SECTION 1. IDENTIFICATION

Great Lakes Orthodontics
200 Cooper Ave
Tonawanda, NY 14150
716-871-1161
800-828-7626
CHEMTREC: 800-424-9300

Product Name: Ball Clasp
Product Number: 090-034, 090-035, 090-054, 090-055

Effective Date: 12-20-12

SECTION 2. HAZARDOUS IDENTIFICATION

Potential Health Effects:

Primary Routes of Entry
- Inhalation
- Skin Contact
- Eye Contact

Medical Conditions Aggravated by Exposure
Special steel alloys are generally not considered hazardous in the form shipped (sold bars, rods, wire). However, if your process involves grinding, melting, welding, cutting or any other process that causes a release of dust or fume, hazardous levels of dust or fume of the constituents of these alloys could be generate. The following is a list of potential health effects for all hazardous elements that are contained in the products mentioned.

- CHROMIUM – Ferrochrome alloys have been associated with lung changes in workers exposed to these alloys.
- MANGNESE – Inhalation of Manganese fume may cause “Metal Fume Fever” with symptoms of chills, fever, nausea, cough, dry throat, weakness, muscle aches, and a sweet or metallic taste in the mouth. Prolonged or repeated exposure may affect the nervous system with difficulties in walking and balancing, weakness or cramps in the legs, hoarseness of the voice, and trouble with memory or judgment, unstable emotions or unusual irritability. The respiratory system may also be affected by pneumonia like illness with symptoms of coughing, fever, chills, body ache, chest pain, and other common signs of pneumonia.
- IRON OXIDE – Repeated exposure to iron oxide fume over a period of years may cause x-ray changes of the lung, but does not cause the exposed person to become ill.
Human Effects and Symptoms of Overexposure:
Exposure to special steel alloys occur primarily from inhalation of dust. However, constituents of these alloys may cause effects directly upon the skin or eyes. Certain constituents may also be harmful if swallowed.

**Carcinogenicity**
Chrome has been identified at National Toxicology Programs as potential cancer causing agent.

### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th><strong>Hazardous Components</strong></th>
<th>%</th>
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<tbody>
<tr>
<td>Carbon</td>
<td>0.07</td>
</tr>
<tr>
<td>Chromium</td>
<td>17.0 – 19.0</td>
</tr>
<tr>
<td>Manganese</td>
<td>2.0</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>-</td>
</tr>
<tr>
<td>Nickel</td>
<td>8.5 – 10.5</td>
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<tr>
<td>Sulphur</td>
<td>0.03</td>
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<tr>
<td>Silicea</td>
<td>1.0</td>
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<tr>
<td>Phosphorus</td>
<td>0.045</td>
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<tr>
<td>Iron</td>
<td>Rest</td>
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### SECTION 4. FIRST AID MEASURES

- **Eye Contact**
  Rinse with water.

- **Skin Contact**
  Rinse with water.

- **Inhalation**
  Fresh air. Consult a doctor.

### SECTION 5. FIRE FIGHTING MEASURES

- **Suitable Extinguishing Media**
  None.

- **Special Fire Fighting Procedures**
  None.

- **Unusual Fire / Explosion Hazards**
  None.

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- **Spill and Leak Procedures**
  This product is a solid metal as shipped. No spillage and/or leakage.

### SECTION 7. HANDLING & STORAGE

- **Handling / Storage Precautions**
  None.
VENTILATION MEASURES
If your fabrication procedure causes a release of dust or fume, use local and general exhaust ventilation to keep airborne concentration of dust or fumes.

RESPIRATORY PROTECTION
If your fabrication procedure causes a release of dust or fume in excess, a NIOSH dust mask should be worn.

HAND PROTECTION
Gloves and barrier creams may be necessary to prevent skin sensitization and dermatitis.

EYE PROTECTION
If your fabrication procedure involves grinding or any other actions that cause the release of dust or fumes, safety glasses or goggles should be worn.

ADDITIONAL PROTECTIVE MEASURES
None.

SECTION 9. PHYSICAL & CHEMICAL PROPERTIES
- Form – Solid
- Odor – Odorless
- Flash Point – Not applicable
- Melting Point – Above 1300 °C
- Lower Explosion Limit – Not applicable
- Upper Explosion Limit – Not applicable
- Vapor Pressure – Not Applicable
- Solubility in Water – Not applicable
- Auto-ignition Temperature - Not applicable
- Specific Gravity – 7.9 g/cm3

SECTION 10. STABILITY & REACTIVITY
- Hazardous Reactions – Hazardous polymerization will not occur.
- Stability – Stable
- Materials to Avoid – None
- Conditions to Avoid – None
- Hazardous Decomposition Products – None

SECTION 11. TOXICOLOGICAL INFORMATION
Not applicable

SECTION 12. ECOLOGICAL INFORMATION (non-mandatory)
Not applicable
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<tr>
<th>SECTION 13.</th>
<th>DISPOSAL CONSIDERATIONS (non-mandatory)</th>
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<td><strong>Waste Disposal Method</strong></td>
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<th>SECTION 14.</th>
<th>TRANSPORT INFORMATION (non-mandatory)</th>
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