# Good Fellow





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# Standard Price List for Stainless Steel - AISI 316 (Fe/Cr18/Ni10/Mo 3)

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## Introduction

Goodfellow is well known as a specialist supplier of small to medium size quantities of metals, alloys, ceramics, polymers and other materials to meet the research, development and specialist production requirements of science and industry worldwide. We realise that "small" means different things to different people, but we consider small to mean any quantity from a few grammes to a few kilos.

Goodfellow offers two distinct services to meet the requirements of our customers:

- The first meets the needs of our customers who need small quantities of products from our standard range of materials within 24-48 hours.
- The second service is for those who require larger quantities or further processing of our standard products or who need an item which falls within our general area of supply expertise.

The range of materials offered by Goodfellow is extensive, as are the forms in which the various products are available. This Catalogue provides a detailed overview of our standard products which are available from stock. Full details of all of these items, including prices and technical information, can be found in our web Catalogue at www.goodfellow.com.

#### **Materials**

#### Metals and Alloys

Goodfellow supplies virtually all of the pure metals from Aluminium to Zirconium as well as a comprehensive range of alloys. Most are available in a variety of forms, including rod, wire and foil. The Catalogue details those materials which are available as standard products from stock. Custommade items are also available, so please contact us if you are unable to identify the item you require.

#### **Ceramics**

The ceramic materials offered by Goodfellow have been carefully chosen and include both the established as well as more recently developed products. All are available as either standard or custom-made products in a variety of forms and sizes. The Catalogue details those items which are available from stock. For ceramic components made to customer drawings, our Ceramic and Glass Division would be delighted to help. Please visit www.goodfellow-ceramics.com for further information.

#### **Polymers**

The range of polymers supplied by Goodfellow is broad and includes both the familiar as well as some of the more unusual or recently developed materials. The Catalogue details those items which are available from stock; please contact us if you are unable to find the item you specifically require.

#### Compounds & Intermetallics

Goodfellow can supply aluminides, borides and silicides as well as other intermetallics and compounds. The majority of these items are made to order and the Catalogue details those which are available. Please contact us with details of your requirements.

#### **Composites**

Some examples of these materials are listed in the Catalogue. As some of these are manufactured on a custom-made basis, please contact us with details of your requirements.

#### Glasses

Goodfellow offers two distinct types of glass products. The first are generally silica-based and transparent. Generally, these products are made to order for customers, so we do not list them in our Catalogue, however, they are available through the Goodfellow Ceramic and Glass Division. Please contact us with your requirements.

The second type of glass product is commonly referred to as "metallic glasses" or "glassy metals". In contrast to crystalline metals and alloys with highly ordered atomic structures, these are non-crystalline (amorphous) metals or, more usually, alloys. Our Catalogue details those glassy metals which are available from stock; please contact us if you are unable to find the item you specifically require.





## Bar

A straight length of rectangular, square or oval section material.

#### **Tolerances**

Section dimensions:  $\leq 10 \text{mm}$   $\pm 10\%$  > 10 mm  $\pm 1 \text{mm}$  Length: < 100 mm  $\pm 1 \text{mm}$   $\geq 100 \text{mm}$  + 5% / -1%



## **Bolt**

A threaded pin that can be screwed into a nut or a tapped hole to fasten items together. Bolts are available with different head styles and also in metric and inch-threaded sizes.

#### **Tolerances**

Ceramics: ANSI B18.6.7M-1985



## **Chopped Fibre**

Fibres cut into short lengths called cut, staple or chopped fibre.

#### **Tolerances**

Fibre diameter:  $\pm 25\%$ Number of strands:  $\pm 10\%$ Tex number:  $\pm 10\%$ Length: + 5% / -1%



## Crucible

A vessel in which other materials may be heated or melted, usually at high temperatures.

#### **Tolerances**

 $\begin{array}{ll} \mbox{Height:} & \pm \, 10\% \\ \mbox{Inside Dimensions:} & \pm \, 10\% \\ \mbox{Outside Dimensions:} & \pm \, 10\% \\ \end{array}$ 



## **Fabric**

Woven fabrics are made by the regular interlacing of two arrays of yarns at right angles to each other, these being referred to as the warp and weft (see also Non-woven fabric).

#### **Tolerances**

Fabric thickness:  $\pm 25\%$ Number of yarns:  $\pm 10\%$ Tex number:  $\pm 10\%$ 

Size (linear dimension): < 100 mm  $\pm 5 \text{mm}$   $\geq 100 \text{mm}$   $\pm 5 \%$ 



## **Fibre**

Yarns or tows consisting of several approximately parallel individual filaments, each filament usually being smaller in diameter than a monofilament. Yarns contain a defined number of filaments, typically three to several hundred; tows contain thousands of filaments whose number is only defined approximately. Both are primarily specified by their linear density measured in "tex", the weight in grammes of a 1km length of material.

#### Tolerances

Fibre diameter:  $\pm 25\%$ Number of strands:  $\pm 10\%$ Tex number:  $\pm 10\%$ Length: + 5% / -1%



## Film

A non-metallic sheet material with a thickness < 0.5mm.

#### **Tolerances**

Thickness:  $\pm 20\%$ 

Size (linear dimension):  $< 100 \text{mm} \qquad \pm 1 \text{mm}$  $\geq 100 \text{mm} \qquad + 2\% / -1\%$ 



## **Flake**

Flat, irregularly shaped pieces of material. A maximum flake size is indicated but individual flakes may vary greatly in size.

#### **Tolerances**

Dimensions shown are nominal





## **Foam**

A low density, permeable structure of cells and continuous ligaments offering a high surface area to volume ratio, and also a high strength to weight ratio. Owing to the nature of this material, dimensions are nominal.



## Foil

Thin sheets of pure metal and metal alloys. Due to their fragile nature, some foils are coated on one side with an acrylic or polyester support. Where foils are supported they are indicated in the detailed item description.

#### **Tolerances**

Thickness: < 0.010mm  $\pm 25\%$ 

0.01-0.05mm  $\pm 15\%$ 

> 0.050mm  $\pm 10\%$ Size (linear dimension): < 100mm + 1mm

≥ 100mm + 2% / -1%



## Granule

Pellets of an approximately regular shape. Granules may vary in size and, therefore, the dimensions stated are nominal. In addition, the shape of a granule may vary from item to item.

#### **Tolerances**

Dimensions shown are nominal



## Honeycomb

A cellular structure similar in appearance to natural honeycomb. Owing to the nature of this material, dimensions are nominal.



## **Insulated Wire**

A single or multiple flexible strand of metal or alloy with an insulating sheath.

#### **Tolerances**

Wire diameter:  $\pm 10\%$ Length:  $\pm 5\% / -1\%$ 

Insulation thickness: Nominal values only

## Laminate

Layers of material which have been bonded together by the use of heat, pressure and, possibly, adhesive.

#### **Tolerances**

Thickness:  $\pm 10\%$ 

Size (linear dimension):  $\leq$  100mm  $\pm$  1mm + 2% / -1%



## Lump

A solid piece of material with no defined shape.

#### **Tolerances**

Dimensions shown are nominal



## Mesh

Mesh is available as either a woven wire or electroformed product; in all cases, the quoted aperture sizes are nominal. Wire mesh: a material which is woven from metal wires to provide a thin grid with a regular series of holes. Electroformed mesh: a product made by electroplating the mesh geometry through a mask onto a substrate which is subsequently etched away.

#### **Tolerances**

Thickness: woven:  $\pm 10\%$ 

electroformed: ±20%

Wire diameter:  $\pm 10\%$ 

Size (linear dimension): < 100mm  $\pm 1$ mm

≥ 100mm + 2% / -1%



## **Metallised Film**

Film which is coated with a metal. The thickness of the metal is measured and described in terms of the material's specific electrical resistance in ohms per square.

#### **Tolerances**

Thickness:  $\pm 10\%$ 

Size (linear dimension): < 100 mm + 1 mm

≥ 100mm + 2% / -1%





## **Microfoil**

An extremely thin sheet of metal or alloy mounted on a permanent support. This support **cannot** be removed without destroying the Microfoil.

#### **Tolerances**

Thickness:  $\pm 30\%$ Size:  $\pm 20\%$ 



## **Microleaf**

An extremely thin sheet of metal mounted on a removable support. Microleaf is not available for metals which are too brittle to be free standing. Microleaf is mounted on a specially treated support which allows separation of the metal film from the support. Full instructions on the method of removal are issued with each Microleaf supplied.

#### **Tolerances**

Thickness:  $\pm 30\%$ Size:  $\pm 20\%$ 



## **Monofilament**

A single strand of a non-metallic material.

#### **Tolerances**

Diameter:  $\pm 20\%$ Length: +5% / -1%



## Non-Woven Fabric

Non-woven fabrics are made by methods other than weaving or knitting, the yarns and fibres being held together, often quite loosely, by means other than geometric interlacing. Due to the open and porous nature of this material, all other dimensions are nominal.

#### **Tolerances**

Size (linear dimension): < 100 mm  $\pm 5 \text{mm}$  > 100 mm + 5%



## Nut

Generally a flat piece of material with a threaded hole which can be screwed onto a bolt to fasten items together. Nuts typically have a hexagonal external shape. Nuts are available in metric and inchthreaded sizes.

#### **Tolerances**

Ceramics: ANSI B18.2.4.1M-1979

(R1995)



## **Powder**

Small particles with an approximately defined size range. Those materials described as alloy precursors are not true alloys - they are made by sintering a blend of powders of the component metals to achieve alloying by diffusion. The resultant cake is ground and sieved to the required particle size range. Unless otherwise stated, the particle sizes shown are for guidance only. We do not guarantee either any particular size distribution between the quoted minimum and maximum sizes, or a specific particle shape.

#### Tolerances

Dimensions shown are nominal



## Rod

A straight length of circular section material.

#### **Tolerances**

Diameter:  $\leq 10 \text{mm}$   $\pm 10\%$ 

Polymer + 20%/-10% Ceramic + 20%/-10%

> 10mm  $\pm 5\%$ 

Ceramic +20%/-10%Polymer +20%/-10%

Length:  $< 100 \text{mm} \quad \pm 1 \text{mm}$ 

≥ 100mm + 5% / -1%





## **Sheet**

Flat material with a thickness > 0.5mm.

#### **Tolerances**

Thickness:		$\pm10\%$
	Ceramic	$\pm 20\%$
	Composite	+20%

Polymer  $\pm 20\%$ Size (linear dimension): < 100mm + 1mm

size (iiiieai difficision). < footiiii  $\pm$  miiii  $\ge$  100mm +2% / -1%



## Single Crystal

A material grown as a monocrystal, generally to a specific orientation, dimension and surface finish. It may contain a dopant. Single crystals are usually made to order.

#### **Tolerances**

Orientation:  $\pm 3^{\circ}$ 

Size: Sizes shown are nominal



## **Sphere**

A regular solid or hollow three-dimensional form in which every cross-section is a circle. Spheres are available with standard or precision tolerances, and can be supplied with different surface finishes depending on the material.

#### **Tolerances**

Diameter (standard):  $\pm 5\%$ Diameter (precision): see item



## Sputtering Target

A high purity material used as a source for sputtering, a cold vapourisation process in which atoms are physically removed from the target surface by ion bombardment.

#### **Tolerances**

Thickness:  $\pm 0.5$ mm Size:  $\pm 0.5$ mm



## **Tube**

A hollow length of material normally circular in section. Most tubes are straight except those made of flexible polymer.

#### **Tolerances**

Outside diameter:	≤2mm	$\pm$ 0.05mm
	Polymer	<u>+</u> 10%
	Ceramic	+10%

 $\leq$ 5mm  $\pm$  0.1mm Polymer  $\pm$  10% Ceramic  $\pm$  10%

> 5mm  $\pm 5\%$ Polymer  $\pm 10\%$ Ceramic  $\pm 10\%$ 

Wall thickness:  $\pm 10\%$ 

Polymer  $\pm 20\%$ Ceramic  $\pm 20\%$ 

Length:  $< 100 \text{mm} \pm 1 \text{mm}$ 

≥ 100mm + 5% / -1%



## Washer

A thin, flat piece of material with a hole in the middle, used in conjunction with bolts and nuts to distribute the load of a threaded fastener.

#### **Tolerances**

Ceramics: see item



## Wire

A single or multiple flexible strand of pure metal or alloy.

