

Goodfellow

Serving The Needs of Science and Industry Worldwide

Au service de la Science et de l'Industrie dans le monde entier

Weltweiter Lieferant für Wissenschaft und Industrie

Metals and Alloys
Métaux et Alliages
Metalle und Legierungen

Ceramics
Céramiques
Keramiken

Polymers
Polymères
Polymere

Composites
Composites
Verbundwerkstoffe



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Standard Price List for Titanium

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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 Catalog details those materials which are available as standard products from stock. Custom-made 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 Catalog 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 Catalog 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 Catalog details those which are available. Please contact us with details of your requirements.

Composites

Some examples of these materials are listed in the Catalog. 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 Catalog, 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.

Product Descriptions



Bar

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

Tolerances

Section dimensions:	≤ 10mm	± 10%
	> 10mm	± 1mm
Length:	< 100mm	± 1mm
	≥ 100mm	+ 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

See item



Chopped Fibre

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

Tolerances

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



Crucible

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

Tolerances

Height:	± 10%
Inside Dimensions:	± 10%
Outside Dimensions:	± 10%



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:	± 25%
Number of yarns:	± 10%
Tex number:	± 10%
Size (linear dimension):	< 100mm ± 5mm
	≥ 100mm ± 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 grams of a 1km length of material.

Tolerances

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



Film

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

Tolerances

Thickness:	± 20%
Size (linear dimension):	< 100mm ± 1mm
	≥ 100mm + 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

Product Descriptions



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 ± 25%
 0.01-0.05mm ± 15%
 > 0.050mm ± 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: ± 10%
 Length: + 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: ± 10%
 Size (linear dimension): ≤ 100mm ± 1mm
 > 100mm + 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: ± 10%
 electroformed: ± 20%
 Wire diameter: ± 10%
 Size (linear dimension): < 100mm ± 1mm
 ≥ 100mm + 2% / -1%

Product Descriptions



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): $< 100\text{mm}$ $\pm 1\text{mm}$
 $\geq 100\text{mm}$ $+2\% / -1\%$



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.

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. conventional textile fabrics. Due to the open and porous nature of this material, all other dimensions are nominal.

Tolerances

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



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 inch-threaded sizes.

Tolerances

See item



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

Product Descriptions



Rod

A straight length of circular section material.

Tolerances

Diameter:	≤ 10mm	± 10%
	Polymer	+ 20%/-10%
	Ceramic	+ 20%/-10%
> 10mm	± 5%	
	Ceramic	+ 20%/-10%
	Polymer	+ 20%/-10%
Length:	< 100mm	± 1mm
	≥ 100mm	+ 5% / -1%



Sheet

Flat material with a thickness > 0.5mm.

Tolerances

Thickness:		± 10%
	Ceramic	± 20%
	Composite	± 20%
	Polymer	± 20%
Size (linear dimension):	< 100mm	± 1mm
	≥ 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:	± 3°
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):	± 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:	± 0.5mm
Size:	± 0.5mm



Tube

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

Tolerances

Outside diameter:	≤ 2mm	± 0.05mm
	Polymer	± 10%
	Ceramic	± 10%
≤ 5mm	± 0.1mm	
	Polymer	± 10%
	Ceramic	± 10%
> 5mm	± 5%	
	Polymer	± 10%
	Ceramic	± 10%
Wall thickness:	± 10%	
	Polymer	± 20%
	Ceramic	± 20%
Length:	< 100mm	± 1mm
	≥ 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

See item

Product Descriptions



Wire

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

Tolerances

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

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



C

Corrosive

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



D

Dangerous when wet

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



E

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.



F+

Extremely flammable

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



Xn

Harmful

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



F

Highly flammable

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



Xi

Irritant

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



R

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.



T

Toxic

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



T+

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 3.5µm 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^{-9} atm-cm³.s⁻¹.

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

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 of £10 will be made for any order received for which same day shipment within the UK 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

Goodfellow Cambridge Limited

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USA
A Pennsylvania corporation
EIN 23-2557381

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Goodfellow GmbH

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Goodfellow (Shanghai) Trading Co., Ltd

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SHANGHAI
200070
The People's Republic of China

Conditions of Sale

1 GENERAL

1.1 In these Conditions:

1.1.1 the following expressions shall have the following meanings:-

- "Buyer" 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;
- "Contract" a contract for the Supply of Goods and/or Services by the Seller to the Buyer;
- "Date of Delivery" the date on which delivery of the Goods or Services takes place pursuant to Condition 7;
- "Goods" 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;
- "Prepayment" 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 for Use" 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 Supplier);
- "Seller" 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;
- "Services" 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

- 1.2 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
- 1.3 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 the Seller
- 1.4 In relation to all obligations of the Buyer under these Conditions, the time of performance is of the essence
- 1.5 The legal construction of these Conditions shall not be effected by their headings which are for convenience of reference only

2 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 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

3 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
- 3.2 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

4 SPECIFICATIONS AND INTELLECTUAL PROPERTY

- 4.1 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 but also that such 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 indemnified 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
- 4.2 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
- 4.3 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

5 QUOTATIONS

- 5.1 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

6 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 follows:-
- 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 Contract;
- 6.2.2 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.

7 DELIVERY

- 7.1 Delivery of Goods shall be deemed to be effected by the Seller at the following times:-
- 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

Conditions of Sale

- accordance with a means of delivery specifically requested by the Buyer, when the same are collected;
- 7.1.2 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 be 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 basis
- 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 withhold 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
- 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:-
- 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 any cancellation by the Buyer will only be 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

- 11.1 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 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,

Conditions of Sale

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 if:
- 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

- 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 country

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 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 served:
- 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 transmitted
- 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

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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

Titanium

Ti

Titanium was discovered by Rev. William Gregor in 1791 in Creed, Cornwall, England and, independently, by M.H. Klaproth in 1795 in Berlin, Germany.

Titanium is a hard, lustrous, silvery metal which is obtained by magnesium or calcium reduction of the tetrachloride. It is a relatively abundant element, there being 5600 ppm in the earth's crust. It forms a protective oxide coating and, hence, resists corrosion, although powdered metal burns in air. Titanium tends to be inert at low temperatures but will combine with a variety of reagents at elevated temperatures.

Titanium and its alloys are characterised by their lightness, strength and corrosion resistance and are used widely in aerospace applications. In addition, these properties also make the material suitable for medical applications (e.g. replacement hip joints). Titanium dioxide, TiO₂ is used as a white pigment in paints and plastics as it provides great opacity. The same material is also used in the manufacture of heat resisting and durable glass, the TiO₂ replacing certain proportions of the soda. Titanium carbide is used to manufacture cemented carbides.

Atomic Properties		Physical Properties	
Atomic number	22	Boiling point	3287 C
Atomic radius - Goldschmidt	0.147 nm	Density @20C	4.5 g cm ⁻³
Atomic weight	47.88 amu	Melting point	1660 C
Crystal structure	Hexagonal close packed	Electrical Properties	
Electronic structure	Ar 3d ² 4s ²	Electrical resistivity @20C	54 μOhmcm
Photo-electric work function	4.1 eV	Temperature coefficient @0-100C	0.0038 K ⁻¹
Thermal neutron absorption cross-section	6.1 Barns	Superconductivity critical temperature	0.40 K
Valences shown	2, 3, 4	Thermal Properties	
Natural isotope distribution		Mass No.	%
		46	8.0
		47	7.5
		48	73.7
		49	5.5
		50	5.3
Ionisation potential		No.	eV
		1	6.82
		2	13.6
		3	27.5
		4	43.3
		5	99.2
		6	119
		Mechanical Properties	
		Material condition	Annealed Polycrystalline
		Bulk modulus	108.4 GPa
		Hardness - Vickers	60
		Izod toughness	61 J m ⁻¹
		Poisson's ratio	0.361
		Tensile modulus	120.2 GPa
		Tensile strength	230-460 MPa
		Yield strength	140-250 MPa



Microfoil

CONTRACT COATING of customers' own components or assemblies is available to special order.

TI004500	Thinness..... 0.1μm	Area density..... 42.8μg.cm⁻²
	Purity..... 99.6+%	Support..... Permanent Mylar 3.5μm
Quantity		
Web Code	Disc diam.	1 disc 2discs 5discs 10discs
059-252-810	10 mm	YEN 31600 YEN 43000 YEN 77000 YEN 122000
825-798-434	25 mm	YEN 46800 YEN 65500 YEN 122000 YEN 198000

Typical Analysis : Starting Material : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.
 This item is normally made to order for delivery within 4-5 weeks.

TI004600	Thinness..... 0.25μm	Area density..... 112.6μg.cm⁻²
	Purity..... 99.6+%	Support..... Permanent Mylar 3.5μm
Quantity		
Web Code	Disc diam.	1 disc 2discs 5discs 10discs
525-512-225	10 mm	YEN 35000 YEN 48000 YEN 87000 YEN 139000
129-297-443	25 mm	YEN 52500 YEN 74000 YEN 139000 YEN 226000

Typical Analysis : Starting Material : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.
 This item is normally made to order for delivery within 4-5 weeks.

TI004700	Thinness..... 0.5μm	Area density..... 225.4μg.cm⁻²
	Purity..... 99.6+%	Support..... Permanent Mylar 3.5μm
Quantity		
Web Code	Disc diam.	1 disc 2discs 5discs 10discs
139-599-398	10 mm	YEN 37200 YEN 51500 YEN 94000 YEN 151000
239-166-185	25 mm	YEN 56000 YEN 80000 YEN 151000 YEN 245000

Typical Analysis : Starting Material : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.
 This item is normally made to order for delivery within 4-5 weeks.

TI004850	Thinness..... 1.0μm	Area density..... 429μg.cm⁻²
	Purity..... 99.6+%	Support..... Permanent Mylar 3.5μm
Quantity		
Web Code	Disc diam.	1 disc 2discs 5discs 10discs
060-822-869	10 mm	YEN 43000 YEN 60000 YEN 111000 YEN 179000
356-832-183	25 mm	YEN 65500 YEN 94000 YEN 179000 YEN 292000

Typical Analysis : Starting Material : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.
 This item is normally made to order for delivery within 4-5 weeks.

Titanium

Ti



Foil

TI000205	Thickness 0.001mm Temper As rolled	High Purity 99.99+%		
Sizes LT Web Code 912-066-045 086-830-273		Quantity		
	Size	1pc	2pcs	5pcs
	25 x 25 mm	YEN 86000	YEN 118000	YEN 184000
	50 x 50 mm	YEN 160000	YEN 223000	
Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.				
TI000206	Thickness 0.002mm Temper As rolled	High Purity 99.99+%		
Sizes LT Web Code 045-468-855 645-780-331		Quantity		
	Size	1pc	2pcs	5pcs
	25 x 25 mm	YEN 78500	YEN 107000	YEN 167000
	50 x 50 mm	YEN 144000	YEN 201000	
Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.				
TI000090	Thickness 0.002mm	Purity 99.6+%		
Sizes LT Web Code 079-450-947 882-226-421		Quantity		
	Size	1pc	2pcs	5pcs
	25 x 25 mm	YEN 54500	YEN 72500	YEN 109000
	50 x 50 mm	YEN 95500	YEN 130000	
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.				
TI000101	Thickness 0.0025mm	Purity 99.99+%		
Sizes LT Web Code 802-112-603 453-672-300		Quantity		
	Size	1pc	2pcs	
	25 x 25 mm	YEN 77500	YEN 96000	
	50 x 50 mm	YEN 116000		
Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.				
TI000100	Thickness 0.0025mm Condition Grade 1 - ASTM B265 Chemistry only	Purity 99.6+%		
Sizes LT Web Code 688-203-858 060-778-536		Quantity		
	Size	1pc	2pcs	5pcs
	25 x 25 mm	YEN 52000	YEN 69500	YEN 104000
	50 x 50 mm	YEN 91000	YEN 124000	
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.				
TI000111	Thickness 0.003mm	Purity 99.99+%		
Sizes LT Web Code 296-378-383 177-959-864		Quantity		
	Size	1pc	2pcs	
	25 x 25 mm	YEN 74000	YEN 94000	
	50 x 50 mm	YEN 116000		
Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.				
TI000110	Thickness 0.003mm	Purity 99.6+%		
Sizes LT Web Code 536-162-812 825-766-602		Quantity		
	Size	1pc	2pcs	5pcs
	25 x 25 mm	YEN 50000	YEN 66500	YEN 100000
	50 x 50 mm	YEN 87000	YEN 119000	
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.				
TI000122	Thickness 0.004mm Temper As rolled	Purity 99.99+%		
Sizes LT Web Code 203-779-311 228-413-008		Quantity		
	Size	1pc	2pcs	
	25 x 25 mm	YEN 81500	YEN 111000	
	50 x 50 mm	YEN 163000		
Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.				

