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MATERIAL SAFETY DATA SHEET
316 STAINLESS STEEL FOR MAGNUM BRACKETS AND BUCCAL TUBES

Document Number: MSDS-055	**Revision Date**: June 02, 2014	**Material Type**: 316 Stainless Steel
Revision: S	**Number of Pages**: 2	

1–PRODUCT IDENTIFICATION

Trade Name: 316
Product Class: Iron Base Alloy

2–HAZARDOUS INGREDIENTS

Ingredient	CAS #	Nominal Chemistry Percent	TLV Mg/m^3	PEL Mg/m^3
Fe Iron	1309-37-1	60	5	10
** Cr Chromium	7440-47-3	18	0.5	1
** Ni Nickel	7440-02-0	14	1	1
Mo Molybdenum	7439-98-7	2.25	10	15
Mn Manganese	7439-96-5	2	Dust- 5 Fume- 1	5-ceiling

** Has been recognized as a suspect carcinogen by NTP and IARC.

3–PHYSICAL DATA

Boiling Point (^oF): N/A
Vapor Pressure (mm Hg.): N/A
Vapor Density (Air = 1): N/A
Solubility in Water: Insoluble
Appearance and Odor: Metallic gray in color – no odor.
Specific Gravity (H_2O=1): Approx. 8
Percent Volatile by Volume: N/A
Evaporation Rate: N/A
Melting Point (^oF): Approx. 2700^oF

4–FIRE AND EXPLOSION DATA

Flash Point (^oF): 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. 2) Molten metals can ignite combustibles. 3) Good housekeeping must be maintained.

5–HEALTH HAZARD DATA

Primary Routes of Entry: Inhalation of dust or fume.

Under normal conditions, exposure to cast ingots presents few health hazards in itself. Thermal cutting and melting of ingots may produce fumes containing the component elements and breathing those fumes may present potentially significant health hazards. Extended (several years) 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 Procedures:
If irritation occurs, flush eyes, wash skin, remove to fresh air, as applicable. Contact physician.

6–REACTIVITY DATA

Cast ingot is stable at ordinary temperatures, however, caution should be taken with acids, bases, and oxidizers. Molten metal will react violently with water.

7–SPILL AND LEAK PROCEDURES

Solid ingot material will be recycled.
Residue from cutting or grinding should be swept or vacuumed and placed in suitable containers for disposal by local, state, or federal waste disposal regulations.

8–SPECIAL PROTECTION INFORMATION

Respiratory Protection: When exposure limits are exceeded, use proper, approved respirator.
Ventilation: Use a local exhaust when cutting, grinding, welding, or melting.
Eye Protection and Protective Clothing: Should be used when cutting, grinding, welding, or melting.

9–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 recommendations by OSHA and ACGIH to insure proper health protection of worker.

10–SARA SECTION 313 SUPPLIERS NOTIFICATION

This product may contain the following chemicals which are subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40

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CFR 372: Aluminum; Manganese; Chromium; Nickel; Cobalt; Vanadium; Copper.

Refer to the Hazardous Ingredients Section of this MSDS for the appropriate CAS numbers and percent by weight.

11–DISCLAIMER

Although the information and recommendations in this data sheet are to the best of our knowledge correct, it is recommended that you make your own determination of the material's suitability for your purpose before you use it. The information contained in this data sheet has been reproduced from the manufacturer's data; the accuracy of this information is the responsibility of the manufacturer. ODP accepts no responsibility for damage of any nature resulting from the use of, or the reliance upon, this data sheet.