#### **Tolerances**

Wire diameter:  $\pm 10\%$ Length:  $\pm 5\% / -1\%$ 

## **Hazards Information**

#### **HAZARDS**

All materials listed in this catalogue, whatever the quantity supplied, are sold for research or development purposes. We make no warranty that the materials are fit for a particular purpose. In purchasing materials from this catalogue, customers should be aware that there may be hazards associated with their use and in the handling of them. Complete toxicological or hazard investigations are the responsibility of the customer. Ingestion or contact with the human body may be harmful. The responsibility for the safe use of our products rests with the customer. All materials should be handled by qualified personnel familiar with laboratory procedures and who are familiar with the nature of the material and any necessary precautions which should be taken in the handling, use and storage of the products. The customer shall be responsible for the control and use of the products offered in this catalogue whether alone or in combination with other articles or substances or in any other manner whatsoever.

## HAZARD SYMBOLS



#### Corrosive

Chemicals which may destroy living tissue when in contact with them.



#### Dangerous when wet

Chemicals which, in contact with water or damp air, evolve highly flammable or toxic gases and vapours in dangerous quantities.



## **Explosive**

Chemicals which may react exothermically without atmospheric oxygen, quickly evolving gases, and which under defined test conditions detonate, quickly deflagrate or upon heating explode when partially confined.



## **Extremely Flammable**

Chemicals which when finely divided (small particle size) are liable to ignite spontaneously.



#### Harmful

Chemicals which may cause death or acute or chronic damage to health when inhaled, ingested or absorbed via the skin.



#### Highly flammable

Chemicals which will ignite after contact with flame, or which will evolve highly flammable gases in contact with water.



#### Irritant

Non-corrosive chemicals which, through immediate, prolonged or repeated contact with the skin or mucous membrane may cause inflammation.



#### Radioactive

Chemicals which will emit ionising radiation without being subject to irradiation. General precautions for Toxic chemicals apply to those of low activity. For chemicals of medium or high activity special regulations apply.



#### Toxic

Chemicals which may cause death or acute or chronic damage to health when inhaled, ingested or absorbed via the skin.



Very Toxic

Chemicals which in low quantities cause death or acute or chronic damage to health when inhaled, ingested or absorbed via the skin.



## **General Information**

## **Analyses**

## Typical Analysis:

Where appropriate a typical analysis is given. All figures are parts per million (ppm) by weight unless otherwise stated. It must be emphasised that this data is "typical" and no guarantee is given that the material supplied will conform to these analyses. The compositions shown under alloy headings are generally weight percent. Exceptions are the glassy alloys and the rare earth magnets where the convention of using atomic ratio is followed.

#### **Purity**

Purities listed are quoted with respect to total metallic impurities. Typical analyses may give additional information about likely non-metallic impurities.

### High Purity

For materials described as High Purity, the actual analysis of metallic impurities will be supplied free of charge. For other items, an actual analysis can be supplied and a charge will be made for the analysis and for the sample used.

If you require an analysis please tell us whether you require analysis of metallic impurities only or metallic and gaseous. Where an analysis is required the shipment of your order may be delayed.

## **Supports**

Some items from our range of foils need to be supported on one side of the foil to enable both you and us to handle these very delicate materials. Two types of support can be used, the choice being governed by the material. Wherever possible we use a temporary support, a permanent support only being used when the material is brittle (for example Chromium or Manganese).

The temporary support is Acrylic, approximately 0.2mm thick. This may be removed by dissolving in 2-Propanone (Acetone).

Our permanent support is Polyester, thickness 0.125mm, which is hot-press laminated to one face of the foil. It **cannot** be removed without destroying the foil.

Microfoil is mounted on a permanent  $3.5\mu m$  polyester support. This support **cannot** be removed without destroying the Microfoil.

Microleaf is mounted on a specially treated support which allows separation of the metal film from the support. Full instructions on the method of removal are issued with each Microleaf supplied.

## Light Tight (LT) & Not Light Tested (NLT)

Light tight (LT) foils are supplied without visible pinholes after examination without magnification. Foils 0.025mm or more in thickness are supplied LT unless otherwise stated.

Foils less than 0.025mm thick are normally supplied Not-Light Tested (NLT), and will normally contain pinholes but may occasionally be free from pinholes. Foils less than 0.025mm in thickness can often be supplied LT but may incur additional charges. Please specify if you require LT foils

## Vacuum tight

Vacuum tight foils show no detectable leakage when tested with a helium mass spectrometer with a sensitivity of 10<sup>-9</sup> atm-cm<sup>3</sup>.s<sup>-1</sup>.

## **Continuous Lengths**

If you require material in continuous lengths please tell us when you place your order. Unless otherwise specified, we reserve the right to supply in more than one length.

#### **Technical Data and Information**

All information and technical data are given as a guide only. Although every effort has been made to ensure that the information is correct, no warranty is given as to its completeness or accuracy.

#### **Tolerances**

For details of our standard tolerances, please refer to the Product Description section. In many cases, closer tolerances are available but may be subject to an extra charge. If you have any special requirements it is important that you tell us at the time of ordering. This includes special tolerances, dimensional uniformity or any other special requirement which you may have (for example edge finish, packaging, labelling etc.). Please indicate precisely what is required and we shall do our best to meet your specification.



## **Order information**

## **General Information**

There are over 70,000 stock packs listed and if you cannot find what you need amongst them, please ask for special sizes, thicknesses, tolerances, dimensions or larger quantities. We are also able to offer many other pure metals, alloys, polymers and ceramics to special order.

#### **Prices**

All the prices listed are total (lot) prices for the sizes and quantities listed. Prices are subject to change without notice.

Prices shown include delivery except for those items marked as "special offer" or dangerous goods with transport restriction. They do not include value added tax, any import duties or local taxes.

## **Transport Restriction**

Some of the materials supplied by Goodfellow are subject to special transport restrictions. Additional shipment charges may apply which are dependent on destination. Please check the individual item on our website or contact us for details of the charges.

If you intend to have the material transported or sent onwards please ensure that you are aware of the relevant transport restrictions.

## **Delivery**

Delivery by door-to-door courier service of our choice is included in the prices, although alternative methods may be used depending on the materials ordered.

## Split shipment

All orders are accepted for one shipment on one date to one address. A charge will be made for split shipments made at the customer's request.

## Special Analysis, Supports or Tolerances

An extra charge is made for non-standard supports, alternative tolerances and certificates of analysis. The analysis is free of charge for items marked "High Purity".

#### **Cancellations**

A charge for cancellation of orders may be made. The amount will depend on the circumstances.

## **Express Service**

An administration charge will be made for any order received for which same day shipment is requested.

## **Shipment**

We aim to have all items listed in this catalogue in stock in the quantities and sizes listed. We can only undertake to despatch an order on a particular date. The date of delivery at the customer's address is subject to the normal variations of the delivery service used.

## **Despatch**

Orders will normally be despatched within 48 hours of receipt.

## Non delivery

If we have notified you of despatch of goods and you have not received delivery within 7 days, please contact us.

#### Insurance

All consignments will be insured by us against the usual risks unless we are instructed in writing to the contrary.

## **Export Restrictions**

A UK Government export licence may be required for some items to some destinations. If the item you require needs a special export licence or an end-use statement we will inform you at the time you order.

## Materials Handling

Many of our materials are extremely delicate and it is essential every care is taken when handling them. Special attention is drawn to the extreme fragility of Microfoil, Microleaf and thinner and finer materials.

All materials are carefully packed to ensure safe transport of goods to your address. We do not accept responsibility for damage caused by mishandling once the outer transit packaging has been removed.

## Terms of payment

Our normal terms of payment are net 30 days from date of invoice. Any alternative terms of payment are to be agreed with us in writing at the time of placing an order. Customers may be asked to pay cash with order or cash against pro-forma invoice with their first order. In order to establish a credit account we will require details of your bankers, along with two trade references.



## Order information

#### Credit account

We endeavour to keep our costs down and customers are requested to pay our invoices on time. We reserve the right to delay delivery if there are overdue invoices on the account. Accounts which remain unpaid beyond the due date may incur an interest charge at a rate of 2% per month.

## Credit card payments

We also accept payment using the following credit and charge cards:

Mastercard, VISA, American Express, DELTA and Switch.

#### **VAT**

VAT number: GB 212 8527 79

#### UK

VAT will be added to the invoice at the rate ruling at the date of invoice. Where a customer is exempt, VAT will be charged unless we receive a copy of the exemption form at the time the order is placed.

### EU

Customers registered for VAT who provide their local registration number will not be charged UK VAT.

Customers who are exempt from VAT will not be charged UK VAT provided we are given a copy of their exemption form at the time the goods are ordered.

Customers not registered for VAT or who fail to give us their registration number will be charged UK VAT at the current rate.

## **Export**

All exports to countries outside the EU are zero-rated for UK VAT unless the invoice is being paid from within the EU.

## Return of goods

We will only accept return of goods provided we are contacted BEFORE the goods are returned. When we agree to the return we will issue a Goods Return Number and give instructions for the method of return of the goods. Goods will not be accepted for return without a valid Goods Return Number. Due to the nature of some of our materials, it is imperative that you check any possible transport restrictions with your proposed freight company.

#### Claims

Great care is taken during manufacture and packing and all items are carefully inspected before shipment. Any claim in respect of short delivery, incorrect material or defective quality must be notified to us in writing within three days of delivery. Please retain ALL packaging for our inspection. Our liability for any such claim shall not exceed the cost of replacement of the goods free of charge, or crediting the customer with the invoice value thereof.

#### Goods ordered in error

We do not accept responsibility for customers' errors in ordering. The amount of credit for returned goods will be at our discretion. Where we accept returned goods a restocking charge will be made.

### **Conditions of sale**

All orders, contracts and quotations are subject to our standard terms and conditions of sale.

Information and statements provided are indicative only and do not form part of any offer or contract.

#### **Exclusions**

We supply materials according to our specification. All conditions warranties and representations regarding the quality, fitness for purpose or state, size, shape, capacity or colour of goods supplied whether expressed or implied by common law or statute or otherwise are hereby expressly excluded. We shall not be liable for any damage direct or consequential arising from the use of goods supplied by us however such damage is caused, nor for delay in delivery.

#### Law

Customers in the USA: Contracts between Goodfellow Corporation and the customer shall be deemed to be subject in all respects to the laws of the Commonwealth of Pennsylvania, or the United States of America.

Customers in France: Contracts between Goodfellow SARL and the customer shall be deemed to be subject in all respects to French law unless otherwise agreed in writing

Customers in Germany: Contracts between Goodfellow GmbH and the customer shall be deemed to be subject in all respects to German law unless otherwise agreed in writing



## **Order information**

Customers in the UK and all other countries: Contracts between Goodfellow Cambridge Limited and the customer shall be deemed to be subject in all respects to English law unless otherwise agreed in writing. Copies of our General Terms and Conditions are available upon request or can be downloaded from our websites at www.goodfellow.com or www.goodfellowusa.com.



## **Company Details**

## **Company Structure**

The Goodfellow Group consists of five companies:

#### Goodfellow Cambridge Limited

Goodfellow was established in the City of London in 1946. The Company now has subsidiary operations in France, Germany and North America with the Group's research laboratories, workshop facilities & central administration located in Huntingdon, England.

#### Goodfellow Corporation

Established at the same time as our associate company in Germany, Goodfellow Corporation was set up to service the requirements of our customers in the USA.

#### Goodfellow GmbH

Since 1989, this member of the Goodfellow group of companies has been serving the needs of our German speaking customers within Europe.

#### Goodfellow SARL

Goodfellow established an operation in France in 1993 to meet the needs of our French-speaking customers in Europe.

## Goodfellow (Shanghai) Trading Co., Ltd

Goodfellow established a representative office in Shanghai in 2006, and in 2012 followed this with the creation of a fully-fledged trading company, servicing the research and specialist manufacturing requirements of the Chinese market.