Metal – Titanium

Titanium

Ti



Foil

TI000121

Thickness **0.004mm** Purity..... **99.6+%**
 Condition..... **Grade 1 - ASTM B265 Chemistry only**

NLT Sizes

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
104-119-736	25 x 25 mm	YEN 46200	YEN 61000	YEN 91000
292-868-505	50 x 50 mm	YEN 79000	YEN 107000	
224-731-655	100 x 100 mm	YEN 180000		

Sizes LT

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
785-692-968	25 x 25 mm	YEN 55500	YEN 73000	YEN 109000
002-536-064	50 x 50 mm	YEN 119000	YEN 161000	

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
132-291-866	4 mm	YEN 47600	YEN 59000	YEN 86000
536-487-144	6 mm	YEN 57000	YEN 72500	YEN 107000
060-894-747	8 mm	YEN 66500	YEN 86000	YEN 129000
611-840-001	10 mm	YEN 76000	YEN 99500	YEN 151000
480-006-974	15 mm	YEN 99000	YEN 132000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000208

Thickness **0.005mm** High Purity **99.99+%**
 Temper **As rolled**

NLT Sizes

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
205-276-680	25 x 25 mm	YEN 57500	YEN 80000	YEN 131000
055-111-473	50 x 50 mm	YEN 94500	YEN 132000	
426-443-033	100 x 100 mm	YEN 168000		

Sizes LT

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
501-822-204	25 x 25 mm	YEN 63500	YEN 87500	YEN 144000
224-191-870	50 x 50 mm	YEN 118000	YEN 165000	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI000210

Thickness **0.005mm** Purity..... **99.6+%**

NLT Sizes

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
166-536-961	25 x 25 mm	YEN 35400	YEN 43800	YEN 60500
220-683-347	50 x 50 mm	YEN 54500	YEN 71000	
450-972-306	100 x 100 mm	YEN 123000		

Sizes LT

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
270-344-449	25 x 25 mm	YEN 39000	YEN 48200	YEN 66500

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
408-527-282	4 mm	YEN 42200	YEN 51500	YEN 68500
065-900-770	6 mm	YEN 48200	YEN 60000	YEN 82500
237-599-389	8 mm	YEN 54000	YEN 68500	YEN 96500
699-918-029	10 mm	YEN 60500	YEN 77000	YEN 111000
489-758-450	15 mm	YEN 75000	YEN 98500	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000140

Thickness **0.006mm** Purity..... **99.6+%**
 Condition..... **Grade 1 - ASTM B265 Chemistry only**

NLT Sizes

Web Code	Size	Quantity	
		1pc	2pcs
148-886-945	25 x 25 mm	YEN 42200	YEN 55000
129-741-932	50 x 50 mm	YEN 71000	YEN 96000
517-667-132	100 x 100 mm	YEN 171000	

Sizes LT

Web Code	Size	Quantity	
		1pc	2pcs
410-260-256	25 x 25 mm	YEN 46400	YEN 60500
769-784-123	50 x 50 mm	YEN 89000	YEN 120000

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
113-674-130	4 mm	YEN 45400	YEN 56000	YEN 81000
209-268-740	6 mm	YEN 53500	YEN 67500	YEN 99500
158-597-940	8 mm	YEN 62000	YEN 79500	YEN 119000
824-740-947	10 mm	YEN 70000	YEN 91500	YEN 138000
092-613-455	15 mm	YEN 90500	YEN 120000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Metal - Titanium

Titanium

Ti



Foil

TI000150

Thickness **0.007mm** Purity..... **99.6+%**
 Condition..... **Grade 1 - ASTM B265 Chemistry only**

NLT Sizes

Web Code	Size	Quantity			
		1pc	2pcs	5pcs	10pcs
855-392-130	25 x 25 mm	YEN 42000	YEN 55000	YEN 81500	YEN 116000
185-053-464	50 x 50 mm	YEN 70500	YEN 95000	YEN 211000	
393-808-679	100 x 100 mm	YEN 168000	YEN 324000		
115-593-372	150 x 150 mm	YEN 362000			

Sizes LT

Web Code	Size	Quantity			
		1pc	2pcs	5pcs	10pcs
769-480-263	25 x 25 mm	YEN 46200	YEN 60500	YEN 89500	YEN 128000
397-971-951	50 x 50 mm	YEN 77500	YEN 105000	YEN 232000	

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
031-461-509	4 mm	YEN 45200	YEN 55500	YEN 80500
932-699-089	6 mm	YEN 53500	YEN 67000	YEN 99000
587-386-527	8 mm	YEN 61500	YEN 79000	YEN 118000
423-317-228	10 mm	YEN 69500	YEN 90500	YEN 137000
914-657-809	15 mm	YEN 90000	YEN 119000	YEN 241000
332-230-147	25 mm	YEN 138000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000161

Thickness **0.008mm** Purity..... **99.99+%**

NLT Sizes

Web Code	Size	Quantity	
		1pc	2pcs
303-275-550	25 x 25 mm	YEN 60500	YEN 80000
870-768-287	50 x 50 mm	YEN 105000	

Sizes LT

Web Code	Size	Quantity	
		1pc	2pcs
607-998-325	25 x 25 mm	YEN 66500	YEN 87500
381-165-374	50 x 50 mm	YEN 131000	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI000222

Thickness **0.008mm** Purity..... **99.99+%**

NLT Sizes

Web Code	Size	Quantity	
		1pc	2pcs
976-993-696	25 x 25 mm	YEN 34400	YEN 41000
263-530-761	50 x 50 mm	YEN 48400	

Sizes LT

Web Code	Size	Quantity	
		1pc	2pcs
101-650-815	25 x 25 mm	YEN 37800	YEN 45200
509-683-013	50 x 50 mm	YEN 60500	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI000211

Thickness **0.008mm** Coil width **104mm**
 Purity..... **99.6+%**

Coil

Web Code	Length	Quantity	
		1 Reel	
021-584-331	0.2 m	YEN 84000	
659-926-525	0.3 m	YEN 114000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Metal – Titanium

Titanium

Ti



Foil

TI000160

Thickness **0.008mm** Purity..... **99.6+%**
 Condition..... **Grade 1 - ASTM B265 Chemistry only**

NLT Sizes

Web Code	Size	Quantity			
		1pc	2pcs	5pcs	10pcs
410-264-638	25 x 25 mm	YEN 40400	YEN 52500	YEN 78000	YEN 113000
855-629-725	50 x 50 mm	YEN 67500	YEN 91000	YEN 205000	
566-804-320	100 x 100 mm	YEN 163000	YEN 314000		
406-154-449	150 x 150 mm	YEN 350000			

Sizes LT

Web Code	Size	Quantity			
		1pc	2pcs	5pcs	10pcs
683-083-649	25 x 25 mm	YEN 44400	YEN 58000	YEN 86000	YEN 124000
984-569-898	50 x 50 mm	YEN 74000	YEN 100000	YEN 225000	

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
890-279-724	4 mm	YEN 44400	YEN 54500	YEN 78500
284-972-801	6 mm	YEN 52000	YEN 65500	YEN 96000
621-609-045	8 mm	YEN 59500	YEN 76500	YEN 114000
701-127-200	10 mm	YEN 67500	YEN 87500	YEN 132000
640-900-870	15 mm	YEN 86500	YEN 115000	YEN 235000
112-611-681	25 mm	YEN 134000	YEN 243000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000170

Thickness **0.009mm** Purity..... **99.6+%**
 Condition..... **Grade 1 - ASTM B265 Chemistry only**

NLT Sizes

Web Code	Size	Quantity			
		1pc	2pcs	5pcs	10pcs
606-259-869	25 x 25 mm	YEN 39000	YEN 50500	YEN 75000	YEN 111000
470-380-247	50 x 50 mm	YEN 64500	YEN 87500	YEN 200000	
132-104-234	100 x 100 mm	YEN 159000	YEN 307000		
669-276-069	150 x 150 mm	YEN 342000			

Sizes LT

Web Code	Size	Quantity			
		1pc	2pcs	5pcs	10pcs
921-913-726	25 x 25 mm	YEN 43000	YEN 56000	YEN 82500	YEN 122000
730-624-021	50 x 50 mm	YEN 71000	YEN 96000	YEN 220000	

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
808-704-520	4 mm	YEN 43600	YEN 53500	YEN 77000
088-064-735	6 mm	YEN 51000	YEN 64000	YEN 93500
008-097-487	8 mm	YEN 58000	YEN 74500	YEN 111000
012-176-180	10 mm	YEN 65500	YEN 85000	YEN 128000
522-019-326	15 mm	YEN 83500	YEN 111000	YEN 230000
252-415-547	25 mm	YEN 131000	YEN 237000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000212

Thickness **0.01mm** High Purity **99.99+%**
 Temper..... **As rolled**

NLT Sizes

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
098-397-513	50 x 50 mm	YEN 93000	YEN 128000	
493-860-886	100 x 100 mm	YEN 173000		

Sizes LT

Web Code	Size	Quantity		
		1pc	2pcs	5pcs
174-909-779	25 x 25 mm	YEN 52500	YEN 71000	YEN 109000
258-429-339	50 x 50 mm	YEN 102000	YEN 141000	
923-125-799	100 x 100 mm	YEN 216000		

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
792-053-392	4 mm	YEN 57000	YEN 83000	YEN 106000
006-670-870	6 mm	YEN 67500	YEN 97500	YEN 130000
833-853-998	8 mm	YEN 77500	YEN 112000	YEN 153000
231-747-483	10 mm	YEN 88000	YEN 127000	YEN 177000
968-435-058	15 mm	YEN 114000	YEN 164000	
054-381-677	25 mm	YEN 166000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

Titanium

Ti



Foil

TI000213

Thickness **0.010mm** Purity..... **99.6+%**
 Condition..... **Grade 1 - ASTM B265 Chemistry only**

NLT Sizes

Web Code	Size	Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
828-848-647	100 x 100 mm	YEN 43800	YEN 55500	YEN 80000	YEN 109000	
518-098-674	150 x 150 mm	YEN 57500	YEN 75000	YEN 111000		
985-450-125	200 x 200 mm	YEN 71000	YEN 94500			

Sizes LT

Web Code	Size	Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
373-084-615	25 x 25 mm	YEN 23400	YEN 26800	YEN 34600	YEN 44200	YEN 60000
039-370-796	50 x 50 mm	YEN 30200	YEN 36400	YEN 49800	YEN 66000	YEN 90500
269-444-548	100 x 100 mm	YEN 48200	YEN 61500	YEN 88000	YEN 120000	

Coil

Web Code	Width 150mm	Length	1 Reel	Quantity
974-012-368		0.2 m	YEN 67000	
829-667-312		0.3 m	YEN 78000	
989-971-926		0.5 m	YEN 94500	
766-205-510		1 m	YEN 126000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000215

Thickness **0.012mm** Purity..... **99.6+%**

NLT Sizes

Web Code	Size	Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
020-471-715	100 x 100 mm	YEN 43000	YEN 54500	YEN 78500	YEN 106000	
229-759-260	200 x 200 mm	YEN 69500	YEN 92000	YEN 138000		

Sizes LT

Web Code	Size	Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
042-393-568	25 x 25 mm	YEN 23200	YEN 26600	YEN 34000	YEN 43600	YEN 59500
139-628-099	50 x 50 mm	YEN 29800	YEN 36000	YEN 48800	YEN 64500	YEN 89000
107-841-890	100 x 100 mm	YEN 47200	YEN 60000	YEN 86500	YEN 117000	

