

**MATERIAL SAFETY DATA SHEET**

**REF: MSDS1 ISSUE 3 DATE: 19.2.2009**

**STAINLESS STEEL WIRECLOTH**

**1. PRODUCT AND COMPANY IDENTIFICATION**

Manufacturer/Supplier	United Wire Granton Park Avenue Edinburgh EH5 1HT
Telephone Number	0131 552 6241
Fax Number	0131 552 8462
Web Address	<a href="http://www.unitedwire.com/">http://www.unitedwire.com/</a>
Contact	QA Dept

**2. COMPOSITION / INFORMATION ON INGREDIENTS**

Element	Material Designation						
	304	304L	316	316L	321	310	DIN 1.4539
C max.	0.06	0.03	0.07	0.03	0.08	0.08	.02
Si max.	1.0	1.0	1.0	1.0	1.0	1.5	1.0
Mn max.	2.0	2.0	2.0	2.0	2.0	2.0	2.0
P max.	0.045	0.045	0.045	0.045	0.045	0.045	.03
S max.	0.030	0.030	0.030	0.030	0.030	0.030	.02
Cr range	17.5/19.0	18.0/19.0	16.5/18.5	16.5/18.5	17.0/19.0	24.0/26.0	19.0/21.0
Mo range	-	-	2.0/3.0	2.0/3.0	-	-	4.0/5.0
Ni range	8.5/10.5	(1) 9.0/12.0	10.5/13.5	(3) 11.0/14.0	9.0/12.0	19.0/22.0	24.0/26.0
Other	-	-	-	-	Titanium 5 X% C to 0.80%	-	Copper 1.0/2.0

**Notes**

1. Wire sized 0.080 mm and below may be supplied with a nickel content of 8.0% minimum.
2. Other alloys may be specified from time to time and should conform to the composition given by BS EN 10088-3, latest issue for the alloy number referenced on the purchase order.
3. Wire sized 0.080 mm and below may be supplied with a nickel content of 10.0% minimum.

**3. HAZARD IDENTIFICATION**

There are no hazards for man or the environment from stainless steel wirecloth in the form supplied.

Many stainless steels contain nickel as an essential alloying element. Nickel is classified in EC directive 67/548/EEC as a suspect carcinogen (category 3 – R40) and as a skin sensitiser (R43). Dust and fume may be generated during processing e.g. in welding, cutting and grinding, In the event that airborne concentrations of dust or fume exceed occupational exposure limits workers health may be affected.

**4. FIRST AID MEASURES**

**Inhalation**

Not applicable to wirecloth in the form supplied. Inhalation of dust and /or fume from grinding, welding and cutting is unlikely to generate the need for specific fist aid.

**Skin & Eye Contact**

Not applicable to wirecloth in the supplied form. In the event of physical injury to the skin seek appropriate first aid treatment. In the event of physical injury to the eyes seek immediate medical attention.

**Ingestion**

Not applicable to wirecloth in the form supplied.

**5. FIRE FIGHTING MEASURES**

Extinguishing Media	Not combustible
Special Hazards of Products	This product may give rise to irritant fumes in a fire
Protective Equipment for Firefighting	Wear self contained breathing apparatus

**6. ACCIDENTAL RELEASE MEASURES**

Personal Precautions	Not applicable
Environmental Precautions	Not applicable
Spillages	Not applicable

**7. HANDLING AND STORAGE**

Under normal circumstances the materials do not produce any hazardous products and as such do not require any special precautions in storage. The transient handling of the materials would not be expected to produce any sensitisation, however all materials may carry a thin film of oil lubricant; it is therefore recommended that gloves are used for handling. Hands should be washed with soap and water before eating, drinking or smoking. The normal precautions for handling heavy metallic objects with possible sharp edges should also be observed.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

OCCUPATIONAL EXPOSURE LIMITS (EH40:2003)

Component	Limit	8hr TWA mg/m <sup>3</sup>	15 min TWA mg/m <sup>3</sup>
Chromium, & its Cr(II) & Cr(III) Compounds	OES	0.5	---
Chromium (VI) compounds	MEL	0.05	---
Nickel, soluble compounds	MEL	0.1	---
Nickel, insoluble compounds	MEL	0.5	---
Nickel, organic compounds	OES	1	---
Manganese Fume	OES	1	3
Copper & its compounds	OES	0.2	---
Copper Dust	OES	1	2
Molybdenum & its soluble compounds	OES	5	10
Molybdenum & its insoluble compounds	OES	10	20
Iron Oxide, Fume	OES	5	10
Welding Fume, total	OES	5	---
Other			---

Engineering Control Measures      Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (dilution and local exhaust) and control of process conditions.

Respiratory Protection                Respirator fitted with P3 filters.

Hand Protection                        Heat resistant gloves when carrying out hot work.

Eye Protection                         Welding visor / goggles when carrying out hot work.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance                            : Solid; metallic grey ranging from dull to bright polished  
 Odour                                     : Odourless  
 Water Solubility                       : Insoluble  
 Melting Point                         : 1370°C - 1520°C  
 Density                                  : 7.7 – 8.1kg/dm<sup>3</sup>

**10. STABILITY AND REACTIVITY**

The product is stable under normal conditions but when subjected to elevated temperatures (welding & burning) fumes are produced. May react with strong acids to release gaseous acid decomposition products e.g. hydrogen and oxides of nitrogen

**11. TOXICOLOGICAL INFORMATION**

Mechanical working such as dry grinding and machining will produce dust of the same composition as the base metal.

The principal mode of entry into the body is by inhalation and if airborne concentrations are excessive (see EH40) over long periods of time they may have a long term effect on the health of the worker, primarily affecting the lungs. Nickel is a known respiratory sensitiser. Occupational asthma due to respiratory sensitisation to nickel salts has been recorded in the electroplating, metal polishing, catalyst reprocessing and stainless steel welding industries. Metallic nickel and its salts are potent skin sensitisers.

Welding and flame cutting of stainless steel mat produce fume containing hexavalent chromium compounds (Cr(VI)) some studies have shown that some Cr(VI) compounds can cause cancer in the electroplating industry, however studies amongst welders indicate that no extra increased risk arises from welding stainless steel.

**12. ECOLOGICAL INFORMATION**

No known harmful effects.

**13. DISPOSAL CONSIDERATIONS**

Recycle preferentially. Should waste disposal be deemed necessary follow national or regional regulations which may be in force.

**14. TRANSPORT INFORMATION**

No special precautions.

**15. REGULATORY INFORMATION**

Not applicable.

**16. OTHER INFORMATION**

R40 Limited evidence of carcinogenic effect  
R43 May cause skin sensitisation  
S22 do not breathe dust  
S36 wear protective clothing

The information given in this safety data sheet is based on the present level of our knowledge and experience. The data sheet describes the products with respect to safety requirements. This information does not constitute an assessment under the Control of Substances Hazardous to Health Regulations 2002.

**Amendment Record**

Issue 3 – COSHH Regulations were previously 1999.

**CIRCULATION –**

**E-MAIL - L FITZPATRICK**