#### COMPANY DETAILS

Ermine Business Park

## Goodfellow Cambridge Limited

**HUNTINGDON PE29 6WR England** Registered in England and Wales no. 1188162 VAT registration GB 212 8527 79

## Goodfellow Corporation

125 Hookstown Grade Road Coraopolis, PA 15108-9302 USA A Pennsylvania corporation EIN 23-2557381

#### Goodfellow SARL

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Siren: 381486836

Numéro de TVA Intracommunitaire :

FR 06 381 486 836

#### Goodfellow GmbH

Am Edelspfad 4 D-61169 Friedberg Germany Registered in Friedberg (Hessen) No. HRB 1309 Import VAT number DE112610478

## Goodfellow (Shanghai) Trading Co., Ltd

Fl. 23, 758 Nanjing Road West SHANGHAI 200040 The People's Republic of China



#### GENERAL

1.1 In these Conditions:
1.1.1 the following expressions shall have the following meanings:-

the individual firm company or other party from whom an order to supply Goods and/or Services is received by the Seller;

"Conditions"

the standard terms and conditions of sale of the Seller as set out herein and includes any additional terms and conditions of sale agreed in writing by the Seller; a contract for the Supply of Goods and/or Services by the Seller to the Buyer;

"Contract"

"Date of Delivery" the date on which delivery of the Goods or Services takes place pursuant to Condition 7; the goods which the Seller is to supply (or, in relation to Condition 11, the goods in respect of which the Seller is to provide Services) under the Contract and includes any of them or any part of them and where the context so admits includes raw materials, processed materials and/or manufactured products whether processed or manufactured by the Seller or not; a payment to be made by the Buyer pursuant to Condition 6.2 to be used at the Seller's discretion for the purchase of materials and/or towards the costs of labour and other costs relating to the supply of Goods;

"Recommendations

ons the recommendations (if any) relating to the storage, handling, application and/or use of the Goods contained in the published literature of the Seller (or, if relevant, a Supplier) or any recommendations made in Writing by an authorised representative of the Seller (or, if relevant, a

"Seller

Supplier); Goodfellow Cambridge Limited and any subsidiary or holding company or associate (as such terms are defined in the Companies Act 1985 (as amended)) of the said company; the work or services or any of them to be

provided by the Seller under the Contract;

"Supplier"

any person, firm or company who or which supplies materials to the Seller which make up the Goods which are to be supplied to the Buyer;

- 1.1.2 words importing the singular number shall include the plural and vice versa, words importing one gender shall include all genders, and words importing persons shall include bodies corporate, unincorporated associations and partnerships
- If satisfactory references and information on the Buyer are not provided within seven days of a request therefore by the Seller, or if, following the provision of such information, the Seller is unable to obtain satisfactory trade indemnity or similar cover in respect of its dealings with the Buyer, the Seller may terminate the Contract and the rights and liabilities of the parties shall be the same as if the Contract had been cancelled in accordance with the provisions of Condition 10.2
- The seller reserves the right to assign, sub-contract the Contract or any part thereof. The Buyer shall not be entitled to assign the benefit or burden of the Contract without the consent in writing of
- In relation to all obligations of the Buyer under these Conditions, the time of performance is of the essence
- The legal construction of these Conditions shall not be effected by their headings which are for convenience of reference only **ORDERS**

- 2.1 Notwithstanding that the Seller may have given a detailed quotation or estimate either verbally or in writing no order shall be binding on the Seller unless and until it has been acknowledged in writing by the Seller or the Goods are delivered or the Services are provided by the Seller to the Buyer pursuant to the order
- 2.2 In order to avoid duplication of orders the Buyer shall be responsible In order to avoid duplication of orders the Buyer shall be responsible for ensuring that any confirmation of an order previously placed is prominently marked as being a confirmation and not a new order. The Buyer acknowledges that any order or confirmation of order which is not so marked may be treated and accepted by the Seller as a new order to create a Contract in addition to any Contract arising out of the previously placed order
- 2.3 These Conditions are incorporated in the Contract and together with any matter set out in the Seller's quotation or acceptance/acknowledgement of order contain the entire obligations between the Seller and the Buyer. In the case of any inconsistency between any letter or quotation incorporating or referring to these Conditions and any order, letter or form of contract sent by the Buyer to the Seller, whatever may be their respective dates, the provisions of these Conditions shall prevail. In the event of the Seller entering into the Contract without the Seller having submitted a written quotation or other letter or document incorporating or referring to these Conditions but in circumstances where the Buyer has had prior notice of these Conditions then all Goods or Services supplied shall be subject to these Conditions
- 2.4 No variation of the Contract by the Buyer shall be binding upon the Seller unless made in Writing and signed on behalf of the Seller. In the event of such variation the Buyer shall indemnify and keep indemnified the Seller in full against all loss, which term shall include (but without prejudice to the generality thereof) loss of profit, costs (including the cost of labour and materials), damages, charges and expenses incurred (directly or indirectly) by the Seller as a result of such variation

2.5 Any representations (except fraudulent misrepresentations) or warranties made by or on behalf of the Seller prior to the Contract (whether verbally or in writing) are hereby expressly excluded and shall be of no effect

#### DESCRIPTION

- 3.1 Any figures, statements, descriptions, illustrations, photographs, drawings, weights or any other matters contained in the Seller's catalogues, pamphlets, price lists or advertising literature are not guaranteed to be accurate and are intended merely to represent a general picture of the Seller's products and shall not form part of the Contract nor be regarded as a warranty or representation relating to the Goods or Services
- The Seller reserves the right to amend the specification of its products and services from time to time so that the descriptions thereof as set out in its catalogues, pamphlets, price lists or advertising literature may not be identical with those set out in the Seller's quotation and the Buyer is advised to check the specification set out in the Seller's quotation before placing an order

#### SPECIFICATIONS AND INTELLECTUAL PROPERTY

- Where goods are supplied to the Buyer's own specification, or where standard goods of the Seller are altered in accordance with the Buyer's instructions the Buyer warrants and undertakes full responsibility for the suitability and fitness of the specification, pattern or design does not infringe any patent, trade mark, registered design, copyright or any other proprietary right of any third party and the Buyer shall indemnify and keep the Seller idemnified in full against any loss, damage or expense whatsoever (including costs) which the Seller may incur in or arising from the performance of the Contract by reason of any infringement of any such patent, trade mark, registered design, copyright or any other proprietary right
- The Seller reserves the right to change the Buyer's specification as required to ensure that the Goods comply with any health, safety or other statutory requirement or provision and no such change by the Seller will constitute a breach of contract or impose upon the Seller any liability whatsoever Unless otherwise agreed in writing, the Seller will be the sole owner of all inventions, formulations, tools, patterns, designs or other similar items and the copyright in all documents and drawings made or produced by it in preparing a quotation for the Buyer or in the course of work on any Contract with the Buyer

#### QUOTATIONS

The Seller's quotations are provisional in so far as they are subject to alteration by reference to any changes in the price of raw materials, any item to be acquired by the Seller from a third party, rates of wages, other costs of production and any other circumstances beyond the Seller's control taking place between the date of the quotation and the Buyer's placing of an order in respect thereof

#### PRICE

- 6.1 The Seller shall be entitled to adjust the Contract price of the Goods or Services whether before or after the making of the Contract in the event of any variation in the cost to the Seller of supplying the same or any part thereof caused by:

  6.1.1 any increase in the cost of materials required by the Seller for the completion of the Contract; or

  6.1.2 any increase in wages or production and manufacturing costs or other overheads; or

  6.1.3 any other reason whatsoever beyond the control of the Seller including (but without prejudice to the generality of the foregoing) fluctuations in exchange rates between monetary currencies the action of any government or any other authority or any labour problems
- 6.2 In the Seller's absolute discretion, a Prepayment in respect of the Contract may be required to be paid by the Buyer to the Seller on the terms set out in this Condition. The Prepayment shall be applied as
  - 6.2.1 in the event that the Contract is performed in full by both parties the Prepayment shall be retained by the Seller in reduction of the total price payable by the Buyer under the
  - Teduction of the total price payable by the buyer times the Contract;

    2 in the event that the Buyer is either in default of any of its obligations under the Contract or cancels or suspends the Contract in accordance with Condition 10 the Prepayment shall be set off by the Seller against its proper costs losses or damages arising in connection with the default and/or cancellation or suspension
- 6.3 Unless otherwise stated, the price set out in the Seller's quotation includes the cost of packaging, carriage, and (save as provided in Condition 6.4) insurance. In respect of supplies of Goods in the United States of America, Canada and Japan the price also includes import duties and sales taxes (if any). In respect of supplies of Goods in other countries the price does not include import duties or VAT or sales taxes which will be extra charges based on prevailing rates
- 6.4 Where the Buyer requests a particular means of delivery, the price set out in the Seller's quotation does not include insurance, which is to be arranged at the responsibility of the Buyer.

- Delivery of Goods shall be deemed to be effected by the Seller at the
  - 7.1.1 where Goods are collected by or on behalf of the Buyer by its servants or agents, or where Goods are collected in



- accordance with a means of delivery specifically requested by the Buyer, when the same are collected; .2 where delivery of the Goods is to be the responsibility of the Seller, when they arrive prior to unloading at the Buyer's
- premises;
  7.1.3 where Goods are sold FOB or CIF, when they pass the ship's rail or are loaded onto the aircraft
- 7.2 Delivery of Services shall be deemed to be effected by the Seller at the time of completion by the Seller of the Services
- 7.3 Whilst the Seller will make every reasonable effort to complete the Contract by the date or dates therein specified for delivery of Goods or provision of Services such date or dates shall only constitute the times by which the Seller expects to effect such delivery and if no time is agreed delivery will be within a reasonable time but the performance of the Contract by the Seller shall not be the essence of the Contract, the Seller's failure to so deliver by the due date or dates shall not constitute a breach of Contract and the Seller shall not in any circumstances be responsible for any direct or consequential loss or damage of any kind whatsoever resulting therefrom. The Seller may wholly or partly suspend deliveries of Goods or provision of Services and the Buyer shall accept late delivery of such Goods or Services unless the Buyer has cancelled the Contract in accordance with the provisions of Condition 10.3

#### 8 QUANTITIES INSTALMENTS AND STORAGE

- 8.1 Where Goods are delivered or Services are by instalment each instalment shall be deemed to be sold under a separate Contract and the party in default in respect of any instalment shall fbe liable accordingly, but no default in respect of any one instalment shall effect due performance of the Contract as regards other instalments
- 8.2 The Seller will endeavour to deliver the quantity of Goods ordered and every delivery shall be deemed to comply with the order. If there is a surplus or shortage of Goods which is no more than 10% of the quantity specified in the order the Buyer shall be deemed to have accepted the Goods and shall pay for the actual quantity delivered
- 8.3 If Goods or Services are to be delivered by instalments, the Seller shall be entitled to invoice each instalment as and when delivery is made and payment for all delivered instalments shall be due notwithstanding the non-delivery of other instalments or other default by the Seller. Failure by the Buyer to make payment by the due date for any one instalment for whatever reason shall entitle the Seller to suspend deliveries of Goods or provision of Services under the Contract but without prejudice to any other right the Seller may have under any of the other provisions of these Conditions
- 8.4 Notwithstanding that risk shall have passed to the Buyer pursuant to Condition 15 the Seller may in its absolute discretion arrange for storage of the Goods either at the request of the Buyer or as a result of the failure by the Buyer to take delivery of the Goods under Condition 7. The Seller may insure the goods whilst in storage and the Buyer shall indemnify and keep indemnified the Seller in full against all costs, losses, damages and expenses whatsoever arising in connection with the storage provided for hereunder and such costs, losses, damages and expenses will be added to and form part of the price of the Goods
- 8.5 Unless otherwise agreed between the Buyer and the Seller, the Seller shall be entitled in its absolute discretion and without giving prior notice to the Buyer at the expiration of 3 months to sell or otherwise dispose of Goods kept in storage as provided in Condition 8.4

#### 9 TERMS OF PAYMENT

- 9.1 Unless otherwise agreed the price shall be due and payable at the Seller's offices 30 days after the date of the Seller's invoice
- 9.2 If the Buyer does not pay the whole or any part of the price on the required day then the Buyer shall pay to the Seller on request interest on the amount outstanding from the required day until the actual date of payment at the rate of 2% p.a. over the base rate of Barclays Bank plc from time to time in force which shall accrue on a daily beginning.
- 9.3 Condition 12 shall apply in the event of any alleged defect or failure in or of the Goods or Services and the Buyer shall not delay or refuse to make payment in any such event
- 9.4 The Buyer shall not be entitled to withold payment of any amount due to the Seller by reason of any disputed claim by the Buyer in connection with the Contract nor shall the Buyer be entitled to set off against any amount payable under the Contract to the Seller any amount which is not then due and payable by the Seller or for which the Seller disputes liability. disputes liability
- 9.5 All payments payable to the Seller under the Contract shall become due immediately upon termination of the Contract despite any other provision.