Coil

Web Code	Width 203mm	Length	1 Reel	Quantity
252-822-899		0.2 m	YEN 73500	
602-855-739		0.3 m	YEN 85500	
356-966-276		0.5 m	YEN 104000	
620-776-860		1 m	YEN 139000	

Discs

Web Code	Diameter	Quantity		
		10 discs	20 discs	50 discs
597-102-260	4 mm	YEN 42400	YEN 52500	YEN 63500
637-776-627	6 mm	YEN 44400	YEN 55500	YEN 68000
722-082-013	8 mm	YEN 46400	YEN 58000	YEN 72500
260-256-451	10 mm	YEN 48600	YEN 61000	YEN 77000
532-062-205	15 mm	YEN 53500	YEN 68000	YEN 88000
507-778-596	25 mm	YEN 63500	YEN 82500	YEN 111000
472-323-015	50 mm	YEN 89000	YEN 118000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000220

Thickness **0.0125mm** Purity..... **99.6+%**
 Temper..... **Annealed**

NLT Sizes

Web Code	Size	Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
658-526-576	100 x 100 mm	YEN 37800	YEN 46800	YEN 65000	YEN 86000	
028-348-496	150 x 150 mm	YEN 48400	YEN 62000	YEN 88500		
999-863-822	279 x 300 mm	YEN 78000	YEN 104000			

Sizes LT

Web Code	Size	Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
884-849-128	25 x 25 mm	YEN 21800	YEN 24200	YEN 29400	YEN 35600	YEN 45000
723-150-208	50 x 50 mm	YEN 27200	YEN 31800	YEN 41200	YEN 52500	YEN 68500
881-950-459	100 x 100 mm	YEN 41600	YEN 51500	YEN 71500	YEN 94500	
265-809-660	150 x 150 mm	YEN 58000	YEN 74000	YEN 106000		
142-915-249	279 x 300 mm	YEN 97500	YEN 129000			

Coil

Web Code	Width 279mm	Length	1 Reel	Quantity
046-933-275		0.5 m	YEN 100000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Titanium

Ti



Foil

TI000230

Thickness **0.015mm**

Purity **99.6+%**

Size

Web Code

603-751-240
 468-903-772
 612-965-543
 382-539-332
 657-861-588

Size

25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 130 x 150 mm
 266 x 300 mm

1pc

2pcs

Quantity

5pcs

10pcs

20pcs

YEN 20200	YEN 22600	YEN 27600	YEN 33600	YEN 42800
YEN 25400	YEN 29800	YEN 39200	YEN 50000	YEN 66000
YEN 35600	YEN 44600	YEN 62500	YEN 83000	
YEN 44000	YEN 56000	YEN 80500		
YEN 73500	YEN 98000			

Coil

Web Code

650-175-936
 263-144-779

Width 266mm

Length

0.5 m YEN 94500
 1 m YEN 126000

Quantity

1 Reel

Discs

Web Code

492-484-908
 560-623-461
 077-932-426
 741-558-443
 694-807-936
 850-990-458
 373-804-051

Diameter

4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

Quantity

10 discs

20 discs

50 discs

YEN 31000	YEN 35200	YEN 45400
YEN 32600	YEN 37600	YEN 49000
YEN 34200	YEN 39800	YEN 52500
YEN 35800	YEN 42000	YEN 56000
YEN 39600	YEN 47600	YEN 65000
YEN 47600	YEN 58500	YEN 82500
YEN 67500	YEN 86500	YEN 127000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000251

Thickness **0.02mm**

Purity **99.6+%**

Temper **Annealed**

Size

Web Code

725-505-933
 013-347-084
 862-537-128
 547-313-928
 151-240-699

Size

25 x 25 mm
 50 x 50 mm
 95 x 100 mm
 150 x 150 mm
 197 x 300 mm

1pc

2pcs

Quantity

5pcs

10pcs

20pcs

YEN 19500	YEN 22000	YEN 27000	YEN 33400	YEN 42800
YEN 24800	YEN 29600	YEN 39200	YEN 50500	YEN 67000
YEN 35000	YEN 44000	YEN 62000	YEN 82500	YEN 112000
YEN 46400	YEN 60000	YEN 87000	YEN 118000	
YEN 66500	YEN 88000			

Coil

Web Code

780-977-641
 688-247-503
 030-949-833

Width 180mm

Length

0.5 m YEN 82500
 1 m YEN 109000
 2 m YEN 164000

Quantity

1 Reel

Discs

Web Code

591-051-892
 881-483-249
 185-401-434
 175-177-199
 897-149-426
 143-681-926
 960-248-212

Diameter

4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

Quantity

10 discs

20 discs

50 discs

YEN 30000	YEN 34400	YEN 44600
YEN 31800	YEN 36800	YEN 48400
YEN 33400	YEN 39000	YEN 52000
YEN 35000	YEN 41400	YEN 55500
YEN 39000	YEN 47200	YEN 65000
YEN 47200	YEN 58500	YEN 83000
YEN 67500	YEN 87500	YEN 129000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000295

Thickness **0.025mm**

High Purity **99.99+%**

Temper **As rolled**

Size

Web Code

260-020-112
 502-513-281
 814-153-684

Size

25 x 25 mm
 50 x 50 mm
 100 x 100 mm

1pc

2pcs

Quantity

5pcs

YEN 33600	YEN 43600	YEN 64000
YEN 56500	YEN 82500	
YEN 153000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

Metal – Titanium

Titanium

Ti



Foil

TI000290

Thickness **0.025mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Grade 2 - ASTM B265 Chemistry only**

Size

Web Code

031-029-506
 878-697-274
 837-161-390
 645-165-294
 530-740-549

Size	Quantity				
	1pc	2pcs	5pcs	10pcs	20pcs
25 x 25 mm	YEN 13700	YEN 15500	YEN 20000	YEN 26400	YEN 34600
50 x 50 mm	YEN 16000	YEN 18700	YEN 25000	YEN 33400	YEN 44600
100 x 100 mm	YEN 20400	YEN 25000	YEN 35000	YEN 47600	YEN 64500
150 x 150 mm	YEN 25000	YEN 31400	YEN 45000	YEN 62000	
300 x 300 mm	YEN 38400	YEN 50500	YEN 75000		

Coil

Web Code

541-201-473
 706-989-091
 373-635-638

Width **305mm**

Length

0.5 m YEN 48400
 1 m YEN 63500
 2 m YEN 92500

Quantity

Discs

Web Code

041-289-593
 161-195-367
 149-422-240
 677-783-752
 722-970-744
 371-344-688
 418-080-124

Diameter	Quantity		
	10 discs	20 discs	50 discs
4 mm	YEN 31800	YEN 38600	YEN 58500
6 mm	YEN 32400	YEN 39600	YEN 60000
8 mm	YEN 33000	YEN 40400	YEN 61500
10 mm	YEN 33800	YEN 41400	YEN 63000
15 mm	YEN 35400	YEN 43800	YEN 67000
25 mm	YEN 38800	YEN 48600	YEN 74500
50 mm	YEN 47400	YEN 60500	YEN 93500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000300

Thickness **0.03mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

998-215-480
 776-929-668
 116-205-498
 525-680-067
 710-000-318

Size	Quantity				
	1pc	2pcs	5pcs	10pcs	20pcs
25 x 25 mm	YEN 15400	YEN 16500	YEN 18800	YEN 21800	YEN 27000
50 x 50 mm	YEN 17400	YEN 19200	YEN 23200	YEN 28000	YEN 35600
100 x 100 mm	YEN 21200	YEN 24800	YEN 31800	YEN 40400	YEN 53000
150 x 150 mm	YEN 25200	YEN 30200	YEN 40600	YEN 52500	YEN 70500
200 x 300 mm	YEN 32600	YEN 40600	YEN 57000		

Coil

Web Code

780-329-650
 750-038-818
 754-861-569

Width **200mm**

Length

0.5 m YEN 42000
 1 m YEN 52500
 2 m YEN 67000

Quantity

Discs

Web Code

873-554-681
 194-325-373
 290-663-064
 332-886-005
 610-757-511
 344-689-593
 086-195-872

Diameter	Quantity		
	10 discs	20 discs	50 discs
4 mm	YEN 25400	YEN 28200	YEN 35400
6 mm	YEN 25800	YEN 29000	YEN 36400
8 mm	YEN 26400	YEN 29600	YEN 37600
10 mm	YEN 26800	YEN 30400	YEN 38600
15 mm	YEN 28000	YEN 32200	YEN 41400
25 mm	YEN 30600	YEN 35600	YEN 47000
50 mm	YEN 36800	YEN 44400	YEN 61000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000315

Thickness **0.05mm**
 Temper **As rolled**

High Purity **99.99+%**

Size

Web Code

136-555-505
 069-442-058
 680-253-151

Size	Quantity		
	1pc	2pcs	5pcs
25 x 25 mm	YEN 31800	YEN 41200	YEN 60000
50 x 50 mm	YEN 53000	YEN 78500	
100 x 100 mm	YEN 145000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

Titanium

Ti



Foil

TI000310

Thickness **0.05mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code
 774-477-060
 809-628-922
 203-623-286
 452-908-860
 162-476-409

Size	Quantity				
	1pc	2pcs	5pcs	10pcs	20pcs
25 x 25 mm	YEN 12300	YEN 13700	YEN 17300	YEN 22200	YEN 28000
50 x 50 mm	YEN 14300	YEN 16700	YEN 22000	YEN 28800	YEN 37400
100 x 100 mm	YEN 18500	YEN 22600	YEN 31200	YEN 42000	YEN 56000
150 x 150 mm	YEN 22600	YEN 28400	YEN 40600	YEN 55000	
300 x 300 mm	YEN 35200	YEN 46200	YEN 68500		

Coil

Web Code
 446-242-685
 613-602-427
 700-305-724

Length	Quantity	
	1 Reel	
0.5 m	YEN 46400	
1 m	YEN 60000	
2 m	YEN 79000	

Discs

Web Code
 085-074-265
 634-286-980
 285-865-592
 733-188-886
 648-612-419
 076-552-726
 569-092-458

Diameter	Quantity		
	10 discs	20 discs	50 discs
4 mm	YEN 25400	YEN 28800	YEN 38800
6 mm	YEN 26000	YEN 29600	YEN 40000
8 mm	YEN 26400	YEN 30400	YEN 41200
10 mm	YEN 27000	YEN 31000	YEN 42400
15 mm	YEN 28200	YEN 33000	YEN 45400
25 mm	YEN 31000	YEN 36600	YEN 51000
50 mm	YEN 37600	YEN 46000	YEN 66000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000351

Thickness **0.075mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Flattened**

Size

Web Code
 241-256-776
 156-724-497
 025-928-623

Size	Quantity			
	1pc	2pcs	5pcs	10pcs
100 x 100 mm	YEN 28200	YEN 34400	YEN 47400	YEN 62000
150 x 200 mm	YEN 39000	YEN 49600	YEN 71500	YEN 96000
200 x 300 mm	YEN 49400	YEN 64500	YEN 95000	

Discs

Web Code
 242-222-155
 735-695-837
 452-586-774
 197-150-362
 671-494-452
 734-313-015
 026-127-530

Diameter	Quantity		
	10 discs	20 discs	50 discs
4 mm	YEN 26200	YEN 29600	YEN 37400
6 mm	YEN 27200	YEN 30800	YEN 39400
8 mm	YEN 28200	YEN 32200	YEN 41400
10 mm	YEN 29000	YEN 33400	YEN 43600
15 mm	YEN 31400	YEN 36800	YEN 48800
25 mm	YEN 36000	YEN 43400	YEN 59000
50 mm	YEN 47600	YEN 60000	YEN 85500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000350

Thickness **0.075mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code
 123-954-154
 494-270-281
 783-783-283
 972-902-877
 612-862-167

