
 TOXIC TO REPRODUCTION - Category 2  
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

#### Composition/information on ingredients

| Name       | %       | Classification   |
|------------|---------|--|
| Nickel     | 0 - 100 | SKIN SENSITIZATION - Category 1<br>CARCINOGENICITY - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1                                     |
| iron       | 0 - 65  | COMBUSTIBLE DUSTS<br>ACUTE TOXICITY (oral) - Category 4  |
| silicon    | 0 - 8   | FLAMMABLE SOLIDS - Category 2<br>EYE IRRITATION - Category 2B  |
| molybdenum | 0 - 6   | EYE IRRITATION - Category 2B<br>SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3   |
| boron      | 0 - 5   | ACUTE TOXICITY (oral) - Category 4   |
| manganese  | 0 - 2   | FLAMMABLE SOLIDS - Category 2<br>EYE IRRITATION - Category 2B<br>TOXIC TO REPRODUCTION - Category 2<br>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 |

### SARA 313

## Section 15. Regulatory information

|                                 | Product name | CAS number | %       |
|---------------------------------|--------------|------------|---------|
| Form R - Reporting requirements | Nickel       | 7440-02-0  | 0 - 100 |
|                                 | Chromium     | 7440-47-3  | 0 - 20  |
|                                 | manganese    | 7439-96-5  | 0 - 2   |
| Supplier notification           | Nickel       | 7440-02-0  | 0 - 100 |
|                                 | Chromium     | 7440-47-3  | 0 - 20  |
|                                 | manganese    | 7439-96-5  | 0 - 2   |

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

### State regulations

- Massachusetts** : The following components are listed: NICKEL; NICKEL CATALYST; CHROMIUM; SILICON DUST; MOLYBDENUM; MANGANESE
- New York** : The following components are listed: Nickel; Chromium
- New Jersey** : The following components are listed: NICKEL; CHROMIUM; SILICON; MOLYBDENUM; BORON; MANGANESE
- Pennsylvania** : The following components are listed: NICKEL CATALYST; CHROMIUM COMPOUNDS; SILICON; MOLYBDENUM; MANGANESE COMPOUNDS

### California Prop. 65

**⚠ WARNING:** This product can expose you to Nickel, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

| Ingredient name | No significant risk level | Maximum acceptable dosage level |
|-----------------|---------------------------|---------------------------------|
| Nickel          | -                         | -                               |

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Section 16. Other information

### Hazardous Material Information System (U.S.A.)

|                  |   |   |
|------------------|---|---|
| Health           | * | 3 |
| Flammability     |   | 0 |
| Physical hazards |   | 0 |
|                  |   |   |

## Section 16. Other information

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

### [National Fire Protection Association \(U.S.A.\)](#)



### [Procedure used to derive the classification](#)

| Classification  | Justification      |
|---|--------------------|
| SKIN SENSITIZATION - Category 1                                 | Calculation method |
| CARCINOGENICITY - Category 2                                    | Calculation method |
| TOXIC TO REPRODUCTION - Category 2                              | Calculation method |
| SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 | Calculation method |

### [History](#)

|                                       |   |
|---------------------------------------|---|
| <b>Date of issue/Date of revision</b> | : 07/17/2020  |
| <b>Date of previous issue</b>         | : No previous validation  |
| <b>Version</b>                        | : 1   |
| <b>Prepared by</b>                    | : Sphera Solutions  |
| <b>Key to abbreviations</b>           | : ATE = Acute Toxicity Estimate<br>AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift<br>BCF = Bioconcentration Factor<br>GHS = Globally Harmonized System of Classification and Labelling of Chemicals<br>IATA = International Air Transport Association<br>IBC = Intermediate Bulk Container<br>IMDG = International Maritime Dangerous Goods<br>LogPow = logarithm of the octanol/water partition coefficient<br>MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)<br>N/A = Not available<br>UN = United Nations |
| <b>References</b>                     | : HCS (U.S.A.)- Hazard Communication Standard<br>International transport regulations  |

☑ Indicates information that has changed from previously issued version.

### [Notice to reader](#)

The Metglas Braze Foil is intended to be used as a braze filler metal in a vacuum or inert atmosphere braze furnace. Since the actual use by others is beyond our control, it is the user's responsibility to determine the suitability of the product for its use and to adopt such safety precautions as may be necessary. Since the conditions of use are not under our control, Metglas disclaims all liability with respect to the use of any material supplied by Metglas.