#### 10 SUSPENSION AND CANCELLATION

10.1 If the Buyer shall commit any breach of the Contract and fail to remedy the same within 7 days of receiving the Seller's request in writing so to do or any distress or execution is levied upon any goods or property of the Buyer or the Buyer makes any voluntary arrangement with its creditors or becomes subject to an administration order or (being an individual or firm) becomes bankrupt or (being an incorporated company) passes a resolution for winding up (otherwise than for the purpose of amalgamation or reconstruction), or a Court makes an order to that effect, or an encumbrancer takes possession, or an administrative receiver or receiver is appointed, of any of the property or assets of the Buyer, or the Buyer ceases, or threatens to cease, to carry on business or is unable to pay its debts within the meaning of section 123 Insolvency Act, 1986, or the Seller reasonably apprehends that any of the events mentioned above is about to occur in relation to the Buyer and notifies the Buyer accordingly, the Seller may:

may:-10.1.1 stop any Goods in transit and suspend any further deliveries;

and/or

- 10.1.2 suspend work on the Contract; and/or 10.1.3 determine the Contract forthwith and if the Goods or Services, or any part of them have been delivered but not paid for, the price shall become immediately due and payable notwithstanding any previous agreement to the contrary but without prejudice to the Seller's right to any unpaid price for Goods or Services delivered under the Contract and to damages for loss (both direct and consequential) suffered in consequence of such determination
- 10.2 If the Buyer requires cancellation of the Contract this will only be accepted at the sole discretion of the Seller and unless otherwise agreed in writing only upon condition that any costs, charges or expenses (both direct and consequential) incurred by the Seller up to the date of cancellation and the value of all loss or damage (both direct and consequential) incurred by the Seller by reason of such cancellation will be reimbursed by the Buyer to the Seller forthwith. Acceptance by the Seller of y cancellation by the Buyer will only be binding upon the Seller if it is made in writing
- binding upon the Seller if it is made in writing

  10.3 In the event of the Seller other than in any of the circumstances set out in Condition 10.1 being prevented or hindered from completing the Contract either wholly or in part in accordance with the terms thereof for any reason whatsoever beyond its reasonable control which, for the avoidance of doubt and without prejudice to the generality of the foregoing, shall include governmental action, war, riot, civil commotion, fire, flood, epidemic, labour disputes (including labour disputes involving the work force or any part thereof of the Seller or Supplier), restraints or delays affecting shipping or carriers, licensing, exporting or importing restrictions, currency restrictions and Acts of God then further performance of the Contract shall be suspended for the period during which the Seller is so prevented provided that in the event of the Contract being suspended for a continuous period of more than 3 months then either party may give the other notice in writing to terminate the Contract forthwith and in such circumstances the Buyer shall pay for all Goods or Services supplied to the date of such termination such payment to be made on or before the last day following the month during which termination was effected. The Seller shall be under no liability whatsoever to the Buyer for any direct or consequential loss or damage suffered by the Buyer as a result of the Seller's inability to perform its obligations under the Contract in these circumstances
- 10.4 The Seller's rights contained in Condition 17 (but not the Buyer's rights) shall continue beyond the discharge of the parties' primary obligations under the Contract consequent upon its termination
- 10.5 The termination of the Contract for whatever reason will be without prejudice to the rights and duties of either party accrued prior to termination

#### 11 INSPECTION AND CLAIMS FOR DEFECTS

- .1 The Goods are of a highly specialised nature and must be treated with the utmost care. It is essential that the Buyer checks that they correspond in all respects with the Buyer's requirements. Any discrepancies should be notified to the Seller immediately. The Buyer undertakes to ensure that all Goods are unpacked and handled only by persons qualified to deal with such specialised products, to safeguard against injury to the Goods or to the Buyer's personnel
- 11.2 The Buyer shall inspect the Goods and carry out tests to ensure the 2 The Buyer standing the Goods and carry out tests to ensure the Goods conform with the description of the Goods or Services in the Buyer's orders within 7 days of Delivery and whether or not the Buyer carries out such obligation to inspect and test no claims for non-delivery, shortages in quantity of units delivered, defective Goods or Services, non-conformity to description or partial loss or damage to Goods will be accepted by the Seller unless:-
  - 11.2.1 they are notified in writing by the Buyer to the Seller within 10 days after the Date of Delivery (in the case of partial loss, damage, non-conforming or defective Goods or Services) or 14 days after the date of the invoice (in the case of non-delivery);
  - 11.2.2 the Goods in respect of which a claim is made together with all the relevant packing are preserved intact as received for a period of 35 days from notification of any such claim and the Buyer permits the Seller or its servants or agents full and free right of access to inspect the Goods and investigate the claim; and
  - 11.2.3 if the Buyer fails to give the appropriate notice as specified in Condition 11.2.1, the Buyer's claim will be deemed to have been waived and will be absolutely barred
- 11.3 It is in all cases the responsibility of the Buyer to ensure by testing or otherwise that the Goods are fit and suitable for the purposes for which the Buyer requires them in the conditions in which they will be used. The Buyer acknowledges that the Seller shall be under no liability of any description to the Buyer if the Goods prove to be unsuitable for whatever reason for application or use notwithstanding that the Seller may, at the request of the Buyer, have given in good faith technical or other advice in relation to the proposed application or use of the Goods and the Buyer shall indemnify and keep indemnified the Seller in full against any and all liability of any kind arising out of or connected with the application or use of the Goods
- 11.4 Section 3 Sale and Supply of Goods Act 1994 shall not apply
- 11.5 The Seller will not accept the return of Goods in any circumstances unless it has first issued a Goods return number and such number is quoted with the returned Goods

#### 12 WARRANTY

12.1 In substitution for all and any other rights which the Buyer might or would have had but for these Conditions and subject to Condition 11,



the Seller shall make good by replacement any failure in the Goods or Services which results from defects in the Seller's materials or workmanship and which appear not later than 2 months after the Date of Delivery and shall replace any Goods or Services which do not conform with the description in the Buyer's order

- 12.2 Notwithstanding the provisions of Condition 12.1, in the case of a claim falling within Condition 12.1, the Seller reserves the right at its sole discretion to credit the Buyer in full the price paid by the Buyer to the Seller
- 12.3 The Seller's liability under this Condition shall automatically cease
  - 12.3.1 the Buyer has not paid for all Goods or Services supplied under any Contract by the due date or is otherwise in breach of this or any other Contract made with the Seller; or
  - 12.3.2 the Seller or its servants or agents are denied full and free right of access to the allegedly defective Goods; or
  - 12.3.3 the Buyer has not properly maintained the Goods or has not complied with any Recommendations for Use; or
  - 12.3.4 the defect or failure is caused by a breach by the Buyer of its undertakings and warranties contained in Condition 17; or
  - 12.3.5 the Buyer has failed to notify the Seller in writing of any defect or suspected defect within 14 days of the same coming to the knowledge of the Buyer
- 12.4 The warranty set out in Condition 12.1 shall be in lieu of any warranties conditions or undertakings whether express or implied by statute, common law or otherwise howsoever which warranties, conditions and undertakings are hereby expressly excluded, except that such exclusions will not apply to any implied condition that the Seller has or will have the right to sell the Goods when the property is to pass
- 12.5 Nothing in these Conditions excludes or limits the liability of the Seller for death or personal injury caused by the Seller's negligence or fraudulent misrepresentation
- 12.6 SUBJECT TO CONDITIONS 12.4 AND 12.5
  12.6.1 the seller's total liability in contract, tort (including negligence or breach of statutory duty), misrepresentation or otherwise, arising in connection with the performance or contemplated performance of the contract shall be limited to the price paid for the goods or services under the contract; and
  - 12.6.2 the seller shall not be liable to the buyer for any indirect or consequential loss or damage (whether for loss of profit, loss of business, depletion of goodwill or otherwise), costs, expenses or other claims for consequential compensation whatsoever (however caused) which arise out of or in connection with the contract

#### 13 CONSUMER SALES

13.1 Where the Goods are sold under a consumer sale (as defined by the Sale of Goods Act 1979) the statutory rights of the Buyer are not affected by these conditions

#### 14 TITLE TO GOODS

- 14.1 Full legal and beneficial ownership of the Goods shall be retained by the Seller notwithstanding that the risk in the same shall pass to the Buyer at the time of delivery until the Seller has received payment in
  - full in respect of
    14.1.1 The Goods; and
    14.1.2 All other sums which become due and owing by the Buyer to the
    Seller on any account whatsoever
- 14.2 Until ownership of the Goods has passed to the Buyer the Buyer shall hold the Goods in a fiduciary capacity and as bailee of the Seller and shall at all times take proper care of the same and will not obliterate or obscure any identifying mark or their packaging and will keep the Goods separate from any other goods and in such manner that they may be clearly identified as belonging to the Seller and the Buyer hereby grants to the Seller the right to enter on the Buyer's premises at any time during the continuation of the Contract to check that the Buyer is complying with the obligation contained in this Condition. The Buyer will return the Goods to the Seller if it receives a request whether verbally or in Writing so to do prior to payment in full as aforesaid having been made and the Seller will then repay any part of the purchase price it has already received in respect of the Goods less a reasonable amount in respect of its costs and expenses in connection with the Contract
- 14.3 For the purposes of Condition 14.1, the expression "the Buyer" includes any subsidiary or holding company or associate of the Buyer (as such terms are defined in the Companies Act 1985 (as amended))
- 14.4 The Seller will have the right to maintain an action against the Buyer for the price of the Goods notwithstanding that property in the Goods has not been passed

#### 15 RISK AND INSURANCE

- 15.1 The risk in the Goods shall pass to the Buyer at the time of delivery as provided for in Condition 7
- 15.2 Notwithstanding the reservation of title contained in Condition 14, the Buyer shall insure the Goods and/or any products made wholly or partly therefrom for the full amount of the price payable under the Contract with an insurance office of repute from the time of delivery of the Goods until the date title in the Goods passes to the Buyer pursuant to Condition 14.1

#### 16 EXPORT TERMS

16.1 In these Conditions "Incoterms" means the international rules for the interpretation of trade terms of the International Chamber of Commerce

- as in force at the date when the Contract is made. Unless the context otherwise requires, any term or expression which is defined in or given a particular meaning by the provisions of Incoterms has the same meaning in the Contract
- 16.2 Where the Goods are supplied for export from the United Kingdom then unless otherwise agreed in writing between the Buyer and the Seller

  - uniess ornerwise agreed in writing between the Buyer and the Seller

    16.2.1 the provisions of Incoterms shall (subject to any special terms agreed in writing between the Buyer and the Seller) apply but if there is any conflict between the provisions of Incoterms and these Conditions, the latter shall prevail.