Size	Quantity				
	1pc	2pcs	5pcs	10pcs	20pcs
25 x 25 mm	YEN 16200	YEN 17600	YEN 20600	YEN 24400	YEN 30600
50 x 50 mm	YEN 19000	YEN 21600	YEN 26800	YEN 33200	YEN 42800
100 x 100 mm	YEN 24400	YEN 29200	YEN 39000	YEN 50500	YEN 67500
150 x 150 mm	YEN 30000	YEN 37000	YEN 51500	YEN 68000	YEN 92000
300 x 300 mm	YEN 46400	YEN 60500	YEN 88500		

Coil

Web Code
 243-569-985
 607-769-501
 971-192-093

Length	Quantity	
	1 Reel	
0.5 m	YEN 60500	
1 m	YEN 78500	
2 m	YEN 104000	

Discs

Web Code
 386-192-659
 274-079-101
 259-896-320
 487-045-860
 880-728-253
 091-032-385
 379-046-876

Diameter	Quantity		
	10 discs	20 discs	50 discs
4 mm	YEN 25800	YEN 28800	YEN 36200
6 mm	YEN 26400	YEN 29800	YEN 37800
8 mm	YEN 27200	YEN 30800	YEN 39400
10 mm	YEN 27800	YEN 31800	YEN 41000
15 mm	YEN 29600	YEN 34200	YEN 44800
25 mm	YEN 33000	YEN 39200	YEN 52500
50 mm	YEN 41800	YEN 51500	YEN 72000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Titanium

Ti



Foil

TI000371

Thickness **0.10mm** Purity **99.6+%**
 Temper **Annealed** Condition **Flattened**
 Condition **Grade 1 - ASTM B265 Chemistry only**

Size	Quantity			
Web Code	1pc	2pcs	5pcs	10pcs
630-171-429	YEN 42800	YEN 55500	YEN 80000	YEN 112000
041-183-299	YEN 55000	YEN 72500	YEN 111000	

Discs	Quantity		
Web Code	10 discs	20 discs	50 discs
423-021-686	YEN 26600	YEN 30000	YEN 38000
175-968-623	YEN 27600	YEN 31400	YEN 40400
907-277-026	YEN 28600	YEN 33000	YEN 42800
316-579-676	YEN 29800	YEN 34400	YEN 45200
094-437-742	YEN 32400	YEN 38200	YEN 51000
160-968-338	YEN 37800	YEN 45800	YEN 63000
637-919-830	YEN 51500	YEN 65000	YEN 93500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000370

Thickness **0.1mm** Purity **99.6+%**
 Temper **Annealed**

Size	Quantity				
Web Code	1pc	2pcs	5pcs	10pcs	20pcs
380-858-910	YEN 16900	YEN 18400	YEN 21800	YEN 25800	YEN 32600
607-371-481	YEN 20000	YEN 22800	YEN 28800	YEN 35800	YEN 46600
921-437-060	YEN 26200	YEN 31800	YEN 42800	YEN 55500	
179-629-378	YEN 32600	YEN 40600	YEN 57000		
664-077-116	YEN 51500	YEN 67500			

Coil	Quantity	
Web Code	1 Reel	
189-018-411	YEN 66500	
707-882-026	YEN 86500	

Discs	Quantity		
Web Code	10 discs	20 discs	50 discs
809-251-386	YEN 26200	YEN 29400	YEN 37000
156-416-369	YEN 27000	YEN 30400	YEN 38800
552-049-618	YEN 27800	YEN 31600	YEN 40600
006-211-220	YEN 28600	YEN 32800	YEN 42400
776-410-055	YEN 30600	YEN 35600	YEN 46800
051-251-261	YEN 34600	YEN 41200	YEN 55500
406-410-729	YEN 44600	YEN 55500	YEN 78000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000385

Thickness **0.125mm** High Purity **99.99+%**
 Temper **As rolled**

Size	Quantity		
Web Code	1pc	2pcs	5pcs
727-305-262	YEN 26200	YEN 33200	YEN 53500
913-150-763	YEN 43000	YEN 76000	
143-849-769	YEN 140000		

Discs	Quantity		
Web Code	10 discs	20 discs	50 discs
981-214-161	YEN 32800	YEN 42400	YEN 55500
651-770-958	YEN 37000	YEN 48200	YEN 65000
471-373-838	YEN 41000	YEN 54000	YEN 81000
921-732-484	YEN 45200	YEN 60000	YEN 105000
216-554-361	YEN 55000	YEN 91000	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

Metal – Titanium

Titanium

Ti



Foil

TI000380

Thickness **0.125mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

057-906-071
 238-253-034
 781-636-016
 704-503-213
 062-901-753
 922-485-882

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 200 x 300 mm
 292 x 300 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	12700	YEN 14100	YEN 17400	YEN 22200	YEN 30800	
YEN	14500	YEN 16700	YEN 21600	YEN 28200	YEN 39200	
YEN	18300	YEN 22000	YEN 30000	YEN 40000	YEN 56000	
YEN	22000	YEN 27400	YEN 38400	YEN 52000		
YEN	29200	YEN 37400	YEN 59000			
YEN	33000	YEN 42800				

Coil

Web Code
 545-948-500
 862-715-984

Width 292mm
Length 1 Reel
 0.5 m YEN 39000
 1 m YEN 55000

Quantity

Discs

Web Code

557-246-320
 655-797-546
 974-690-389
 836-290-194
 536-267-545
 033-446-776
 180-848-104

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

Quantity

		10 discs	20 discs	50 discs
YEN	25800	YEN 32400	YEN 39400	
YEN	26400	YEN 33000	YEN 40400	
YEN	26800	YEN 33800	YEN 41600	
YEN	27400	YEN 34400	YEN 42600	
YEN	28400	YEN 36000	YEN 45200	
YEN	30800	YEN 39400	YEN 50500	
YEN	36800	YEN 47800	YEN 64000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000382

Thickness **0.140mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

606-012-500
 010-177-731
 272-216-225
 027-035-967
 379-493-508
 742-088-872

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 160 x 300 mm
 300 x 300 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	12800	YEN 14300	YEN 17800	YEN 22800	YEN 31400	
YEN	14900	YEN 17200	YEN 22400	YEN 29200	YEN 40600	
YEN	19000	YEN 23000	YEN 31600	YEN 42200	YEN 59000	
YEN	23000	YEN 28800	YEN 40600	YEN 55000		
YEN	28800	YEN 36800	YEN 53500			
YEN	35400	YEN 46200				

Coil

Web Code
 436-693-678
 751-563-854

Width 305mm
Length 1 Reel
 0.5 m YEN 42200
 1 m YEN 58500

Quantity

Discs

Web Code

028-375-940
 546-997-443
 374-685-253
 835-655-353
 456-918-924
 114-862-575
 357-818-460

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

Quantity

		10 discs	20 discs	50 discs
YEN	26000	YEN 32400	YEN 39600	
YEN	26400	YEN 33200	YEN 40800	
YEN	27000	YEN 34000	YEN 42000	
YEN	27600	YEN 34600	YEN 43200	
YEN	28800	YEN 36600	YEN 46000	
YEN	31400	YEN 40200	YEN 52000	
YEN	38000	YEN 49400	YEN 66500	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000401

Thickness **0.2mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Flattened**

Size

Web Code

907-888-770
 204-903-429
 313-677-415

Size
 50 x 50 mm
 100 x 100 mm
 200 x 300 mm

		Quantity			
		1pc	2pcs	5pcs	10pcs
YEN	18200	YEN 21800	YEN 29800	YEN 39600	
YEN	25600	YEN 32200	YEN 46200		
YEN	47000	YEN 62500			

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Titanium

Ti



Foil

TI000400

Thickness **0.2mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

129-380-472
 580-405-247
 941-750-285
 236-895-810
 973-163-541

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	13500	YEN 15200	YEN 19300	YEN 24800	YEN 34400	YEN 46600
YEN	16200	YEN 19000	YEN 25400	YEN 33400	YEN 46600	
YEN	21600	YEN 26600	YEN 37400	YEN 50500		
YEN	27000	YEN 34400	YEN 49400			
YEN	43200	YEN 57500				

Coil

Web Code
 825-843-223
 228-266-286

Width 300mm
Length
 0.5 m
 1 m

		Quantity
		1 Reel
YEN	52000	YEN 69500
YEN	69500	

Discs

Web Code
 986-033-217
 968-970-654
 543-435-716
 178-645-566
 380-041-064
 595-064-213
 299-707-372

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

		Quantity		
		10 discs	20 discs	50 discs
YEN	26200	YEN 33000	YEN 43200	YEN 55500
YEN	27000	YEN 34000	YEN 44800	
YEN	27600	YEN 34800	YEN 46200	
YEN	28400	YEN 35800	YEN 47800	
YEN	30000	YEN 38200	YEN 51500	
YEN	33400	YEN 43200	YEN 59500	
YEN	42000	YEN 55500	YEN 78500	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000410

Thickness **0.25mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

768-534-698
 066-835-971
 354-498-924
 312-367-578
 045-940-137

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	13700	YEN 15600	YEN 19800	YEN 25600	YEN 35400	YEN 48600
YEN	16700	YEN 19700	YEN 26400	YEN 34800	YEN 48600	
YEN	22600	YEN 28000	YEN 39600	YEN 53500		
YEN	28400	YEN 36400	YEN 52500			
YEN	46000	YEN 61500				

Coil

Web Code
 316-367-513
 742-519-425

Width 305mm
Length
 0.5 m
 1 m

		Quantity
		1 Reel
YEN	56000	YEN 75000
YEN	75000	

Discs

Web Code
 674-850-554
 356-312-880
 539-103-561
 387-945-396
 493-170-938
 646-364-761
 795-591-392

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

		Quantity		
		10 discs	20 discs	50 discs
YEN	26400	YEN 33200	YEN 43400	YEN 55500
YEN	27200	YEN 34200	YEN 45200	
YEN	28000	YEN 35200	YEN 46800	
YEN	28600	YEN 36200	YEN 48400	
YEN	30600	YEN 39000	YEN 52500	
YEN	34200	YEN 44200	YEN 61000	
YEN	43600	YEN 57500	YEN 82000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000416

Thickness **0.3mm**
 Temper **Annealed**

Purity **99.6+%**

Condition **Grade 2 - ASTM B265 Chemistry only**

Size

Web Code

169-498-291
 235-167-601
 221-732-416

Size
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm

		Quantity		
		1pc	2pcs	5pcs
YEN	23200	YEN 29000	YEN 41200	YEN 55000
YEN	29600	YEN 38000	YEN 55000	
YEN	48400	YEN 64500		

Coil

Web Code
 132-825-015
 554-285-099

Width 300mm
Length
 0.5 m
 1 m

		Quantity
		1 Reel
YEN	58500	YEN 79000
YEN	79000	

Discs

Web Code
 408-518-289
 688-508-383
 143-762-475
 787-600-313
 644-217-040
 360-282-234
 548-345-091

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

		Quantity		
		10 discs	20 discs	50 discs
YEN	26600	YEN 33200	YEN 43600	YEN 55500
YEN	27400	YEN 34400	YEN 45400	
YEN	28200	YEN 35400	YEN 47200	
YEN	28800	YEN 36600	YEN 49000	
YEN	30800	YEN 39400	YEN 53500	
YEN	34800	YEN 45000	YEN 62500	
YEN	44800	YEN 59000	YEN 85000	

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Titanium

Ti



Foil

TI000419

Thickness **0.35mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Platinised on both sides 2 micron thick**

Size	Quantity
Web Code 386-456-572	Size 100 x 100 mm
	1pc YEN 66500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000427

Thickness **0.45mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Platinised on both sides 2 micron thick**

Size	Quantity
Web Code 865-860-030	Size 100 x 100 mm
	1pc YEN 70500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000423

Thickness **0.5mm**
 Condition **Ion Implanted**

Purity **99.6+%**

Size	Quantity
Web Code 116-312-044	Size 50 x 50 mm
	1pc POA

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.
 This material has been Ion Implanted with Nitrogen Ions to a dose of 3×10^{17} ions cm^{-2} .

