MATERIAL SAFETY DATA SHEET
17-4 pH STAINLESS STEEL FOR THE FOLLOWING:
FOCUS, COMFORT ZONE, AGILITY AND MINIPREVAIL AND VIPER BUCCAL TUBES

Document Number: MSDS-053
Revision Date: June 02, 2014
Material Type: 17-4 pH Stainless Steel
Revision: A
Number of Pages: 2

1–PRODUCT IDENTIFICATION
Trade Name: AMS 5355
Product Class: Iron Base Alloy

2–HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS #</th>
<th>Nominal Chemistry</th>
<th>TLV Mg/m³</th>
<th>PEL Mg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fe Iron</td>
<td>1309-37-1</td>
<td>75.0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td><strong>Cr Chromium</strong></td>
<td>7440-47-3</td>
<td>16.2</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td><strong>Ni Nickel</strong></td>
<td>7440-02-0</td>
<td>4.0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cu Copper</td>
<td>7440-50-8</td>
<td>2.0</td>
<td>Fume 0.2</td>
<td>Mist 1</td>
</tr>
</tbody>
</table>

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

3–PHYSICAL DATA
Boiling Point: 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 (H₂O=1): Approx. 8
Percent Volatile by Volume: N/A
Evaporation Rate: N/A
Melting Point (°F): Approx. 2700°F

4–FIRE AND EXPLOSION 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. 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.
## Material Safety Data Sheet
### 17-4 pH Stainless Steel for the Following:
**Focus, Comfort Zone, Agility and MinipreVail and Viper Buccal Tubes**

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### 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 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.