    16.2.2 the Buyer shall be responsible for complying with any legislation or regulations governing the importation of the Goods into the country of destination and (save in respect of the United States of America, Canada and Japan) for the payment of any duties and taxes thereon unless payment for these is included in the Contract

    16.2.3 the Buyer shall be deemed to have satisfied itself that such Goods comply with the safety regulations of any country or state in which the Goods are to be used outside the United Kingdom and the Buyer shall indemnify and keep indemnified the Seller in full for any loss or damage whatsoever which the Seller may incur if such Goods do not comply with such safety regulations
- 16.3 The Goods shall not be used in any country other than that for which the Seller was aware they were originally ordered without the Seller's consent in writing
- 16.4 The Buyer undertakes not to offer the Goods for resale in any country notified by the Seller at or before the time the Buyer's order is placed, or to sell the Goods to any person if the Buyer knows or has reason to believe that person intends to resell the Goods in any such

#### 17 BUYER'S WARRANTIES

- 17.1 The Buyer warrants to the Seller that:
  17.1.1 the Buyer will install, operate or otherwise use or store the Goods strictly in accordance with the Recommendations for Use and with all relevant or applicable statutory or other regulations governing the installation, operation, use or storage of the Goods; and
  17.1.2 any collection vehicle, container, ship or other means of transport provided by the Buyer or any agent of the Buyer will comply with all relevant legislation and regulations relating to health and safety requirements; and
  17.1.3 the storage and transport facilities and all parts thereof and all equipment used in connection therewith is suitable for storage (both short term and long term) and transport of the Goods and complies with any statute, regulation, bye law or other rule having the force of law and relating to the storage of goods of the nature of the Goods; and
  17.1.4 the Buyer will ensure that the Goods are stored in conditions appropriate to goods of that nature and will comply with any recommendations as to the storage of Goods notified to it by the Seller from time to time; and
  17.2 The Buyer shall indemnify and keen indemnified the Seller in full
- 17.2 The Buyer shall indemnify and keep indemnified the Seller in full against any claim, loss or damage (including, without limitation, damage to the reputation of the Seller) arising directly or indirectly from any breach of the warranty contained in Condition 17.1

#### 18 SEVERANCE

18.1 If at any time any one or more of the provisions or part thereof of these Conditions becomes or is invalid, illegal or unenforceable in any respect under any law or is held by a court to be invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions hereof and the remainder of such provision shall not in any way be affected or impaired thereby

#### 19 JURISDICTION

19.1 These Conditions and each and every Contract made pursuant to them shall be governed by and construed in all respects in accordance with the laws of England and the Seller and the Buyer hereby agree to submit to the non-exclusive jurisdiction of the English Courts

#### 20 NOTICES

- 20.1 Any notice required or permitted to be given by either party to the other under these Conditions shall be in writing addressed to that other party at its registered office or principal place of business or such other address as may at the relevant time have been notified pursuant to this provision to the party giving notice
- 20.2 Any notice given pursuant to clause 20.1 shall be deemed to have been

  - 20.2.1 if delivered by hand, on the first Business Day following delivery;

    20.2.2 if sent by post, on the third Business Day after posting if the address of the recipient is in the country of despatch, otherwise on the seventh Business Day after posting;

    20.2.3 if sent by facsimile transmission, on the first Business Day following successful transmission
- 20.3 In proving service it shall be sufficient proof in the case of a notice sent by post, that the envelope containing the same was properly stamped, addressed and placed in the post and, in the case of facsimile transmission, that it was properly addressed and successfully
- 20.4 In this Condition 20, "Business Day" shall mean any day other than Saturday, Sunday or any other day which is a public holiday in the place at which the notice is left or to which such notice is despatched

#### 21 WAIVER



	on Sale
21.1 No waiver by the Seller of any breach of any provision of the Contract by the Buyer shall be considered as a waiver of any subsequent breach	of the same or any other provision and the Seller shall not be prejudiced by any forbearance or indulgence granted by it to the Buyer



#### Stainless Steel - AISI 316

### Fe/Cr18/Ni10/Mo 3

Stainless steels are iron based alloys containing at least 10.5% Chromium. They achieve their stainless characteristics through the formation of an invisible and adherent Chromium rich oxide film. Alloy 316 is a general purpose austenitic stainless steel with a face centered cubic structure. It is essentially non-magnetic in the annealed condition and can only be hardened by cold working. Molybdenum has been added to increase corrosion resistance particulary in chloride containing environments, and the lower Carbon content of alloy 316L gives even better corrosion resistance in welded structures.

<b>Physical</b>	<b>Properties</b>

Density Melting point  $7.96~{\rm g}~{\rm cm}^{-3}$ 1370-1400 C

 $70\text{-}78~\mu\text{Ohmcm}$ 

Thermal Properties Coefficient of thermal expansion @20-100C Specific heat @23C

16-18 x10<sup>-6</sup> K<sup>-1</sup> 502 J K<sup>-1</sup> kg<sup>-1</sup> 16.3 W m<sup>-1</sup> K<sup>-1</sup>

**Electrical Properties** Electrical resistivity

Temperature coefficient

**Mechanical Properties** 

Elongation at break Hardness - Brinell Izod impact strength Modulus of elasticity

Tensile strength

Thermal conductivity @23C

< 60 % 160-190 20-136 J m<sup>-1</sup> 190-210 GPa 460-860 MPa



#### Foil

FE240201

Thickness . . . . . . . . . 0.005mm Temper . . . . . . . . . . . . . As rolled Coil width . . . . . . . . 95mm

Temper . . . . . . . . . . . As rolled

Coil	Width 95mm		Quantity
Web Code	Length	1 Reel	
298-831-678	0.025 m	£ 156.00	
477-710-288	0.05 m	£ 195.00	
738-363-550	0.1 m	£ 261.00	
769-676-127	0.2 m	£ 459.00	

Typical Analysis: Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.

FE240200 Thickness . . . . . . . . . . 0.0075mm

Sizes LT Quantity Web Code 580-775-917 **Size** 25 x 25 mm **1pc** £ 124.00 **2pcs** £ 142.00 **5pcs** £ 181.00 50 x 50 mm 100 x 100 mm £ 166.00 £ 250.00 005-607-204 £ 202.00 564-511-802

Typical Analysis: Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.

Thickness . . . . . . . . . 0.01mm FE240210

Sizes LT		Quantity					
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs	
691-109-391	25 x 25 mm	£ 118.00	£ 135.00	£ 169.00	£ 210.00	£ 272.00	
408-659-136	50 x 50 mm	£ 155.00	£ 187.00	£ 252.00	£ 327.00	£ 437.00	
382-323-015	100 x 100 mm	£ 229.00	£ 291.00	£ 417.00	£ 560.00		
309-591-411	200 x 200 mm	£ 376.00	£ 500.00	£ 912.00			

Coil	Width 200mm		Quantity
<b>Web Code</b> 681-208-729 151-095-905	<b>Length</b> 0.5 m 1 m	1 Reel £ 570.00 £ 929.00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
874-505-542	4 mm	£ 175.00	£ 201.00	£ 261.00
313-191-861	6 mm	£ 186.00	£ 217.00	£ 286.00
148-981-676	8 mm	£ 197.00	£ 233.00	£ 311.00
622-709-063	10 mm	£ 209.00	£ 249.00	£ 337.00
838-635-144	15 mm	£ 237.00	£ 288.00	£ 399.00
829-388-209	25 mm	£ 293.00	£ 367.00	£ 525.00
673-535-104	50 mm	£ 433.00	£ 567.00	

Typical Analysis : Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.





## Foil

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Thickness 0.0125mm	Temper						
NLT Sizes Web Code	Size	1pc	2pcs	Quantity 5pcs	10pcs	20pcs	
315-224-077	300 x 300 mm	£ 316.00	£ 416.00	£ 712.00	·	·	
Sizes LT				Quantity			
<b>Web Code</b> 552-575-541 536-042-776 912-255-041 884-184-587	Size 25 x 25 mm 50 x 50 mm 100 x 100 mm 150 x 150 mm	1pc £ 98.00 £ 118.00 £ 157.00 £ 197.00	2pcs £ 107.00 £ 135.00 £ 191.00 £ 247.00	5pcs £ 128.00 £ 172.00 £ 261.00 £ 349.00	10pcs £ 153.00 £ 216.00 £ 341.00 £ 466.00	<b>20pcs</b> £ 193.00 £ 281.00 £ 459.00	
Coil	Width 305mm		Quantity				
Web Code 268-613-511 576-693-177	Length 0.5 m 1 m	1 Reel £ 409.00 £ 538.00	-				
Discs			Quantity				
Web Code 086-638-569 829-819-967 727-492-235 936-530-731 066-339-633 292-450-578 556-314-046	Diameter     4 mm     6 mm     8 mm     10 mm     15 mm     25 mm     50 mm	10 discs £ 161.00 £ 167.00 £ 173.00 £ 179.00 £ 194.00 £ 224.00 £ 299.00	20 discs £ 182.00 £ 191.00 £ 199.00 £ 208.00 £ 229.00 £ 272.00 £ 379.00	50 discs £ 234.00 £ 247.00 £ 261.00 £ 274.00 £ 308.00 £ 376.00 £ 545.00			

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE240236	Thickness 0.025mm		Temper		Annealed			
	Size		Quantity					
	Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs	
	287-215-168	25 x 25 mm	£ 79.00	£ 84.50	£ 97.00	£ 113.00	£ 140.00	
	077-662-977	50 x 50 mm	£ 89.00	£ 98.50	£ 119.00	£ 145.00	£ 185.00	
	176-888-420	100 x 100 mm	£ 109.00	£ 127.00	£ 164.00	£ 208.00		
	219-178-538	150 x 150 mm	£ 129.00	£ 155.00	£ 209.00			

Coil	Width 150mm		Quantity
Web Code	Length	1 Reel	
002-714-482	0.3 m	£ 176.00	
374-373-073	0.5 m	£ 201.00	
640-341-755	1 m	£ 246.00	
525-720-344	2 m	£ 311 00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
696-721-569	4 mm	£ 144.00	£ 163.00	£ 210.00
770-716-080	6 mm	£ 147.00	£ 167.00	£ 216.00
257-560-506	8 mm	£ 150.00	£ 171.00	£ 223.00
002-261-348	10 mm	£ 153.00	£ 176.00	£ 230.00
071-270-305	15 mm	£ 161.00	£ 187.00	£ 247.00
558-113-813	25 mm	£ 176.00	£ 208.00	£ 281.00
114-361-288	50 mm	£ 214.00	£ 262.00	£ 367.00

Typical Analysis : Cr 16.5 - 20%, Mn  $\,$  <2%, Ni 8 - 14%, C  $\,$  <1200, Mo 2.0 - 3.5%, Fe balance.

FE240235	Thickness 0.025mm		Tempe	r	Hard		
	Size				Quantity		
	Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs
	539-255-548	25 x 25 mm	£ 79.00	£ 84.50	£ 97.00	£ 113.00	£ 140.00
	406-944-306	50 x 50 mm	£ 89.00	£ 98.50	£ 119.00	£ 145.00	£ 185.00
	868-043-217	100 x 100 mm	£ 109.00	£ 127.00	£ 164.00	£ 208.00	£ 274.00
	505-400-046	150 x 150 mm	£ 129.00	£ 155.00	£ 209.00	£ 271.00	
	324-323-523	300 x 300 mm	£ 189.00	£ 240.00	£ 343.00		
	Coil	Width 300mm		Quantity			
	Wah Cada	Longth	1 Dool				

Coll	wiath soumm		Quant
Web Code	Length	1 Reel	
175-000-147	0.3 m	£ 211.00	
875-021-259	0.5 m	£ 246.00	
377-654-242	1 m	£ 310.00	
206-783-620	2 m	£ 408.00	

Discs		Quantity			
Web Code	Diameter	10 discs	20 discs	50 discs	
847-953-403	4 mm	£ 144.00	£ 163.00	£ 210.00	
994-182-140	6 mm	£ 147.00	£ 167.00	£ 216.00	
272-763-858	8 mm	£ 150.00	£ 171.00	£ 223.00	
095-476-903	10 mm	£ 153.00	£ 176.00	£ 230.00	
934-621-616	15 mm	£ 161.00	£ 187.00	£ 247.00	
827-712-415	25 mm	£ 176.00	£ 208.00	£ 281.00	
464-054-696	50 mm	£ 214.00	£ 262.00	£ 367.00	

Typical Analysis : Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.





## Foil

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THICKINESS 0.030	111111	remper Annealed						
Size		Quantity						
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs		
006-831-080	25 x 25 mm	£ 72.00	£ 76.50	£ 86.50	£ 101.00	£ 124.00		
178-754-469	50 x 50 mm	£ 79.50	£ 87.00	£ 104.00	£ 125.00	£ 158.00		
072-015-385	100 x 100 mm	£ 94.50	£ 108.00	£ 138.00	£ 173.00	£ 226.00		
380-310-386	150 x 150 mm	£ 110.00	£ 130.00	£ 172.00	£ 221.00			
455-537-985	280 x 300 mm	£ 152.00	£ 190.00	£ 269.00				

Coil	Width 300mm		Quantity
Web Code	Length	1 Reel	
379-802-547	0.5 m	£ 204.00	
853-881-141	1 m	£ 253.00	
735-142-248	2 m	£ 372.00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
445-569-259	4 mm	£ 137.00	£ 155.00	£ 201.00
696-152-985	6 mm	£ 139.00	£ 158.00	£ 206.00
019-120-251	8 mm	£ 141.00	£ 162.00	£ 211.00
390-026-771	10 mm	£ 144.00	£ 165.00	£ 216.00
753-345-180	15 mm	£ 149.00	£ 173.00	£ 229.00
168-145-165	25 mm	£ 161.00	£ 189.00	£ 255.00
018-144-978	50 mm	£ 190 00	£ 230.00	£ 320.00

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

#### FE240241

Thickness 0.043mm		Temper		Annealed		
Size				Quantity		
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs
268-120-320	25 x 25 mm	£ 69.00	£ 72.00	£ 80.00	£ 91.50	£ 111.00
906-304-575	50 x 50 mm	£ 73.50	£ 79.00	£ 90.50	£ 106.00	£ 132.00
043-823-339	100 x 100 mm	£ 83.00	£ 92.00	£ 112.00	£ 136.00	£ 174.00
357-363-636	150 x 150 mm	£ 92.50	£ 105.00	£ 133.00	£ 166.00	
145-399-675	300 x 300 mm	£ 120.00	£ 145.00	£ 195.00		

Coil width . . . . . . . . . . 50mm

Coil	Width 300mm		Quantity
Web Code	Length	1 Reel	
475-317-419	0.5 m	£ 159.00	
515-047-022	1 m	£ 189.00	
380-876-465	2 m	£ 232.00	
609-561-962	5 m	£ 360.00	

Discs		Quantity			
Web Code	Diameter	10 discs	20 discs	50 discs	
716-230-104	4 mm	£ 135.00	£ 153.00	£ 197.00	
528-773-464	6 mm	£ 136.00	£ 155.00	£ 200.00	
096-685-377	8 mm	£ 138.00	£ 157.00	£ 203.00	
085-674-774	10 mm	£ 139.00	£ 159.00	£ 206.00	
709-344-073	15 mm	£ 143.00	£ 164.00	£ 214.00	
668-008-088	25 mm	£ 150.00	£ 174.00	£ 230.00	
501-001-183	50 mm	£ 168.00	£ 199.00	£ 270.00	

Typical Analysis : Cr 16.5 - 20%, Mn  $\,$  < 2%, Ni 8 - 14%, C  $\,$  < 1200, Mo 2.0 - 3.5%, Fe balance.