TI000425

Thickness **0.5mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Polished on both sides**

Size	Quantity
Web Code 772-974-842	Size 100 x 100 mm
	1pc YEN 24200
	2pcs YEN 31200
	5pcs YEN 47400

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000421

Thickness **0.5mm**
 Surface treatment **Titanium Nitride coating 2-3 microns**

Purity **99.6+%**

Size	Quantity
Web Code 541-806-825	Size 25 x 25 mm
	1pc YEN 19500
725-858-944	50 x 50 mm
	YEN 28200
732-369-991	100 x 100 mm
	YEN 45600

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.
 This item is shown as an example of Titanium Nitride (TiN) coated material. Other items or your own material may also have a coating applied, please ask for more details.

TI000417

Thickness **0.5mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Polished on 1 side**

Size	Quantity
Web Code 832-171-022	Size 10 x 10 mm
	1pc YEN 22600
	2pcs YEN 28000
	5pcs YEN 41600
	10pcs YEN 73000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI000420

Thickness **0.5mm**
 Temper **Annealed**

Purity **99.6+%**

Size	Quantity
Web Code 395-215-502	Size 25 x 25 mm
	1pc YEN 12900
401-947-946	50 x 50 mm
	YEN 15100
243-490-913	100 x 100 mm
	YEN 19300
436-363-166	150 x 150 mm
	YEN 23600
545-396-026	300 x 300 mm
	YEN 36200

Discs	Quantity
Web Code 174-503-000	Diameter 4 mm
	10 discs YEN 28600
812-883-333	6 mm
	YEN 29200
610-424-962	8 mm
	YEN 29800
303-115-363	10 mm
	YEN 30400
889-416-404	15 mm
	YEN 32000
177-058-647	25 mm
	YEN 35200
132-334-408	50 mm
	YEN 43400

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Metal – Titanium

Titanium

Ti



Foil

TI000422

Thickness **0.7mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

205-817-696
 727-209-309
 901-170-200
 646-283-102
 785-398-996
 174-873-228

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm
 500 x 500 mm

		Quantity							
		1pc	2pcs	5pcs	10pcs	20pcs			
YEN	13900	YEN	15200	YEN	17900	YEN	21200	YEN	26800
YEN	16300	YEN	18500	YEN	23200	YEN	28800	YEN	37400
YEN	21000	YEN	25200	YEN	33800	YEN	43800		
YEN	25800	YEN	31800	YEN	44200				
YEN	40000	YEN	52000						
YEN	59000								

Discs

Web Code

859-151-435
 393-937-489
 242-177-694
 272-211-949
 026-499-559
 312-438-349
 054-791-401

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

		Quantity			
		10 discs	20 discs	50 discs	
YEN	24400	YEN	27800	YEN	35800
YEN	25200	YEN	28600	YEN	37200
YEN	25800	YEN	29600	YEN	38800
YEN	26400	YEN	30600	YEN	40200
YEN	28200	YEN	32800	YEN	43800
YEN	31400	YEN	37600	YEN	51500
YEN	39600	YEN	49200	YEN	70000

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI000432

Thickness **1.0mm**
 Temper **As rolled**

High Purity **99.99+%**

Size

Web Code

584-866-631
 108-336-569
 542-069-398

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm

		Quantity			
		1pc	2pcs	5pcs	
YEN	29000	YEN	38600	YEN	59500
YEN	43800	YEN	64000		
YEN	107000				

Discs

Web Code

758-671-372
 833-914-083
 239-257-642
 907-208-069
 401-012-081

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm

		Quantity			
		10 discs	20 discs	50 discs	
YEN	54500	YEN	77500	YEN	142000
YEN	59000	YEN	83500	YEN	151000
YEN	63000	YEN	89500	YEN	161000
YEN	67500	YEN	95500	YEN	176000
YEN	78000	YEN	113000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI000433

Thickness **1.0mm**
 Temper **As rolled**

High Purity **99.999%**

Size

Web Code

812-737-861
 592-230-675

Size
 25 x 25 mm
 50 x 50 mm

		Quantity	
		1pc	2pcs
YEN	45800	YEN	62500
YEN	89000		

Discs

Web Code

603-234-420
 404-307-191
 538-399-744
 299-968-929

Diameter
 4 mm
 6 mm
 8 mm
 10 mm

		Quantity			
		10 discs	20 discs	50 discs	
YEN	64000	YEN	91000	YEN	163000
YEN	73500	YEN	104000		
YEN	82500	YEN	117000		
YEN	92000				

Typical Analysis : Al 2, Cu 1, Fe 3, Si 1, Sn 1

TI000431

Thickness **1.0mm**
 Surface treatment **Titanium Nitride coating 2-3 microns**

Purity **99.6+%**

Size

Web Code

702-374-695
 796-826-641
 603-328-130

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm

		Quantity					
		1pc	2pcs	5pcs	10pcs		
YEN	19000	YEN	23000	YEN	31400	YEN	42000
YEN	27200	YEN	34400	YEN	49800		
YEN	43400						

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

Titanium

Ti



Foil

TI000430

Thickness **1.0mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

457-003-322
 125-412-506
 676-571-029
 571-381-273
 422-657-739
 832-224-674

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm
 500 x 500 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	12500	YEN 14400	YEN 19400	YEN 27000	YEN 41400	
YEN	14200	YEN 16800	YEN 23200	YEN 32400	YEN 49000	
YEN	17600	YEN 21600	YEN 30800	YEN 43200		
YEN	21000	YEN 26400	YEN 38400			
YEN	31000	YEN 45400				
YEN	57500					

Discs

Web Code

028-078-493
 509-804-178
 725-523-593
 690-438-003
 304-758-631
 094-828-900
 853-618-903

Diameter
 4 mm
 6 mm
 8 mm
 10 mm
 15 mm
 25 mm
 50 mm

		Quantity		
		10 discs	20 discs	50 discs
YEN	32800	YEN 46600	YEN 67500	
YEN	33200	YEN 47200	YEN 68500	
YEN	33800	YEN 48000	YEN 69500	
YEN	34200	YEN 48600	YEN 70500	
YEN	35400	YEN 50500	YEN 73500	
YEN	37800	YEN 53500	YEN 78500	
YEN	43800	YEN 62000	YEN 92000	

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI000436

Thickness **1.20mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Grade 2 - ASTM B265 Chemistry only**

Size

Web Code

145-934-621
 463-826-320

Size
 150 x 150 mm
 300 x 300 mm

		Quantity		
		1pc	2pcs	5pcs
YEN	29400	YEN 37000	YEN 52500	
YEN	47200	YEN 64000		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI000437

Thickness **1.5mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

101-479-356
 684-924-816
 615-609-851
 951-226-388
 903-294-963

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	14600	YEN 16100	YEN 19400	YEN 23400	YEN 29800	
YEN	17600	YEN 20400	YEN 26200	YEN 33000	YEN 43400	
YEN	23800	YEN 29000	YEN 39800	YEN 52000		
YEN	29800	YEN 37600	YEN 53500			
YEN	48000	YEN 74000				

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.
 We can also offer 99.99% material, prices on request.

TI000441

Thickness **2.0mm**
 Surface treatment **Titanium Nitride coating 2-3 microns**

Purity **99.6+%**

Size

Web Code

936-788-231
 098-526-117
 315-763-502

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm

		Quantity			
		1pc	2pcs	5pcs	10pcs
YEN	19900	YEN 24000	YEN 32800	YEN 43600	
YEN	28400	YEN 36000	YEN 51500		
YEN	45200				

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.
 This item is shown as an example of Titanium Nitride (TiN) coated material.

TI000440

Thickness **2.0mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

263-376-857
 922-100-049
 262-509-593
 813-694-122
 711-767-761
 970-963-485

Size
 25 x 25 mm
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 300 x 300 mm
 500 x 500 mm

		Quantity				
		1pc	2pcs	5pcs	10pcs	20pcs
YEN	14800	YEN 16400	YEN 19800	YEN 24000	YEN 30800	
YEN	18000	YEN 21000	YEN 27000	YEN 34200	YEN 45200	
YEN	24600	YEN 30200	YEN 41400	YEN 54500		
YEN	31000	YEN 39200	YEN 56000			
YEN	50500	YEN 67500				
YEN	88500					

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI000460

Thickness **3.0mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

881-241-821
 155-226-563
 403-321-253
 549-675-408
 415-152-205

Size
 50 x 50 mm
 100 x 100 mm
 150 x 150 mm
 190 x 300 mm
 300 x 300 mm

		Quantity		
		1pc	2pcs	5pcs
YEN	19400	YEN 22800	YEN 30000	
YEN	27200	YEN 34000	YEN 47600	
YEN	35000	YEN 45000		
YEN	49000			
YEN	58500			

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

Titanium

Ti



Foil

TI000500

Thickness **3.2mm**
 Temper **As rolled**

High Purity **99.99+%**

Size

Web Code
 894-032-736
 754-091-171
 261-396-631

Size	Quantity		
	1pc	2pcs	5pcs
25 x 25 mm	YEN 30200	YEN 40400	YEN 62000
50 x 50 mm	YEN 46400	YEN 72000	
100 x 100 mm	YEN 123000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.



Sheet

TI003140

Thickness **4.0mm**
 Temper **Annealed**

Purity **99.6+%**

Discs

Web Code
 192-447-187

Diameter	Quantity	
	1 pcs	2 pcs
26 mm	YEN POA	YEN POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI003150

Thickness **5.0mm**
 Purity **99.6+%**

Tolerance **20 %**
 Temper **Annealed**

Size

Web Code
 433-101-802
 121-072-818

Size	Quantity
	1pc
150 x 150 mm	POA
300 x 300 mm	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI003151

Thickness **5.0mm**
 Purity **99.6+%**

Tolerance **20 %**
 Temper **Annealed**

Size

Web Code
 846-346-453

Size	Quantity			
	1pc	2pcs	5pcs	10pcs
20 x 20 mm	YEN 12100	YEN 14800	YEN 21800	YEN 37200

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI003200

Thickness **7.0mm**

Purity **99.6+%**

Size

Web Code
 739-589-782
 448-715-217

Size	Quantity
	1pc
150 x 150 mm	POA
300 x 300 mm	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI003230

Thickness **8.0mm**

Purity **99.6+%**

Size

Web Code
 089-994-764
 609-269-915
 117-989-168
 322-171-842

Size	Quantity
	1pc
75 x 75 mm	POA
75 x 105 mm	POA
90 x 340 mm	POA
92 x 498 mm	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI003250

Thickness **12.0mm**

Purity **99.6+%**

Size

Web Code
 089-409-444
 176-182-493

Size	Quantity
	1pc
150 x 150 mm	POA
300 x 300 mm	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.



Sputtering Target

TI009100

Thickness **1.0mm**

High Purity **99.99+%**

Size

Web Code
 393-206-927

Disc diam.	Quantity
	1disc
33 mm	POA

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.
 These targets are normally available for immediate shipment from stock. Other sizes are available to special order.

Metal – Titanium

Titanium

Ti



Sputtering Target

TI009300

Thickness **3.0mm** High Purity **99.99+%**

Size	Quantity
Web Code	Disc diam. 1disc
877-206-666	25 mm POA
789-984-168	50 mm POA
748-016-513	75 mm POA

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.
 These targets are normally available for immediate shipment from stock. Other sizes are available to special order.

TI009301

Thickness **3.0mm** Purity **99.6+%**

Size	Quantity
Web Code	Disc diam. 1disc
502-063-393	50 mm POA
757-916-720	75 mm POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.
 These targets are normally available for immediate shipment from stock. Other sizes are available to special order.

TI009600

Thickness **6.0mm** High Purity **99.99+%**

Size	Quantity
Web Code	Disc diam. 1disc
388-404-527	25.4 mm POA
327-130-952	50 mm POA
930-533-923	75 mm POA
894-411-415	101.6 mm POA

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.
 These targets are normally available for immediate shipment from stock. Other sizes are available to special order.

