Material Safety Data Sheet—Stainless Steel

1.0 Identification of Product and Company

1.1 Product: Chromium Alloyed Stainless Steel

1.2 Supplier: BS Stainless Limited
360 Leach Place
Walton Summit
Preston PR5 8AS

1.3 Emergency Contact: P: +44 (0) 1772 337555 ; E: info@bsstainless.co.uk

1.4 Date Updated: January 20, 2015

2.0 Hazards Identification

2.1 Emergency Overview: These products are not hazardous unless processed (i.e. ground, welded) in a manner that generates dust or fumes. Dust and fumes may cause eye, skin and respiratory irritation. May cause skin and respiratory tract sensitization (allergic reaction). Prolonged inhalation of dust or fumes from this product may cause perforation of the nasal septum and lung damage. This product contains nickel which may cause cancer.

3.0 Composition and Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS - No.</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>Balance</td>
</tr>
<tr>
<td>Chromium</td>
<td>7440-47-3</td>
<td>10.5 - 19.5</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>7439-98-7</td>
<td>0-2.5</td>
</tr>
<tr>
<td>Manganese</td>
<td>7439-96-5</td>
<td>0-1.25</td>
</tr>
<tr>
<td>Silicon</td>
<td>7440-21-3</td>
<td>0-1.0</td>
</tr>
<tr>
<td>Nickel</td>
<td>7440-02-0</td>
<td>0-0.75</td>
</tr>
<tr>
<td>Copper</td>
<td>7440-50-8</td>
<td>0-0.6</td>
</tr>
<tr>
<td>Cobalt</td>
<td>7440-48-4</td>
<td>0-0.6</td>
</tr>
</tbody>
</table>

4.0 First Aid Measures

4.1 Inhalation: Not applicable in solid form. Inhalation of dust or fume from grinding, cutting and welding operations is unlikely to generate the need for specific first aid. There are no special symptoms or effects associated with stainless steel. In the event of physical injury to the skin seek appropriate medical attention. In the event of physical injury to the eyes, seek immediate medical attention. Austenitic stainless steel particles are non-magnetic or only slightly magnetic and may not respond to a magnet placed over the eye. In such cases seek hospital treatment.

4.2 Skin or Eye Contact: Does not apply to stainless steel in the solid form.

BS Stainless Limited—360 Leach Place, Walton Summit, Preston, PR5 8AS T: +44 (0) 1772 337555 F: +44 (0) 1772 313010 E: info@bsstainless.com
www.bsstainless.com

VER:BS-59-V1
### 5.0 Fire Fighting Procedures

5.1 Extinguishing Media

This material is not combustible in solid form. Use media that is appropriate for the surrounding fire. For fires involving fine dust or filings, do not use water, CO₂ or foam directly on the burning metal. Use dry sand, graphite powder, Lith-X powder, dry chemical or other media appropriate for a class D fire.

5.2 Fire Fighting Procedures

Firefighters should wear full emergency equipment and NIOSH approved positive pressure self-contained breathing apparatus.

### 6.0 Accidental Release Measures

Not Applicable

### 7.0 Handling and Storage

#### 7.1 Handling

Do not breathe dust or fumes from processing. Avoid contact with dust. Wear protective clothing and equipment as described in Section 8. Process only with adequate ventilation. Keep containers closed when not in use. Do not eat, drink or smoke in the work area.

#### 7.2 Storage

Store in a cool, well ventilated location away from incompatible materials.

### 8.0 Exposure Controls/Personal Protection

#### 8.1 Engineering Controls

None needed under normal use. If dust or fumes are generated during processing, use with adequate local exhaust ventilation to maintain exposures below D20 the occupational exposure limits.

#### 8.2 Eye Protection

Wear safety glasses or other eye protection consistent with industrial safety practice for the process being performed.

#### 8.3 Skin Protection

Wear protective gloves if need to prevent cuts or other injuries.

None needed under normal use. If the occupational exposure limits are exceeded during processing, an approved respirator with high efficiency particulate filters may be used. For higher exposures (greater than 10 times the exposure limit) a supplied air respirator may be required. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 or local authority regulations and good Industrial Hygiene practice.

### 9.0 Physical and Chemical Properties

#### 9.1 Physical State

Solid

#### 9.2 Odour

Odourless

#### 9.3 Density

7.7—8.3 g/cm³

#### 9.4 Melting Point

1325 to 1530 °C

#### 9.5 Water Solubility

1325 to 1530 °C

#### 9.6 Specific Gravity

0.27 - 0.30
10.0 Stability and Reactivity

10.1 Stability: Stable

10.2 Conditions to avoid: None Known

10.3 Incompatibility: Acids, Oxidising agents, ammonia nitrate, Sulfur, alkalis, Selenium, nickel nitrate and sodium azide

10.4 Hazardous Decomposition: Toxic metal fumes and oxides are emitted when product is heated above the melting point

11.0 Toxicological Information

Stainless Steel is non toxic

12.0 Ecological Information

No known harmful effects. No special precautions are required.

13.0 Disposal Considerations

Surplus and scrap (waste) stainless steel is valuable and in demand for the production of prime new stainless steel. Recycling routes are well-established, and recycling is therefore the preferred disposal route. Disposal to landfill is not harmful to the environment, but it is a waste of resources and therefore less desirable than recycling.

14.0 Transport Information

No special precautions required – non-hazardous for road, sea or air.

15.0 Health, Safety and Environmental Regulatory Information

15.1 CE Marking: Supplied to CPR 305/2011 and BS EN 10088 - 4/5

15.2 REACH: Stainless Steel does not contain any Substance of Very High Concern (SVHC) in their products exceeding 0.1% by weight, in - line with Article 33(1) of REACH regulation

16.0 Other Information

Information supplied is in line with EN 10088 and British Stainless Steel Association (BSSA). Updated 20/01/2015.

16.1 HMIS Hazard Rating: Health - 0 Fire Hazard - 0 Physical Hazard - 0

16.2 EU Preparation Classification: Xn (Harmful); R40, R42, R48/23, R53

Disclaimer: The information given in the safety datasheet is based on the present level of our knowledge and experience. The data sheet describes the products with respect to safety requirements. The data given is not intended as a confirmation of product properties and does not constitute a legal contractual relationship, nor should it be used as the basis for ordering these products.