Thickness . . . . . . . . . 0.05mm

#### FE240252

Temper Annealed			
Coil	Width 50mm		Quantity
Web Code	Length	1 Reel	
335-248-059	0.5 m	£ 97.00	
550-032-385	1 m	£ 106.00	
772-471-539	2 m	£ 118.00	
098-081-069	5 m	£ 143.00	
583-919-504	10 m	£ 172.00	

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.





## Foil

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THICKHESS U.USHIIII		remper		Annealed				
Size		Quantity						
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs		
625-147-387	25 x 25 mm	£ 58.00	£ 60.50	£ 67.50	£ 77.50	£ 95.50		
143-423-411	50 x 50 mm	£ 61.00	£ 65.00	£ 74.50	£ 87.50	£ 110.00		
927-927-628	100 x 100 mm	£ 67.50	£ 74.50	£ 89.00	£ 108.00	£ 138.00		
990-952-718	150 x 150 mm	£ 74.00	£ 83.50	£ 103.00	£ 128.00	£ 167.00		
869-091-472	300 x 300 mm	£ 93.50	£ 111.00	£ 146.00				

Coil	Width 315mm	Quantity
Web Code	Length	1 Reel
414-677-654	0.5 m	£ 128.00
636-425-843 553-237-050	1 m 2 m	£ 149.00 £ 180.00
154-626-820	5 m	£ 272.00

Discs		Quantity			
Web Code	Diameter	10 discs	20 discs	50 discs	
044-185-686	4 mm	£ 117.00	£ 131.00	£ 168.00	
523-204-179	6 mm	£ 118.00	£ 132.00	£ 169.00	
400-518-197	8 mm	£ 118.00	£ 134.00	£ 171.00	
064-766-329	10 mm	£ 119.00	£ 135.00	£ 173.00	
095-799-983	15 mm	£ 121.00	£ 138.00	£ 178.00	
974-988-944	25 mm	£ 125.00	£ 143.00	£ 187.00	
873-617-576	50 mm	£ 136.00	£ 158.00	£ 209.00	

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE240260	Thickness 0.075mm		Temper		Annealed		
	Size				Quantity		
	Web Code	<b>Size</b> 25 x 25 mm	1pc	<b>2pcs</b> £ 60.50	<b>5pcs</b> £ 67.50	<b>10pcs</b> £ 77.00	<b>20pcs</b> £ 95.00
	202-193-183 274-139-626	50 x 50 mm	£ 58.00 £ 61.00	£ 65.00	£ 67.50 £ 74.50	£ 77.00 £ 87.00	£ 109.00
	267-451-277 431-406-861	100 x 100 mm 150 x 150 mm	£ 67.50 £ 73.50	£ 74.00 £ 83.00	£ 88.50 £ 103.00	£ 107.00 £ 127.00	£ 137.00 £ 166.00
	925-850-540	300 x 300 mm	£ 92.50	£ 110.00	£ 145.00	2 127.00	2 100.00

Coil	Width 300mm		Quantity
Web Code	Length	1 Reel	
834-711-260	0.5 m	£ 126.00	
731-314-989	1 m	£ 146.00	
414-366-159	2 m	£ 175.00	
795-774-431	5 m	£ 276.00	

Discs		Quantity				
Web Code	Diameter	10 discs	20 discs	50 discs		
976-315-340	4 mm	£ 117.00	£ 131.00	£ 167.00		
039-422-771	6 mm	£ 118.00	£ 132.00	£ 169.00		
927-843-251	8 mm	£ 118.00	£ 134.00	£ 171.00		
980-402-709	10 mm	£ 119.00	£ 135.00	£ 173.00		
550-338-714	15 mm	£ 121.00	£ 137.00	£ 177.00		
792-349-824	25 mm	£ 125.00	£ 143.00	£ 186.00		
043-730-078	50 mm	£ 135 00	£ 157 00	£ 209 00		

Typical Analysis : Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.

FE240261	Thickness 0.1mm		Temper.				
	Size				Quantity		
	Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs
	466-251-938	25 x 25 mm	£ 58.00	£ 60.50	£ 67.50	£ 77.00	£ 95.00
	281-489-244	50 x 50 mm	£ 61.00	£ 65.00	£ 74.50	£ 87.00	£ 109.00
	186-152-477	100 x 100 mm	£ 67.50	£ 74.00	£ 88.50	£ 107.00	£ 137.00
	269-054-407	150 x 150 mm	£ 73.50	£ 83.00	£ 103.00	£ 127.00	£ 166.00
	038-579-803	200 x 200 mm	£ 80.00	£ 92.00	£ 117.00	£ 147.00	
	Coil	Width 200mm		Quantity			

Coil	Width 200mm		Quantity
Web Code 976-562-169	Length 0.5 m	1 Reel £ 117.00	
070-268-148	1 m	£ 134.00	
783-518-246 939-777-689	2 m 5 m	£ 157.00 £ 225.00	





## Foil

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THICKHESS U.IIIIII		Temper Amealed							
Size		Quantity							
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs			
561-794-353	25 x 25 mm	£ 58.00	£ 60.50	£ 67.00	£ 77.00	£ 95.00			
224-291-668	50 x 50 mm	£ 61.00	£ 65.00	£ 74.00	£ 86.50	£ 109.00			
036-456-935	100 x 100 mm	£ 67.00	£ 73.50	£ 88.00	£ 106.00	£ 136.00			
557-117-288	150 x 150 mm	£ 73.50	£ 82.50	£ 102.00	£ 126.00	£ 164.00			
639-659-534	300 x 300 mm	£ 92.00	£ 108.00	£ 143.00					

Coil	Width 300mm		Quantity
Web Code	Length	1 Reel	
531-999-735	0.5 m	£ 125.00	
957-445-820	1 m	£ 145.00	
680-733-184	2 m	£ 173.00	
091-640-331	5 m	£ 288.00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
043-512-503	4 mm	£ 117.00	£ 131.00	£ 167.00
439-072-166	6 mm	£ 118.00	£ 132.00	£ 169.00
884-024-841	8 mm	£ 118.00	£ 133.00	£ 171.00
503-109-086	10 mm	£ 119.00	£ 135.00	£ 173.00
888-629-671	15 mm	£ 121.00	£ 137.00	£ 177.00
078-711-042	25 mm	£ 125.00	£ 143.00	£ 186.00
838-877-904	50 mm	£ 135 00	£ 157 00	£ 208 00

Typical Analysis : Cr 16.5 - 20%, Mn  $\,$  < 2%, Ni 8 - 14%, C  $\,$  < 1200, Mo 2.0 - 3.5%, Fe balance.

FE240270	Thickness 0.125mm		Temper.		Annealed		
	Size				Quantity		
	Web Code	Size	1pc	2pcs	5pcs	10pcs	2
	859-741-931	25 x 25 mm	£ 58.00	£ 60.50	£ 67.00	£ 77.00	£
	407 740 000	FO FO	0.04.00	0.05.00	0.74.00	0.00.50	C 40

20pcs £ 95.00 £ 109.00 £ 136.00 £ 164.00 467-742-886 467-858-087 482-252-580 281-567-544 £ 74.00 £ 88.00 £ 102.00 £ 143.00 50 x 50 mm 100 x 100 mm 150 x 150 mm £ 86.50 £ 106.00 £ 126.00 £ 61.00 £ 67.00 £ 73.50 £ 92.00 £ 65.00 £ 73.50 £ 82.50 300 x 300 mm £ 109.00

Coil	Width 300mm		Quantity
Web Code	Length	1 Reel	
338-901-712	0.5 m	£ 125.00	
195-942-444	1 m	£ 145.00	
492-812-288	2 m	£ 173.00	
601-527-128	5 m	£ 314.00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
861-599-197	4 mm	£ 117.00	£ 131.00	£ 167.00
699-888-083	6 mm	£ 118.00	£ 132.00	£ 169.00
486-003-341	8 mm	£ 118.00	£ 133.00	£ 171.00
750-417-602	10 mm	£ 119.00	£ 135.00	£ 173.00
802-202-487	15 mm	£ 121.00	£ 137.00	£ 177.00
275-310-865	25 mm	£ 125.00	£ 143.00	£ 186.00
413-855-170	50 mm	£ 135 00	£ 157 00	£ 208 00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE240290	Thickness 0.15mm		Temper		Annealed		
	Size				Quantity		
	Web Code	Size	1pc	2pcs	5pcs	10pcs	20
	731-893-232	25 x 25 mm	£ 58.00	£ 61.00	£ 67.50	£ 77.50	£ 95

**20pcs** £ 95.50 £ 110.00 £ 140.00 £ 169.00 50 x 50 mm 100 x 100 mm 150 x 150 mm 300 x 300 mm £ 61.50 £ 68.00 £ 74.50 £ 94.00 £ 65.50 £ 74.50 £ 84.00 £ 112.00 £ 75.00 £ 89.50 £ 104.00 £ 148.00 486-651-776 831-465-077 £ 88.00 £ 109.00 933-128-284 641-030-718 £ 130.00

Coil	Width 305mm	Quantity
Web Code	Length	1 Reel
362-714-704	0.5 m	£ 128.00
128-839-016	1 m	£ 150.00
104-875-058	2 m	£ 186.00
109-384-493	5 m	£ 350.00

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
415-027-873	4 mm	£ 117.00	£ 131.00	£ 168.00
878-475-987	6 mm	£ 118.00	£ 133.00	£ 169.00
809-489-860	8 mm	£ 119.00	£ 134.00	£ 171.00
186-233-697	10 mm	£ 119.00	£ 135.00	£ 173.00
279-202-137	15 mm	£ 121.00	£ 138.00	£ 178.00
900-273-673	25 mm	£ 126.00	£ 144.00	£ 187.00
534-211-512	50 mm	£ 136 00	£ 159 00	£ 211 00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.



## Stainless Steel - AISI 316

### Fe/Cr18/Ni10/Mo 3



## Foil

FE240300



Thickness 0.25mm		Temper.		Annealed						
Size				Quantity						
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs				
776-446-489	25 x 25 mm	£ 57.50	£ 59.50	£ 66.00	£ 75.50	£ 92.50				
055-811-008	50 x 50 mm	£ 60.00	£ 63.50	£ 71.50	£ 83.50	£ 104.00				
976-380-143	100 x 100 mm	£ 65.00	£ 70.50	£ 83.00	£ 99.50	£ 127.00				
047-514-019	150 x 150 mm	£ 70.00	£ 78.00	£ 94.50	£ 116.00	£ 149.00				
939-259-410	300 x 300 mm	£ 85 50	£ 99 50	£ 129 00						

Coil	Width 300mm	Quar	ntity
Web Code	Length	1 Reel	
339-340-573	0.5 m	£ 116.00	
407-427-151	1 m	£ 133.00	
928-392-810	2 m	£ 160.00	
040 444 050	F	0.005.00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
374-319-748	4 mm	£ 116.00	£ 131.00	£ 167.00
789-968-309	6 mm	£ 117.00	£ 132.00	£ 168.00
746-049-552	8 mm	£ 118.00	£ 133.00	£ 170.00
256-194-296	10 mm	£ 118.00	£ 134.00	£ 171.00
024-275-443	15 mm	£ 120.00	£ 136.00	£ 175.00
034-427-441	25 mm	£ 123.00	£ 140.00	£ 182.00
303_425_078	50 mm	£ 131 00	£ 152 00	£ 200 00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE240312 Thickness . . . . . . . . . 0.5mm Condition..... lon Implanted



Quantity Size **Web Code** 165-089-544 Size **1pc** POA 50 x 50 mm

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance. This material has been Ion Implanted with Nitrogen Ions to a dose of 3 x 10<sup>17</sup> ions cm<sup>-2</sup>.