TI009512

Thickness **6.0mm** Purity **99.6+%**

Size	Quantity
Web Code	Disc diam. 1disc
503-269-618	120 mm POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI009515

Thickness **6.0mm** Purity **99.6+%**

Size	Quantity
Web Code	Disc diam. 1disc
908-701-507	152.4 mm POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI009520

Thickness **6.0mm** Purity **99.6+%**

Size	Quantity
Web Code	Disc diam. 1disc
587-693-758	203.2 mm POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI009700

Thickness **7.0mm** Purity **99.6+%**

Size	Quantity
Web Code	Disc diam. 1disc
073-522-547	50 mm POA
190-319-810	75 mm POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.
 These targets are normally available for immediate shipment from stock. Other sizes are available to special order.



Mesh

TI008710

Nominal Aperture **0.19mm** Wire diameter **0.23mm**
 Wires/inch **60x60** Open area **20%**
 Weave **Twill**

Size	Quantity
Web Code	Size 1pc 2pcs 5pcs
113-282-527	50 x 50 mm YEN 40000 YEN 53500 YEN 76500
160-318-438	100 x 100 mm YEN 55500 YEN 75500 YEN 113000
039-809-321	150 x 150 mm YEN 71000 YEN 97500

TI008720

Nominal Aperture **4.3mm** Wire diameter **1.5mm**
 Wires/inch **4.4x4.4** Open area **94%**
 Condition **Diamond pattern** Condition **Platinised**

Size	Quantity
Web Code	Size 1pc
293-740-051	100 x 100 mm YEN 62000

Metal – Titanium

Titanium

Ti



Wire

TI005100	Diameter 0.05mm Temper Hard	Purity 99.8%
	Length Web Code	Quantity
	703-333-766	Length 1 Reel
	916-721-398	10 m YEN 32200
	590-169-228	20 m YEN 39400
	771-155-069	50 m YEN 53500
	044-552-997	100 m YEN 70000
		200 m YEN 93500
Typical Analysis : Al 1, Cr 30, Cu 10, Fe 90, Mg 10, Mn 400, Ni 50, Si 30, V 50, H 80, N 20, O 400.		
TI005108	Diameter 0.08mm Temper As drawn	Purity 99.6+% Condition Grade 1 - ASTM B265 Chemistry only
	Length Web Code	Quantity
	688-190-022	Length 1 Reel
		10 m YEN 32200
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.		
TI005112	Diameter 0.125mm Temper Annealed	Purity 99.6+% Condition Grade 2 - ASTM B348 Chemistry only
	Length Web Code	Quantity
	162-135-533	Length 1 Reel
		10 m YEN 21000
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.		
TI005119	Diameter 0.20mm Temper As drawn	Purity 99.6+% Condition Grade 1 - ASTM B348 Chemistry only
	Length Web Code	Quantity
	109-417-803	Length 1 Reel
		10 m YEN 20600
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000. 10m reels only. Very limited stock available.		
TI005121	Diameter 0.20mm Temper Annealed	Purity 99.6+%
	Length Web Code	Quantity
	407-756-100	Length 1 Reel
	474-042-012	1 m YEN 14100
	963-914-025	5 m YEN 16800
	782-680-564	25 m YEN 22800
	364-257-070	100 m YEN 34200
	434-034-311	200 m YEN 44000
		500 m YEN 85000
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.		
TI005120	Diameter 0.25mm Temper As drawn	High Purity 99.99+%
	Length Web Code	Quantity
	254-793-337	Length 1 Reel
	849-171-880	0.5 m YEN 18500
	146-486-879	1 m YEN 23200
	310-857-604	2 m YEN 30000
		5 m YEN 44600
Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.		
TI005124	Diameter 0.25mm Temper As drawn	Purity 99.6+% Condition Grade 1 - ASTM B348 Chemistry only
	Length Web Code	Quantity
	552-625-721	Length 1 Reel
		10 m YEN 19900
Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000. 10m reels only. Very limited stock available.		

Metal – Titanium

Titanium

Ti



Wire

TI005123

Diameter **0.25mm**
 Temper **As drawn**

Purity **99.6+%**

Length

Web Code
 128-690-626
 969-449-238
 557-759-758
 461-325-340
 007-612-179
 510-587-840

Quantity

Length 1 Reel
 1 m YEN 14300
 5 m YEN 17100
 25 m YEN 23400
 100 m YEN 35400
 200 m YEN 45600
 500 m YEN 92500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI005122

Diameter **0.25mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Grade 4 - ASTM B348 Chemistry only**

Length

Web Code
 782-345-219

Quantity

Length 1 Reel
 1 m YEN 14300

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI005128

Diameter **0.5mm**
 Temper **As drawn**

High Purity **99.99+%**

Length

Web Code
 809-328-225
 166-027-687
 753-455-659
 181-958-579

Quantity

Length 1 Reel
 0.5 m YEN 20000
 1 m YEN 25200
 2 m YEN 32800
 5 m YEN 59000

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI005127

Diameter **0.5mm**
 Temper **Annealed**

Purity **99.975+%**

Length

Web Code
 341-440-179
 680-020-060
 002-501-645

Quantity

Length 1 Reel
 0.5 m YEN 18600
 1 m YEN 23200
 2 m YEN 31000

Typical Analysis : Al <10, Ca <5, Cr <10, Cu <5, Fe <160, K <1, Li <1, Mg <10, Mo <10, Na <1, Si <10.

TI005125

Diameter **0.5mm**
 Temper **As drawn**

Purity **99.6+%**
 Condition **Grade 2 - ASTM B348 Chemistry only**

Length

Web Code
 068-135-256
 516-906-634
 613-334-558
 666-822-887
 352-853-849

Quantity

Length 1 Reel
 1 m YEN 13900
 5 m YEN 17100
 25 m YEN 24200
 100 m YEN 37400
 200 m YEN 50500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI005126

Diameter **0.75mm**
 Temper **As drawn**

Purity **99.6+%**
 Condition **Grade 2 - ASTM B348 Chemistry only**

Length

Web Code
 269-768-530

Quantity

Length 1 Reel
 1 m YEN 14900

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI005135

Diameter **1.0mm**
 Temper **As drawn**

High Purity **99.99+%**

Length

Web Code
 743-899-888
 987-481-525
 435-199-458

Quantity

Length 1 Reel
 0.5 m YEN 23800
 1 m YEN 29600
 2 m YEN 38000

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

Metal – Titanium

Titanium

Ti



Wire

TI005136

Diameter **1.0mm**
 Temper **Annealed**

Purity **99.99+%**

Length

Web Code
 684-191-326
 301-401-658
 042-269-369

Quantity

Length 1 Reel
 0.5 m YEN 23800
 1 m YEN 29600
 2 m YEN 38000

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI005320

Diameter **1.0mm**
 Condition **Straight wire**

Purity **99.6+%**
 Temper **As drawn**

Size

Web Code

Length

Quantity

1pc 2pcs 5pcs 10pcs 20pcs
 3.6g #1000 mm#

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI005129

Diameter **1.0mm**
 Temper **As drawn**

Purity **99.6+%**
 Condition **Grade 2 - ASTM B348 Chemistry only**

Length

Web Code
 710-202-350

Quantity

Length 1 Reel
 0.5 m YEN 13300

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI005130

Diameter **1.0mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Grade 2 - ASTM B348 Chemistry only**

Length

Web Code
 762-664-231

Quantity

Length 1 Reel
 0.5 m YEN 13300

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI005140

Diameter **1.5mm**
 Temper **As drawn**

Purity **99.6+%**

Length

Web Code
 809-085-444
 506-434-790
 941-505-933
 755-186-249
 833-122-096

Quantity

Length 1 Reel
 1 m YEN 16400
 5 m YEN 24200
 10 m YEN 30000
 20 m YEN 38200
 50 m YEN 60000

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI005160

Diameter **3.0mm**
 Temper **Annealed**

Purity **99.6+%**
 Condition **Grade 1 - ASTM B348 Chemistry only**

Length

Web Code
 902-253-893

Quantity

Length 1 Reel
 1 m YEN 20800

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.



Rod

TI007905

Diameter **1.5mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code
 726-938-831
 455-869-852
 038-382-829
 341-063-631

Quantity

Length	1pc	2pcs	5pcs	10pcs	20pcs
100 mm	YEN 14000	YEN 16900	YEN 20800	YEN 26600	YEN 37600
200 mm	YEN 14500	YEN 17700	YEN 22000	YEN 28200	YEN 40000
500 mm	YEN 15600	YEN 19100	YEN 24200	YEN 31600	YEN 44600
1000 mm	YEN 16700	YEN 20800	YEN 26800	YEN 35200	YEN 49800

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

Metal – Titanium

Titanium

Ti



Rod

TI007911

Diameter **2mm**
 Temper **As drawn**

High Purity **99.99+%**

Size	Web Code	Length	Quantity			
			1pc	2pcs	5pcs	10pcs
669-911-794		100 mm	YEN 18300	YEN 22000	YEN 28200	YEN 43400
626-767-595		200 mm	YEN 21200	YEN 26200	YEN 42600	YEN 74000
331-228-329		500 mm	YEN 27200	YEN 42200	YEN 88500	
587-909-642		1000 mm	YEN 41600	YEN 73000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007913

Diameter **2mm**
 Temper **Annealed**

Purity **99.99+%**

Size	Web Code	Length	Quantity			
			1pc	2pcs	5pcs	10pcs
487-942-601		100 mm	YEN 19800	YEN 23400	YEN 29800	YEN 44800
720-919-424		200 mm	YEN 22800	YEN 27600	YEN 44200	YEN 75500
246-190-801		500 mm	YEN 28800	YEN 43800	YEN 90000	
263-199-777		1000 mm	YEN 43000	YEN 74500		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007910

Diameter **2mm**
 Temper **Annealed**

Purity **99.6+%**

Size	Web Code	Length	Quantity				
			1pc	2pcs	5pcs	10pcs	20pcs
613-226-991		100 mm	YEN 14400	YEN 17400	YEN 21600	YEN 27800	YEN 39200
653-367-004		200 mm	YEN 15000	YEN 18400	YEN 23000	YEN 29800	YEN 42200
039-162-907		490 mm	YEN 16300	YEN 20200	YEN 25800	YEN 33800	YEN 47800
860-685-368		1000 mm	YEN 17800	YEN 22400	YEN 29200	YEN 38600	YEN 56500

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007915

Diameter **3.0mm**
 Temper **Annealed**

Purity **99.6+%**

Size	Web Code	Length	Quantity				
			1pc	2pcs	5pcs	10pcs	20pcs
993-901-341		100 mm	YEN 14900	YEN 18100	YEN 22600	YEN 29200	YEN 41400
177-055-164		200 mm	YEN 15700	YEN 19400	YEN 24600	YEN 32000	YEN 45200
167-721-605		500 mm	YEN 17500	YEN 21800	YEN 28400	YEN 37600	YEN 53500
548-835-815		1000 mm	YEN 19400	YEN 24600	YEN 32800	YEN 44000	YEN 74500

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007916

Diameter **4mm**
 Temper **Annealed**

Purity **99.6+%**

Size	Web Code	Length	Quantity				
			1pc	2pcs	5pcs	10pcs	20pcs
647-843-137		100 mm	YEN 15700	YEN 19200	YEN 24000	YEN 31000	YEN 43400
549-782-494		200 mm	YEN 16900	YEN 20800	YEN 26600	YEN 34600	YEN 48400
814-360-570		500 mm	YEN 19100	YEN 24000	YEN 31600	YEN 43200	YEN 73000
144-236-334		1000 mm	YEN 21600	YEN 27600	YEN 38800	YEN 64000	

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007918

Diameter **5.0mm**
 Temper **As drawn**

Purity **99.99+%**

Size	Web Code	Length	Quantity	
			1pc	2pcs
428-536-198		50 mm	YEN 32400	YEN 40800
267-928-716		100 mm	YEN 38800	YEN 49800

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007920

Diameter **5mm**
 Temper **Annealed**

Purity **99.6+%**

Size	Web Code	Length	Quantity				
			1pc	2pcs	5pcs	10pcs	20pcs
585-670-678		100 mm	YEN 15800	YEN 19400	YEN 24400	YEN 31400	YEN 43800
208-829-984		200 mm	YEN 17000	YEN 21000	YEN 27000	YEN 35000	YEN 49400
103-746-780		500 mm	YEN 19300	YEN 24400	YEN 32200	YEN 45000	YEN 76500
968-344-939		1000 mm	YEN 22000	YEN 28000	YEN 40600	YEN 67500	

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

Titanium

Ti



Rod

TI007921

Diameter **6mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

043-116-388
 389-540-768
 692-593-155
 574-141-796

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 17600	YEN 21600	YEN 27000	YEN 34600
200 mm	YEN 19000	YEN 23600	YEN 30200	YEN 39000
500 mm	YEN 21800	YEN 27600	YEN 36400	YEN 56500
1000 mm	YEN 25000	YEN 32000	YEN 52000	

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007923

Diameter **6.2mm**
 Temper **Annealed**

Purity **99.99+%**

Size

Web Code

017-601-271
 571-501-549
 384-667-485

Length	Quantity
	1pc
154 mm	YEN 45400
370 mm	YEN 74000
895 mm	YEN 155000

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.
 Very limited stock available.

