

**Product:**

Austenitic Stainless Steel Building Components. (Including Angles, Lintels, Reinforcing Bars, Special Fabrications and Wall Ties).

**Material Analysis:**

Various grades of Austenitic Stainless Steel, as listed below, are used.

% MAXIMUM CONTENT									
Grade	C	Si	Mn	P	S	Cr	Mo	Ni	Other
<b>304</b>	0.08	1.00	2.00	0.045	0.030	18.0/20.0	----	8.00/10.5	----
<b>304L</b>	0.03	1.00	2.00	0.045	0.030	18.0/20.0	----	8.00/10.5	----
<b>316</b>	0.08	1.00	2.00	0.045	0.030	16.0/18.0	2.00/3.00	10.0/14.0	----
<b>316L</b>	0.03	1.00	2.00	0.045	0.030	16.0/18.0	2.00/3.00	10.0/14.0	----
<b>321</b>	0.08	1.00	2.00	0.045	0.030	17.0/19.0	----	9.00/12.0	Ti 5 x Cmin
<b>310</b>	0.15	1.50	2.50	0.045	0.030	25.0/28.0	----	20.0/22.5	----
<b>320</b>	0.08	1.50	2.50	0.045	0.030	16.0/18.0	2.00/3.00	10.0/14.0	Ti 5 x Cmin

**Hazards**

When handling the product, there is a risk of laceration of the skin. Injury, including skin laceration and eye injury may occur when breaking open the strapping due to release of tension.

When subjected to elevated temperatures, e.g. during welding or flame cutting, fumes are produced containing oxides of iron and the added elements. The principal mode of entry into the body is inhalation and the potential effects on health, which include metal fume fever, a short lasting condition with symptoms similar to those of influenza, are dealt with in the documents listed under "Some Relevant References". Stainless steel fume is a potential respiratory sensitiser and can lead to occupational asthma.

**Precautionary and Proactive Methods**

When handling the product appropriate protective clothing should be worn to prevent lacerations. Similarly, when breaking open the strapping appropriate clothing and equipment such as hand and eye protection should be worn.

To ensure the Occupational Exposure Limits set out over-leaf are not exceeded when fume/dust is generated provide adequate ventilation, if necessary, including local fume extraction.

Alternatively, where necessary, appropriate respiratory protective equipment should be provided for use by those at risk from inhalation of fumes.

**Current Occupational Exposure Limits**

	Type of Limit	8h. TWA	15Min.TWA
Iron Oxide, fume (as Fe)	WEL	5.0mg/m <sup>3</sup>	10.0mg/m <sup>3</sup>
Manganese and its inorganic compounds	WEL	0.5mg/m <sup>3</sup>	-
Manganese, fume (as Mn)	WEL	1.0mg/m <sup>3</sup>	3.0mg/m <sup>3</sup>
Chromium metal 'bi' and 'tri'valent (as Cr)	WEL	0.5mg/m <sup>3</sup>	-
Chromium hexavalent (as Cr)	WEL	0.05mg/m <sup>3</sup>	-
Nickel compounds (as Ni), soluble compounds	WEL	0.1mg/m <sup>3</sup>	-
Nickel compounds (as Ni), insoluble compounds	WEL	0.5mg/m <sup>3</sup>	-
Molybdenum compounds as (Mo), soluble compounds	WEL	5.0mg/m <sup>3</sup>	10.0mg/m <sup>3</sup>
Molybdenum compounds as (Mo), insoluble compounds	WEL	10.0mg/m <sup>3</sup>	20.0mg/m <sup>3</sup>
Vanadium Pentoxide	WEL	0.05mg/m <sup>3</sup>	-

**Some Relevant References**

Personal Protective Equipment at Work Regulations 1992

**HSE Guidance Notes**

INDG346: Working with Chromium

INDG351: Working with Nickel

EH40: Occupational Exposure Limits – current edition

HSG173: Monitoring Strategies for Toxic Substances

All information and references in these data sheets are accurate as at Dec 2018. Users/customers should ensure that there have been no alterations or further data sheets since that date.

**If you require further information or advice on the use of this product, please consult our Technical Department.**