FE240311

Thickness 0.5m	n
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Surface treatment	Titanium	Nitride	coating	2-3	mi-
	crons				



Size			Quanti	ty	
Web Code	Size	1pc	2pcs	5pcs	10pcs
208-512-757	25 x 25 mm	£ 77.50	£ 89.00	£ 116.00	£ 151.00
064-094-706	50 x 50 mm	£ 98.50	£ 119.00	£ 189.00	
011-846-779	100 x 100 mm	£ 152.00	£ 252.00		
157-334-036	150 x 160 mm	£ 287 00			

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
480-847-457	4 mm	£ 157.00	£ 196.00	£ 304.00
105-927-598	6 mm	£ 163.00	£ 205.00	£ 318.00
240-946-727	8 mm	£ 169.00	£ 213.00	£ 331.00
118-342-655	10 mm	£ 175.00	£ 222.00	£ 345.00
792-827-942	15 mm	£ 190.00	£ 243.00	£ 399.00
400 400 505	05	0.000.00		

Typical Analysis : Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance. This item is shown as an example of Titanium Nitride (TiN) coated material.

FE240310



Thickness 0.5mm		Temper		Annealed		
Size				Quantity		
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs
458-966-314	25 x 25 mm	£ 57.50	£ 60.00	£ 67.00	£ 76.50	£ 94.00
370-789-930	50 x 50 mm	£ 60.50	£ 64.50	£ 73.50	£ 85.50	£ 107.00
348-745-018	100 x 100 mm	£ 66.50	£ 72.50	£ 86.50	£ 104.00	£ 133.00
593-133-269	150 x 150 mm	£ 72.00	£ 81.00	£ 99.50	£ 122.00	£ 162.00
141-657-484	300 x 300 mm	£ 89.50	£ 105.00	£ 141.00	£ 229.00	

Coil	Width 300mm	Quan	tity
Web Code	<b>Length</b>	<b>1 Reel</b>	
707-181-822	1 m	£ 141.00	
397-730-760	2 m	£ 186.00	
716-347-429	5 m	£ 349.00	

Discs			Quantity	
Web Code	Diameter	10 discs	20 discs	50 discs
543-436-276	4 mm	£ 117.00	£ 131.00	£ 167.00
929-528-053	6 mm	£ 117.00	£ 132.00	£ 169.00
191-000-781	8 mm	£ 118.00	£ 133.00	£ 170.00
875-099-534	10 mm	£ 119.00	£ 134.00	£ 172.00
387-444-335	15 mm	£ 121.00	£ 137.00	£ 176.00
430-541-302	25 mm	£ 124.00	£ 142.00	£ 184.00
817-668-178	50 mm	£ 134.00	£ 155.00	£ 205.00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.



## Stainless Steel - AISI 316

## Fe/Cr18/Ni10/Mo 3



#### Foil

FE240315

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Size		Quantity				
Web Code	Size	1pc	2pcs	5pcs	10pcs	
248-488-265	50 x 50 mm	£ 61.00	£ 64.50	£ 73.50	£ 85.00	
731-022-947	150 x 150 mm	£ 73.50	£ 82.50	£ 102.00	£ 125.00	
717-455-986	300 x 300 mm	£ 92.50	£ 110.00	£ 154.00		
077-963-248	500 x 500 mm	£ 118.00	£ 161.00			

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance. Prices for pieces up to 1220mmx1220mm on request.

FF240320 0.914mm

FEZ4U3ZU	1111CK11C35
<b>A A</b>	Size
X	Web Code
Xn	342-019-545

Thickness 0.914m	m	Temper		Annealed		
Size				Quantity		
Web Code	Size	1pc	2pcs	5pcs	10pcs	20pcs
342-019-545	50 x 50 mm	£ 61.50	£ 66.00	£ 75.00	£ 87.50	£ 108.00
752-439-667	100 x 100 mm	£ 69.00	£ 76.00	£ 91.00	£ 110.00	£ 140.00
054-955-976	150 x 150 mm	£ 76.00	£ 86.00	£ 107.00	£ 133.00	
869-494-002	300 x 300 mm	£ 97.00	£ 116.00	£ 159.00		
686-762-057	500 x 500 mm	£ 126.00	£ 166.00			

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance. Prices for pieces up to 1220mmx1220mm on request.

FE240350 Thickness . . . . . . . . . 1.0mm

Size Web Code 645-289-041

Temper . . . . . . . . . . Annealed Quantity 1pc £ 58.00 2pcs £ 60.50

**5pcs** £ 67.00

Annoalod

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

2 Omm

15 x 45 mm

FE240380

THICKIESS J.UIIIII	remper Aimealeu						
Size		Quantity					
Web Code	Size	1pc	2pcs	5pcs	10pcs		
680-191-272	100 x 100 mm	£ 87.00	£ 105.00	£ 130.00	£ 172.00		
435-504-236	150 x 150 mm	£ 100.00	£ 123.00	£ 176.00			
605-864-987	300 x 300 mm	£ 144.00	£ 233.00				

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance. Prices for pieces up to 1220mmx1220mm on request.

FE240385 Thickness . . . . . . . . . 5.0mm

Size			Quantity	
Web Code	Size	1pc	2pcs	5pcs
873-427-564	40 x 100 mm	£ 88.50	£ 107.00	£ 133.00
800-467-838	40 x 200 mm	£ 99.50	£ 123.00	
494-538-259	40 x 500 mm	£ 121.00		

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance. Prices for pieces up to 1220mmx1220mm on request.



### Foam

FE243825

Thickness . . . . . . 6.35mm Porosity . . . . . . 93%

Bulk density . . . . . . . . . 0.55g.cm<sup>-3</sup> Pores/cm ..... 24

Quantity Size Web Code 593-627-241 Size **1pc** £ 274.00 **2pcs** £ 483.00 150 x 150 mm

FE243840

Thickness . . . . . . . . . 12.7mm Porosity.......93%

Bulk density . . . . . . . . 0.55g.cm<sup>-3</sup> Pores/cm ..... 24

×

Size Quantity Web Code **1pc** POA POA Size 2pcs POA 848-851-265 237-560-811 300 x 350 mm 300 x 700 mm



## Mesh

FE248703

Nominal Aperture..... 0.085mm Wires/inch....... 188x188
Type ...... Plain weave mesh

Wire diameter..... 0.05mm Open area ..... 39.6%

Size			Quanti	ty	
Web Code 387-491-021	<b>Size</b> 100 x 100 mm	<b>1pc</b> £ 160.00	<b>2pcs</b> £ 185.00	<b>5pcs</b> £ 240.00	<b>10pcs</b> £ 297.00
907-193-870 472-118-700	150 x 150 mm 300 x 300 mm	£ 182.00 £ 246.00	£ 215.00 £ 307.00	£ 289.00	2 201.00
764-746-487	600 x 600 mm	£ 407.00	2 307.00		





## Mesh

FE248705

Nominal Aperture..... 0.103mm Wire diameter..... 0.066mm Wires/inch.......150x150
Type ......Plain weave mesh

Size Quantity Web Code 688-485-215 707-822-407 1pc £ 128.00 £ 192.00 2pcs £ 161.00 **5pcs** £ 235.00 Size

366-118-058

150 x 150 mm 300 x 300 mm 600 x 600 mm £ 353 00

FE248710

Nominal Aperture..... 0.38mm Wire diameter..... 0.25mm Wires/inch..... 40x40 Open area ..... 37% Type ..... Plain weave mesh Size Quantity Size

Web Code 087-878-424 2pcs £ 122.00 £ 148.00 £ 225.00 **1pc** £ 100.00 100 x 100 mm £ 118.00 £ 173.00 150 x 150 mm 300 x 300 mm 984-806-837 £ 213.00 607-766-689 600 x 600 mm £ 283.00



## Wire

FE245100 Diameter..... 0.05mm Temper . . . . . . . . . Annealed

Length		Quantity
Web Code	Length	1 Reel
142-882-389	50 m	£ 71.50
860-291-284	100 m	£ 81.00
536-407-496	200 m	£ 96.00
050-925-897	500 m	£ 134.00
365-730-597	1000 m	£ 160.00

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE245102 Diameter..... 0.15mm Temper . . . . . . . . . . Hard

Diameter..... 0.25mm

Diameter..... 0.5mm

Quantity Length Web Code 716-324-920 540-619-941 577-488-104 20 m 50 m 100 m 1 Reel £ 76.50 £ 76.50 £ 91.00 £ 108.00 £ 134.00 £ 215.00 186-014-334 200 m 500 m 251-798-917

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE245105

**Length Web Code**474-869-646
358-708-909 Quantity Length 20 m 50 m 1 Reel £ 70.50 £ 80.00 838-616-807 £ 109.00 £ 148.00 827-108-405 200 m 500 m 568-809-288 1000 m £ 201 00

Typical Analysis : Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.

FE245320

Diameter................. 0.5mm Condition..... Straight wire Temper . . . . . . . . . Hard

×

Size Quantity Web Code 20pcs Length 1pc 2pcs 5pcs 10pcs 1.6g #1000 mm#

Temper . . . . . . . . . . . . Hard

Temper . . . . . . . . . . . Hard

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE245130 ×

	Quantity
Length	1 Reel
10 m	£ 65.00
20 m	£ 72.00
50 m	£ 87.50
100 m	£ 106.00
200 m	£ 152.00
500 m	£ 294.00
	10 m 20 m 50 m 100 m 200 m

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance



## Stainless Steel - AISI 316

## Fe/Cr18/Ni10/Mo 3



FE245131	Diameter 0.5mm	Temper Annealed
	Length	Quantity

Length		Quantity
Web Code	Length	1 Reel
258-136-833	10 m	£ 65.00
616-548-222	20 m	£ 72.00
165-919-019	50 m	£ 87.50
536-661-963	100 m	£ 106.00
671-759-507	200 m	£ 152.00
897-804-288	500 m	£ 294.00
	Web Code 258-136-833 616-548-222 165-919-019 536-661-963 671-759-507	Web Code         Length           258-136-833         10 m           616-548-222         20 m           165-919-019         50 m           536-661-963         100 m           671-759-507         200 m

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE245135	Diameter 0.6mm	Temper Har

44	Length		Quantity
	Web Code	Length	1 Reel
Xn	064-047-906	10 m	£ 66.00
XII	561-306-677	20 m	£ 74.00
	743-237-733	50 m	£ 90.50
	149-692-672	100 m	£ 111.00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE245138	Diar	meter	0.7	1mm	1	Temper Hard	
0 .00	_	1141				·	

*	Size	Ottalgilt will		Quantity			
Xn	Web Code	Length	1pc	2pcs	<b>5pcs</b> 3.1g	<b>10pcs</b> #1000 mm#	

FE245140 Diameter 0.8mm	Temper Hard
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	Lenath		Quantity
×	Web Code	Length	1 Reel
Xn	379-933-151	10 m	£ 69.00
ΛΠ	137-120-935	20 m	£ 77.50
	200-043-659	50 m	£ 96.50
	010-572-272	100 m	£ 125.00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

FE245110	Diameter 1.0mm	Temper Hard
I LZTJIIU	Blainete in the state of the st	. opo

	Length		Quantity
×	Web Code	Length	1 Reel
Xn	101-150-314	5 m	£ 62.50
ΛΠ	643-797-629	10 m	£ 68.50
	474-709-891	20 m	£ 78.00
	338-726-433	50 m	£ 97.50
	340-810-060	100 m	£ 122.00
	601 252 407	200 m	£ 179 00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.