TI007922

Diameter **6.35mm**
 Temper **Annealed**

High Purity **99.99+%**

Size

Web Code

664-090-505
 519-300-427
 277-294-013

Length	Quantity	
	1pc	2pcs
50 mm	YEN 33200	YEN 41800
100 mm	YEN 39800	YEN 51500
200 mm	YEN 49200	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007925

Diameter **8.0mm**
 Temper **As drawn**

High Purity **99.99+%**

Size

Web Code

823-918-786
 405-093-456
 986-116-236

Length	Quantity	
	1pc	2pcs
50 mm	YEN 37400	YEN 47800
100 mm	YEN 45600	YEN 68000
200 mm	YEN 66000	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007931

Diameter **9.5mm**
 Temper **Annealed**

High Purity **99.99+%**

Size

Web Code

351-300-359
 912-539-653
 918-599-677
 824-951-989

Length	Quantity		
	1pc	2pcs	5pcs
25 mm	YEN 34000	YEN 43000	YEN 63000
50 mm	YEN 41000	YEN 53000	
100 mm	YEN 51000	YEN 87000	
200 mm	YEN 85000		

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007930

Diameter **10mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

767-723-911
 965-493-289
 686-650-782
 831-348-743

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 19100	YEN 23000	YEN 29400	YEN 37600
200 mm	YEN 21000	YEN 25800	YEN 33600	
500 mm	YEN 24800	YEN 31200		
1000 mm	YEN 29200			

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007938

Diameter **16mm**
 Temper **As drawn**

High Purity **99.99+%**

Size

Web Code

501-713-189
 480-926-876
 877-169-973

Length	Quantity	
	1pc	2pcs
25 mm	YEN 37600	YEN 49000
50 mm	YEN 47000	YEN 79500
100 mm	YEN 77500	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007937

Diameter **16mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code

390-400-846
 800-104-921
 013-124-908
 640-617-607

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 21400	YEN 26200	YEN 34000
200 mm	YEN 24000	YEN 30000	YEN 46000
500 mm	YEN 29200	YEN 43400	
1000 mm	YEN 41200		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

Metal – Titanium

Titanium

Ti



Rod

TI007941

Diameter **20mm** High Purity **99.99+%**
 Temper **As drawn**

Size	Web Code	Length	Quantity	
			1pc	2pcs
	417-393-521	25 mm	YEN 39400	YEN 53000
	049-096-533	50 mm	YEN 51000	YEN 89000
	097-147-193	100 mm	YEN 87000	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007940

Diameter **20mm** Purity **99.6+%**
 Temper **Annealed**

Size	Web Code	Length	Quantity		
			1pc	2pcs	5pcs
	650-810-444	50 mm	YEN 16400	YEN 19500	POA
	354-463-169	100 mm	YEN 18200	YEN 22000	POA
	307-897-152	200 mm	YEN 20800	POA	
	487-146-660	500 mm	POA		
	077-206-463	1000 mm	POA		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007946

Diameter **25mm** High Purity **99.99+%**
 Temper **As drawn**

Size	Web Code	Length	Quantity	
			1pc	2pcs
	373-425-482	25 mm	YEN 44400	YEN 70000
	946-302-718	50 mm	YEN 68000	

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

TI007945

Diameter **25mm** Purity **99.6+%**
 Temper **Annealed**

Size	Web Code	Length	Quantity		
			1pc	2pcs	5pcs
	667-385-278	50 mm	YEN 17500	YEN 21000	POA
	570-710-445	100 mm	YEN 19800	YEN 25200	POA
	249-765-258	200 mm	YEN 24000	POA	
	390-711-673	500 mm	POA		
	894-550-342	1000 mm	POA		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007947

Diameter **30mm** Purity **99.6+%**
 Temper **Annealed**

Size	Web Code	Length	Quantity		
			1pc	2pcs	5pcs
	483-440-583	50 mm	YEN 18600	YEN 22600	POA
	330-430-696	100 mm	YEN 21200	YEN 30200	POA
	609-494-572	200 mm	YEN 29000	POA	
	897-523-046	500 mm	POA		
	210-713-265	1000 mm	POA		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007948

Diameter **40mm** Purity **99.6+%**
 Temper **Annealed**

Size	Web Code	Length	Quantity		
			1pc	2pcs	5pcs
	727-887-547	50 mm	YEN 20800	YEN 28200	POA
	177-997-770	100 mm	YEN 27000	POA	
	430-360-174	200 mm	POA		
	670-459-346	500 mm	POA		
	336-998-532	1000 mm	POA		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007955

Diameter **50mm** High Purity **99.99+%**

Size	Web Code	Length	Quantity
			1pc
	311-277-120	10 mm	YEN 50000
	909-639-289	25 mm	YEN 86000

Typical Analysis : Al <3, Ca <2, Cr <6, Cu <10, Fe <10, Mg <1, Mn <1, Nb <5, Ni <3, S <1, Si <5, V <3, Zn <1, Zr <3.

Titanium

Ti



Rod

TI007950

Diameter **50mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code
 368-631-967
 893-334-663
 666-829-969
 353-747-982
 218-490-266
 642-046-246

Length	Quantity		
	1pc	2pcs	5pcs
25 mm	YEN 20600	YEN 26000	POA
50 mm	YEN 24600	POA	POA
100 mm	POA	POA	POA
200 mm	POA	POA	POA
500 mm	POA	POA	POA
1000 mm	POA	POA	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI007975

Diameter **75mm**
 Temper **Annealed**

Purity **99.6+%**

Size

Web Code
 045-504-645
 010-155-025
 289-420-615
 957-338-168
 423-492-152
 299-047-015

Length	Quantity	
	1pc	2pcs
25 mm	YEN 24200	POA
50 mm	POA	POA
100 mm	POA	POA
200 mm	POA	POA
500 mm	POA	POA
1000 mm	POA	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.



Bar

TI008003

Side Length **10mm**
 Purity **99.6+%**

Side Length (of longer side) **12mm**

Size

Web Code
 024-847-271
 871-756-044
 655-568-722
 289-180-194

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 9600	YEN 11700	YEN 16000	YEN 26800
200 mm	YEN 11500	YEN 14200	YEN 26400	
500 mm	YEN 15600	YEN 26200		
1000 mm	YEN 26000	YEN 47000		

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

TI008010

Side Length **50mm**
 Purity **99.6+%**

Side Length (of longer side) **50mm**

Size

Web Code
 943-781-460

Length	Quantity
	1pc
100 mm	POA

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.



Tube

TI007050

Outside Diameter **0.51mm**
 Inside Diameter **0.35mm**
 Temper **Annealed**

Wall Thickness **0.08mm**
 Purity **99.6+%**

Size

Web Code
 139-002-057
 375-258-559
 907-315-054

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 37800	YEN 46800	YEN 83000
200 mm	YEN 45400	YEN 69500	
500 mm	YEN 80500		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007060

Outside Diameter **0.81mm**
 Inside Diameter **0.61mm**
 Temper **As drawn**

Wall Thickness **0.1mm**
 Purity **99.6+%**

Size

Web Code
 212-007-468
 084-327-266
 627-380-069
 600-924-567

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 35800	YEN 44000	YEN 70500
200 mm	YEN 42600	YEN 60000	YEN 120000
500 mm	YEN 68500	YEN 119000	
1000 mm	YEN 117000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Titanium

Ti



Tube

TI007068

Outside Diameter..... **1.00mm**
 Inside Diameter..... **0.36mm**
 Temper..... **Hard**

Wall Thickness..... **0.32mm**
 Purity..... **99.6+%**
 Condition..... **Grade 2 - ASTM B338 Chemistry only**

Size

Web Code
 307-126-652

Length	Quantity			
	10pcs	20pcs	50pcs	100pcs
20 mm	YEN 34400	YEN 49200	YEN 94000	YEN 168000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007070

Outside Diameter..... **1.05mm**
 Inside Diameter..... **0.75mm**
 Temper..... **Annealed**

Wall Thickness..... **0.15mm**
 Purity..... **99.6+%**
 Condition..... **Grade 2 - ASTM B338 Chemistry only**

Size

Web Code
 414-378-307
 797-294-422
 661-800-346
 328-012-513

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 35800	YEN 44000	YEN 70500
200 mm	YEN 42600	YEN 60000	YEN 120000
500 mm	YEN 68500	YEN 119000	
1000 mm	YEN 117000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007075

Outside Diameter..... **1.5mm**
 Inside Diameter..... **1.15mm**
 Temper..... **Hard**

Wall Thickness..... **0.175mm**
 Purity..... **99.6+%**

Size

Web Code
 772-144-387

Length	Quantity		
	1pc	2pcs	5pcs
230 mm	YEN 36200	YEN 45000	YEN 62000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007085

Outside Diameter..... **1.6mm**
 Inside Diameter..... **0.6mm**
 Temper..... **Annealed**

Wall Thickness..... **0.5mm**
 Purity..... **99.6+%**

Size

Web Code
 550-158-262
 054-267-481
 934-343-170
 272-244-568

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 23000	YEN 28600	YEN 47600
200 mm	YEN 27400	YEN 40400	YEN 81500
500 mm	YEN 46200	YEN 81000	
1000 mm	YEN 80000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007080

Outside Diameter..... **1.6mm**
 Inside Diameter..... **1.2mm**
 Temper..... **Hard**

Wall Thickness..... **0.2mm**
 Purity..... **99.6+%**
 Condition..... **Grade 2 - ASTM B338 Chemistry only**

Size

Web Code
 656-944-268
 492-647-132
 863-991-063
 054-380-668

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 23000	YEN 28600	YEN 47600
200 mm	YEN 27400	YEN 40400	YEN 81500
500 mm	YEN 46200	YEN 81000	
1000 mm	YEN 80000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007101

Outside Diameter..... **2.03mm**
 Inside Diameter..... **1.55mm**
 Temper..... **Annealed**

Wall Thickness..... **0.24mm**
 Purity..... **99.6+%**

Size

Web Code
 139-154-472
 322-700-154
 295-841-870
 686-703-660

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 20400	YEN 24800	YEN 33000
200 mm	YEN 23800	YEN 29600	YEN 52000
500 mm	YEN 31400	YEN 52000	
1220 mm	YEN 59000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007100

Outside Diameter..... **2.03mm**
 Inside Diameter..... **1.63mm**
 Temper..... **Annealed**

Wall Thickness..... **0.2mm**
 Purity..... **99.6+%**

Size

Web Code
 725-038-271
 629-775-405
 721-931-142
 173-953-754

Length	Quantity		
	1pc	2pcs	5pcs
100 mm	YEN 21600	YEN 26600	YEN 39200
200 mm	YEN 25400	YEN 33600	YEN 64500
500 mm	YEN 37600	YEN 64000	
1000 mm	YEN 63000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Metal – Titanium

Titanium

Ti



Tube

TI007126	Outside Diameter.....	2.65mm	Wall Thickness.....	0.1mm
	Inside Diameter.....	2.45mm	Purity.....	99.6+%
	Temper.....	Hard		
	Size		Quantity	
	Web Code		Length	10pcs 25pcs 50pcs 100pcs
	117-672-939		4 mm	YEN 20000 YEN 25400 YEN 32400 YEN 45200

