

COMPANY INFORMATION

COMPANY NAME: ORTHO SPECIALTIES
COMPANY ADDRESS: 3820 OHIO AVE - SUITE 15
 ST. CHARLES, IL 60174
COMPANY PHONE: 630-443-0225
COMPANY FAX: 630-443-0224
COMPANY WEB ADDRESS: www.orthospecialties.com

GRIPPER™ CRIMPABLE HOOKS AND STOPS

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| DOCUMENT NUMBER: | SDS19 |
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SECTION I: IDENTIFICATION

1.1 Product Identifier: **Gripper™ Crimpable Hooks and Stops**

Chemical Name: Stainless Steel
 Trade Names or Synonyms: Stainless Steel 200, 300, 400 Series, 17-7, A286 and 21-6-9

SECTION II: COMPOSITION/INGREDIENTS

This section covers the material in the product as shipped and is applicable to mechanical cutting and grinding. The fumes and gases produced during welding are covered in Section VI.

| Component | CAS# | % Weight | OSHA PEL* TWA (mg/M ³) | ACGIH TLV-TWA (mg/M ³) |
|---|------------|----------|---|---|
| Iron (Iron Oxide) (Fe) | 7439-89-6 | 60-88 | 5 [fume] | 5; A4 ² [dust and fume] |
| ALLOYING ELEMENTS | | | | |
| Chromium ³ [metal] (Cr) | 7440-47-3 | 10-30 | 0.5 Metal | 0.5; A4 [metal] |
| Nickel [metal] (Ni) | 7440-02-0 | 0-27 | 1 | 1.5, A5 |
| Manganese [elemental & inorganic cpds] (Mn) | 7439-96-5 | 0-10 | 1 C5 ⁴ [fume] | 0.2 |
| Molybdenum (Mo) | 7439-98-7 | <8 | 10 [insoluble cpds, total dust] 5 [soluble cpds] | 10 [insoluble cpds, total dust] Nic-3 5 [soluble cpds] Nic 0.5A3 |
| Copper ³ (Cu) | 7440-50-8 | <6 | 0.1 [fume] 1 [dust] | 0.2 [fume] 1 [dust and mists] |
| Titanium ³ [titanium dioxide] (Ti) | 13463-67-7 | <6 | 10 [dust] | 10; A4 |
| Carbon (C) | 7440-44-0 | <2 | N/A | N/A |
| Aluminum ³ (Al) | 7429-90-5 | <2 | 10 [total dust] 5 [resp. fraction] | 10 [metal oxide] 5 [fume] |
| Phosphorous [yellow] (P) | 7723-14-0 | <2 | 0.1 | 0.1 |
| Sulfur [sulfur dioxide] (S) | 7746-09-5 | <.2 | 5 | 5.2, 13 STEL; A4 |
| Silicon (Si) | 7440-21-3 | <2 | 10 [total dust] | 10 |
| Niobium (Nb) | 7440-03-1 | <2 | N/A | N/A |
| Tantalum (Ta) | 7440-25-7 | <2 | 5 [dust] & (Oxide) | 5 [dusts] |
| Tin [metal] (Sn) | 7440-31-5 | <2 | 2 | 2 |
| Cobalt ³ [elemental & inorganic cpds] (Co) | 7440-48-4 | <2 | 0.05 [dust & fume] | 0.02; A3 ⁵ |
| Lead ³ [elemental & inorganic cpds] (Pb) | 7439-92-1 | <.1 | 0.05 | 0.05; A3 ⁵ |

¹ Percent of alloying element varies with grade.
² A4=Not classifiable as a human carcinogen.
³ SARA, Title iii, Section 313 Toxic Chemical.
⁴ C=Ceiling limit not to be exceeded.
⁵ A3=Animal carcinogen.

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SECTION III: PHYSICAL DATA

Boiling Point: N/A (i.e., >1000°C)
Vapor Pressure: N/A
Vapor Density: (AIR=1) N/A
Solubility In Water: N/A
Specific Gravity: (H₂O=1.0) Approximately 7
%Volatile By Volume: N/A
Evaporation Rate: N/A
Melting Point (°F): (Base Metal) >1600 °F
Appearance and Odor: Grey with metallic lustre - no distinct odor.

SECTION IV: FIRE AND EXPLOSION HAZARD DATA

Flash Point (°F): N/A
Flammable Limits: N/A
Extinguishing Media: Use dry powder extinguishing agent.
Fire and Explosion Hazard: 1. Metal powder dispersed in air may cause fire and explosion hazard.
2. Molten metal can ignite combustibles.
3. Good housekeeping must be maintained.

SECTION V: HEALTH HAZARD DATA

Primary Routes Of Entry: Inhalation of dust and fume. Extended exposure to iron dust or fume may result in signs of pneumoconiosis (i.e. siderosis). Physical examination of those exposed to iron dust have not indicated any disability.
Emergency and First Aid Procedure: If irritation occurs, flush eyes, wash skin, remove to fresh air as applicable. Contact physician.

SECTION VI: REACTIVITY DATA

Stability: Stable
Conditions To Avoid: None
Incompatibility: reacts with strong acids to produce hydrogen gas
Hazardous Decomposition: Will not occur
Hazardous Polymerization: Will not occur

SECTION VII: SPILL OR LEAK PROCEDURES

Minimal problems with spills of this product would be expected to occur because of its solid form. If there is a spill of alloy dust, the following precautions should be taken.

1. Shut off ignition sources; no flares, smoking or flames should be near hazard area.
2. Do not touch or walk through spilled material. Clean up using methods which avoid dust generation.
3. Compressed air should not be used to clean up spills.
4. During cleanup, skin and eye contact and inhalation of dust should be avoided as much as possible.
5. Provide local exhaust or dilution ventilation as required.

SECTION VIII: SPECIAL PROTECTION INFORMATION

SKIN PROTECTION:

Use appropriate protective clothing, such as welder's aprons and gloves, when welding or durning. Use clothing and equipment, as required by applicable federal, state and local occupational safety and health laws.

RESPIRATORY PROTECTION:

NIOSH/MSHA-approved dust/ mist/fume respirators should be used during welding, burning and grinding operations, if applicable exposure limits are exceeded.

EYE PROTECTION:

Safety glasses should always be worn when grinding or cutting; face shield should be worn when welding burning.

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SECTION IX: SPECIAL PRECAUTIONS

Use good housekeeping practices to prevent accumulations of dust and to keep airborne dust concentrations at a minimum. Avoid breathing dust or fumes.

PEL/TLV exposures should be kept below recommended by OSHA and ACGIH to insure proper health protection of worker.