## **Insulated Wire**

FE245815 Conductor diameter..... 0.025mm Insulation thickness . . . . . . 0.002mmInsulation ..... Polyester

Xn	Length		Quantity
Xn	Web Code	Length	1 Reel
XII	394-782-819	5 m	£ 91.50
	347-856-704	10 m	£ 106.00
	482-089-898	20 m	£ 130.00
	261-227-442	50 m	£ 242.00
	653-432-145	100 m	£ 427.00

FE245820 Conductor diameter..... 0.05mm Insulation thickness . . . . . . 0.003mm

	insulation Polyeste	ſ	
	Length		Quantity
Xn	Web Code	Length	1 Reel
711	679-021-504	5 m	£ 90.00
	877-689-494	10 m	£ 104.00
	711-186-933	20 m	£ 125.00
	898-365-097	50 m	£ 227.00
	295-629-145	100 m	£ 397.00



#### Stainless Steel - AISI 316

#### Fe/Cr18/Ni10/Mo 3



## **Insulated Wire**

FE245810

Conductor diameter..... 0.075mm
Insulation ...... PTFE (Polytetrafluoroethylene) Insulation thickness . . . . . 0.018mm

Length		Quantity
Web Code	Length	1 Reel
383-402-006	1 m	£ 97.00
925-257-992	2 m	£ 111.00
657-241-273	5 m	£ 140.00
155-158-270	10 m	£ 173.00
553-097-872	20 m	£ 219.00
137-237-145	50 m	£ 341.00

Typical Analysis: Cr 16.5 - 20%, Mn <2%, Ni 8 - 14%, C <1200, Mo 2.0 - 3.5%, Fe balance.

FE245840

Conductor diameter..... 0.125mm Insulation thickness . . . . . 0.007mm Insulation . . . . . Polyester



Length Web Code Quantity Length 1 Reel 953-638-592 £ 88.50

FE245850

Conductor diameter..... 0.25mm Insulation ...... Polyester

Insulation thickness . . . . . 0.009mm



	Quantity	
Length	1 Reel	
5 m	£ 87.00	
10 m	£ 99.50	
20 m	£ 118.00	
50 m	£ 198.00	
100 m	£ 339.00	
	5 m 10 m 20 m 50 m	



## Rod

FE247910 Diameter..... 2.0mm Temper . . . . . . . . . . Hard Size Quantity **Web Code** 961-139-762 311-859-074 2pcs £ 69.50 £ 78.00 Length 1pc £ 56.00 £ 62.00 500 mm 1000 mm

OIZC			Quuiti	٠,	
Web Code	Length	1pc	2pcs	5pcs	10pcs
961-139-762	500 mm	£ 56.00	£ 69.50	£ 90.50	£ 119.00
311-859-074	1000 mm	£ 62.00	£ 78.00	£ 104.00	£ 139.00
Diameter 10.0mm		Temper.		As drawn	
Size			Quanti	ty	
Web Code	Length	1pc	2pcs	5pcs	10pcs

£ 68.50 £ 77.50 £ 95.00 £ 83.00 £ 96.00 £ 121.00 £ 133.00 £ 186.00 225-331-281 100 mm £ 105.00 022-001-948 481-325-580 200 mm 500 mm 432-093-904 1000 mm £ 115.00

FE247930

FE247915

Diameter..... 12.7mm

	Quantity				
Length	1pc	2pcs	5pcs	10pcs	
100 mm	£ 70.00	£ 85.50	£ 109.00	£ 137.00	
200 mm	£ 79.50	£ 99.00	£ 130.00	£ 204.00	
500 mm	£ 98.50	£ 126.00	£ 231.00		
1000 mm	£ 120.00	£ 192.00			
	100 mm 200 mm 500 mm	100 mm £ 70.00 200 mm £ 79.50 500 mm £ 98.50	Length         1pc         2pcs           100 mm         £ 70.00         £ 85.50           200 mm         £ 79.50         £ 99.00           500 mm         £ 98.50         £ 126.00	Length         1pc         2pcs         5pcs           100 mm         £ 70.00         £ 85.50         £ 109.00           200 mm         £ 79.50         £ 99.00         £ 130.00           500 mm         £ 98.50         £ 126.00         £ 231.00	

FE247940

Diameter..... 25.4mm

Size		Quantity			
Web Code 127-684-190 884-949-798 122-201-539	<b>Length</b> 100 mm 200 mm 500 mm	1pc £ 88.00 £ 105.00 £ 158.00	<b>2pcs</b> £ 111.00 £ 142.00	<b>5pcs</b> £ 168.00	



**20pcs** £ 150.00

£ 201.00 £ 384.00

£ 142.00 £ 223.00

## Stainless Steel - AISI 316

### Fe/Cr18/Ni10/Mo 3



## Tube

FE247200

Outside Diameter..... 3.0mm Wall Thickness..... 0.75mm Inside Diameter . . . . . . 1.5mm Temper . . . . . . . . . . Hard Size Quantity Web Code 999-643-999 919-010-338 916-996-557 Length 100 mm 1pc £ 71.50 £ 78.50 £ 91.50 5pcs £ 102.00 £ 117.00 £ 146.00 10pcs £ 121.00 **2pcs** £ 86.50

200 mm 500 mm £ 96.00 £ 114.00 £ 219.00 215-303-933 1000 mm £ 106.00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

Outside Diameter..... 6.35mm Wall Thickness..... 2.0mm FE247400 Inside Diameter . . . . . . 2.35mm Temper . . . . . . . . . . Annealed

Size Quantity Length 100 mm 200 mm Web Code 1pc £ 72.50 £ 79.50 £ 93.50 **2pcs** £ 83.50 £ 93.50 475-441-945 695-560-457 £ 110.00 496-542-888 847-230-265 500 mm £ 109.00 1000 mm

Typical Analysis: Not applicable

Outside Diameter..... 8.0mm Wall Thickness..... 1.0mm FE247500 Inside Diameter . . . . . . 6mm Temper . . . . . . . . . . . . Annealed

Quantity Size Web Code 138-470-258 308-784-443 598-056-033 **10pcs** £ 133.00 £ 162.00 Length 1pc £ 72.50 £ 79.50 £ 93.50 **2pcs** £ 83.50 100 mm 200 mm 500 mm £ 93.50 £ 113.00 757-000-873 1000 mm £ 109.00

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

Wall Thickness..........0.7mm FE247600 Outside Diameter...... 11.1mm Inside Diameter . . . . . . 9.7mm Temper . . . . . . . . . . . . Annealed

Size Quantity 2pcs £ 90.00 £ 102.00 £ 125.00 Web Code 625-104-193 138-014-307 **1pc** £ 77.50 £ 85.50 **5pcs** £ 120.00 £ 138.00 **10pcs** £ 147.00 £ 185.00 Length 100 mm 200 mm 500 mm 473-439-118 1000 mm £ 121.00 £ 163.00

Typical Analysis : Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance.

Wall Thickness...... 1.5mm
Temper..... Annealed Outside Diameter..... 20.0mm FE247800 Inside Diameter . . . . . . . 17mm

Size Quantity **2pcs** £ 99.50 £ 115.00 £ 146.00 Length 100 mm 200 mm **10pcs** £ 168.00 £ 237.00 Web Code 1pc £ 84.00 £ 95.00 **5pcs** £ 134.00 £ 159.00 179-895-094 486-877-771 £ 117.00 £ 141.00 859-717-634 500 mm 1000 mm 464-703-045

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 1200, Mo 2.0 - 3.5%, Fe balance

## Powder

FE246020 Max. Particle size ..... 45micron

Quantity 1 Pot £ 75.50 £ 83.00 £ 98.00 Web Code Weight 876-168-519 521-063-072 132-878-437 100 g 200 g 500 g 609-800-815 225-107-744 1000 g 2000 g £ 116.00 £ 170.00

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 300, Mo 2.5 - 3.5%, Fe balance.

Shipping Restriction. Additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.



## Stainless Steel - AISI 316

### Fe/Cr18/Ni10/Mo 3



## Powder

Max. Particle size . . . . . . 150micron FE246010

	Quantity	
Web Code	Weight	1 Pot
498-107-219	100 g	£ 68.00
263-406-897	200 g	£ 73.50
925-855-156	500 g	£ 85.00
731-896-044	1000 g	£ 98.50
487-009-310	2000 g	£ 134.00

Typical Analysis: Cr 16.5 - 20%, Mn < 2%, Ni 8 - 14%, C < 300, Mo 2.5 - 3.5%, Fe balance.

Quantity

Shipping Restriction. Additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.



## **Sphere**

FE246805 Diameter..... 0.5mm

Sphericity ... 2.50μm
Condition ... Grade 100

Quantity Quantity **Web Code** 955-436-807 968-006-094 1 Pot £ 94.50 £ 128.00 **Spheres** 50 pcs 100 pcs 436-137-262 200 pcs £ 179.00

Typical Analysis: Not applicable

FE246810

Xn

Diameter..... 1.0mm 

Tolerance . . . . . . . . . . ± 12.7μm Grade . . . . . . Precision Sphere

Quantity Quantity Web Code 527-345-842 647-046-850 Spheres 50 pcs 100 pcs

1 Pot £ 92.50 £ 126.00 £ 170.00 200 pcs 154-293-609

Typical Analysis: Not applicable

FE246820

Diameter..... 2.0mm Sphericity . . . . . 2.50μm Condition . . . . . Grade 100 Quantity Quantity Spheres 1 Pot £ 92.50 £ 126.00 Web Code 821-001-919 741-323-330 50 pcs 100 pcs 200 pcs 787-943-530

Typical Analysis: Not applicable

FE246825

Diameter . . . . . . . . . 2.5mm Sphericity ..... 2.50μm Condition. Grade 100 Quantity Quantity Web Code 016-642-431 Spheres 1 Pot £ 92.50 50 pcs 100 pcs 683-009-392 468-675-172 £ 126.00 £ 170.00

Typical Analysis: Not applicable

FE246830 Diameter..... 3.0mm Sphericity ... 2.50μm
Condition ... Grade 100

Quantity Quantity Web Code 931-231-544 804-938-686 Spheres 50 pcs 1 Pot £ 92.50 100 pcs £ 126.00 £ 170.00 421-549-490 200 pcs

Typical Analysis: Not applicable

FE246840 Diameter..... 4mm Grade . . . . . Precision Sphere Tolerance . . . . . . . . .  $\pm$  100 $\mu$ m

Quantity Quantity Web Code 240-729-606 091-207-653 400-951-547 1 Pot £ 68.00 Spheres 20 pcs 50 pcs 100 pcs £ 92.50 £ 126.00 118-947-005



#### Telephone 0800 731 4653 : Fax 0800 328 7689 Stainless Steel - AISI 316 Fe/Cr18/Ni10/Mo 3 **Sphere** FE246850 Tolerance ...... $\pm$ 12.7 $\mu$ m Grade ..... Precision Sphere Sphericity . . . . . 2.50μm Condition. . . . . . Grade 100 Quantity Quantity 1 Pot £ 69.00 £ 94.00 £ 128.00 Web Code **Spheres** 320-680-542 085-072-574 20 pcs 50 pcs 100 pcs 634-063-464 257-925-888 Typical Analysis : Not applicable FE246860 Diameter..... 6mm Tolerance . . . . . . . . . $\pm 25 \mu m$ Grade ..... Precision Sphere Quantity Quantity Web Code 868-376-860 547-108-385 388-543-343 567-915-146 Spheres 20 pcs 50 pcs 100 pcs 1 Pot £ 72.50 £ 99.00 £ 136.00 £ 205.00 200 pcs Diameter..... 8mm Tolerance . . . . . . . . $\pm 25 \mu m$ FE246870 Grade . . . . . Precision Sphere Quantity Quantity 1 Pot £ 73.00 £ 100.00 £ 140.00 £ 213.00 Web Code 147-920-471 286-978-005 Spheres 20 pcs 50 pcs 100 pcs 200 pcs 096-365-432 087-169-238 FE246880 Quantity Quantity **Web Code** 989-391-656 673-960-783 Spheres 1 Pot £ 74.50 £ 103.00 20 pcs 50 pcs 100 pcs 200 pcs 245-090-558 636-321-894 Typical Analysis: Not applicable FE246890 Diameter..... 25mm Quantity Quantity **Web Code** 359-714-094 978-190-048 **Spheres** 1 Pot £ 99.00 10 pcs £ 156.00 20 pcs Typical Analysis: Not applicable



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