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007210	Outside Diameter.....	3.0mm	Wall Thickness.....	0.75mm
	Inside Diameter.....	1.5mm	Purity.....	99.6+%
	Temper.....	Annealed		
	Size		Quantity	
	Web Code		Length	1pc 2pcs 5pcs 10pcs
	832-381-277		100 mm	YEN 19000 YEN 23000 YEN 30600 YEN 48200
	047-658-559		200 mm	YEN 21800 YEN 26800 YEN 47600
	957-319-600		500 mm	YEN 29200 YEN 47200
	664-952-794		1000 mm	YEN 46200

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007250	Outside Diameter.....	4.25mm	Wall Thickness.....	0.25mm
	Inside Diameter.....	3.75mm	Purity.....	99.6+%
	Temper.....	Annealed		
	Size		Quantity	
	Web Code		Length	1pc 2pcs 5pcs 10pcs
	119-099-329		100 mm	YEN 18400 YEN 22000 YEN 27600 YEN 36400
	887-420-548		200 mm	YEN 21000 YEN 25600 YEN 35800 YEN 58500
	927-568-528		500 mm	YEN 26000 YEN 35400
	946-070-401		1000 mm	YEN 34400 YEN 57500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007295	Outside Diameter.....	6.1mm	Wall Thickness.....	0.5mm
	Inside Diameter.....	5.1mm	Purity.....	99.6+%
	Temper.....	Annealed		
	Size		Quantity	
	Web Code		Length	1pc 2pcs 5pcs 10pcs
	481-675-901		100 mm	YEN 20800 YEN 25400 YEN 34600 YEN 55500
	356-826-007		200 mm	YEN 24200 YEN 30200 YEN 55000 YEN 96000
	504-026-630		500 mm	YEN 33000 YEN 54500
	206-109-979		1000 mm	YEN 53000 YEN 94500

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007350	Outside Diameter.....	6.35mm	Wall Thickness.....	0.89mm
	Inside Diameter.....	4.57mm	Purity.....	99.6+%
	Temper.....	Annealed		
	Size		Quantity	
	Web Code		Length	1pc 2pcs 5pcs 10pcs
	739-151-280		100 mm	YEN 20400 YEN 24600 YEN 31400 YEN 49000
	393-908-800		200 mm	YEN 23400 YEN 29000 YEN 48200
	238-601-445		500 mm	YEN 29800 YEN 47800
	825-177-227		1000 mm	YEN 46600

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007300	Outside Diameter.....	6.35mm	Wall Thickness.....	0.41mm
	Inside Diameter.....	5.53mm	Purity.....	99.6+%
	Temper.....	Annealed	Condition.....	Grade 2 - ASTM B338 Chemistry only
	Size		Quantity	
	Web Code		Length	1pc 2pcs 5pcs 10pcs
	258-804-851		100 mm	YEN 20800 YEN 25400 YEN 34600 YEN 55500
	350-610-838		200 mm	YEN 24200 YEN 30200 YEN 55000
	826-351-383		500 mm	YEN 33000 YEN 54500
	293-913-295		1000 mm	YEN 53000

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007370	Outside Diameter.....	7.0mm	Wall Thickness.....	1.0mm
	Inside Diameter.....	5mm	Purity.....	99.6+%
	Temper.....	Annealed		
	Size		Quantity	
	Web Code		Length	1pc 2pcs 5pcs 10pcs
	223-418-007		100 mm	YEN 20400 YEN 24600 YEN 31400 YEN 49000
	106-208-414		200 mm	YEN 23400 YEN 29000 YEN 48200
	648-580-126		500 mm	YEN 29800 YEN 47800
	036-921-236		1000 mm	YEN 46600

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

Metal – Titanium

Titanium

Ti



Tube

TI007401

Outside Diameter..... **9.5mm**
 Inside Diameter..... **8.2mm**
 Temper..... **Annealed**

Wall Thickness..... **0.65mm**
 Purity..... **99.6+%**
 Condition..... **Lightly Oxidised surface**

Size

Web Code

060-031-005
 635-270-033
 520-055-962
 854-966-646

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 17100	YEN 20800	YEN 24400	YEN 28800
200 mm	YEN 18800	YEN 23200	YEN 28200	YEN 39400
500 mm	YEN 22000	YEN 27800	YEN 44600	
1000 mm	YEN 25800	YEN 38400		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007461

Outside Diameter..... **10mm**
 Inside Diameter..... **8mm**
 Temper..... **Annealed**

Wall Thickness..... **1.0mm**
 Purity..... **99.6+%**
 Condition..... **Grade 2 - ASTM B338 Chemistry only**

Size

Web Code

026-656-727
 886-397-128
 640-012-142
 429-596-619

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 19100	YEN 22800	YEN 28600	YEN 39800
200 mm	YEN 21800	YEN 26600	YEN 39000	
500 mm	YEN 27000	YEN 38600		
1000 mm	YEN 37400			

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007460

Outside Diameter..... **10.3mm**
 Inside Diameter..... **8.7mm**
 Temper..... **Annealed**

Wall Thickness..... **0.8mm**
 Purity..... **99.6+%**
 Condition..... **Grade 2 - ASTM B338 Chemistry only**

Size

Web Code

284-117-036
 514-633-570
 329-199-253
 149-909-352

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 19100	YEN 22800	YEN 28600	YEN 39800
200 mm	YEN 21800	YEN 26600	YEN 39000	
500 mm	YEN 27000	YEN 38600		
1000 mm	YEN 37400			

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007500

Outside Diameter..... **12.7mm**
 Inside Diameter..... **10.9mm**
 Temper..... **Annealed**

Wall Thickness..... **0.9mm**
 Purity..... **99.6+%**

Size

Web Code

738-669-986
 333-737-954
 717-241-244
 655-150-249

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 19400	YEN 23400	YEN 29200	YEN 42200
200 mm	YEN 22200	YEN 27200	YEN 41400	YEN 69000
500 mm	YEN 27600	YEN 41000		
1000 mm	YEN 39800	YEN 68000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.

TI007550

Outside Diameter..... **25.4mm**
 Inside Diameter..... **23.62mm**
 Temper..... **Annealed**

Wall Thickness..... **0.89mm**
 Purity..... **99.6+%**

Size

Web Code

893-777-018
 722-128-135
 266-023-212
 252-905-815

Length	Quantity			
	1pc	2pcs	5pcs	10pcs
100 mm	YEN 20600	YEN 24800	YEN 30800	YEN 44400
200 mm	YEN 23400	YEN 28600	YEN 43600	YEN 72500
500 mm	YEN 28800	YEN 43000		
1000 mm	YEN 41800	YEN 71000		

Typical Analysis : Al 300, Ca 20, Cr 50, Cu 5, Fe 1500, Mn 100, Ni 50, Si 300, Sn 200, C 300, H 60, N 150, O 2000.



Powder

TI006030

Max. Particle size..... **45micron**
 Condition..... **Grade 1**
 Condition..... **Spherical**

Purity..... **99.5%**
 Condition..... **Gas atomized**



Web Code
 350-340-381

Quantity	
Weight	1 Pot
50 g	YEN 31800

Typical Analysis : C <100, Chlorides 1700, Fe 200, N <100, O 1000.

May be suitable for additive manufacturing research and development purposes.

Hazardous goods, additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.

Titanium

Ti



Powder

TI006021

Max. Particle size **45micron**
 Condition..... **Grade 2**
 Condition..... **Spherical**

Purity..... **99.5%**
 Condition..... **Gas atomized**



Web Code
 145-365-376

Quantity	Weight	1 Pot
	50 g	YEN 31800

Typical Analysis : C < 100, Chlorides 1700, Fe 200, N < 100, O 1000.

May be suitable for additive manufacturing research and development purposes.

Hazardous goods, additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.

TI006022

Max. Particle size **75micron**

Purity..... **99.5%**



Web Code
 780-284-214
 815-389-828
 563-440-572
 310-743-087

Quantity	Weight	1 Pot
	50 g	YEN 26200
	100 g	YEN 33600
	200 g	YEN 40600
	500 g	YEN 68000

Typical Analysis : C < 100, Chlorides 1700, Fe 200, N < 100, O 1000.

Hazardous goods, additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.

TI006075

Max. Particle size **106micron**
 Condition..... **Grade 1**
 Condition..... **Spherical**

Purity..... **99.5%**
 Condition..... **Gas atomized**



Web Code
 357-953-023

Quantity	Weight	1 Pot
	50 g	YEN 29400

Typical Analysis : C < 100, Chlorides 1700, Fe 200, N < 100, O 1000.

May be suitable for additive manufacturing research and development purposes.

Hazardous goods, additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.

TI006076

Max. Particle size **106micron**
 Condition..... **Grade 2**
 Condition..... **Spherical**

Purity..... **99.5%**
 Condition..... **Gas atomized**



Web Code
 679-009-014

Quantity	Weight	1 Pot
	50 g	YEN 29400

Typical Analysis : C < 100, Chlorides 1700, Fe 200, N < 100, O 1000.

May be suitable for additive manufacturing research and development purposes.

Hazardous goods, additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.

TI006020

Max. Particle size **150micron**

Purity..... **99.5%**



Web Code
 051-375-012
 421-878-116
 201-125-457
 734-771-099
 846-380-654

Quantity	Weight	1 Pot
	50 g	YEN 20800
	100 g	YEN 24600
	200 g	YEN 30200
	500 g	YEN 41000
	1000 g	YEN 70000

Typical Analysis : C < 100, Chlorides 1700, Fe 200, N < 100, O 1000.

Hazardous goods, additional shipment charges apply which are dependent on destination. Please check the individual item on our website or contact us for further details.



Lump

TI006104

Max. Lump size **4mm**

Purity..... **99.6+%**

Web Code
 744-070-240

Quantity	Weight	1 Pot
	20 g	YEN 17900

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.

Metal – Titanium

Titanium

Ti



Lump

TI006101

Max. Lump size **4mm**
 Condition..... **Pellets**

High Purity **99.99+%**

Web Code

693-862-822
 230-788-207
 691-854-254

Quantity

Weight

20 g
 50 g
 100 g

1 Pot

YEN 25200
 YEN 40000
 YEN 67500

Typical Analysis : Al <3, Ca <2, Cr <2, Cu <1, Fe <10, Mn <1, Nb <5, Ni <3, Si <5, V <3, Zn <1, Zr <3.
 Nominally 3mm diameter x 3mm length pellets. Please ask for prices for larger quantities.

TI006102

Max. Lump size **6mm**
 Condition..... **Pellets**

High Purity **99.99+%**

Web Code

466-661-763
 036-450-754
 259-017-715

Quantity

Weight

20 g
 50 g
 100 g

1 Pot

YEN 24000
 YEN 35600
 YEN 59000

Typical Analysis : Al <3, Ca <2, Cr <2, Cu <1, Fe <10, Mn <1, Nb <5, Ni <3, Si <5, V <3, Zn <1, Zr <3.
 Nominally 4.7mm diameter x 4.7mm length pellets. Please ask for prices for larger quantities.

TI006111

Max. Lump size **6mm**
 Condition..... **Pellets**

High Purity **99.999%**

Web Code

797-622-142
 421-821-863
 217-107-759

Quantity

Weight

20 g
 50 g
 100 g

1 Pot

YEN 29600
 YEN 50500
 YEN 86500

Typical Analysis : Al 2, Cu 1, Fe 3, Si 1, Sn 1
 Nominally 4.7mm diameter x 4.7mm length pellets. Please ask for prices for larger quantities.

TI006100

Max. Lump size **10mm**
 Condition..... **Pellets**

High Purity **99.99+%**

Web Code

128-330-856
 041-351-482
 168-929-050

Quantity

Weight

20 g
 50 g
 100 g

1 Pot

YEN 21200
 YEN 30600
 YEN 48600

Typical Analysis : Al <3, Ca <2, Cr <2, Cu <1, Fe <10, Mn <1, Nb <5, Ni <3, Si <5, V <3, Zn <1, Zr <3.
 Pellets - nominal size 9.5mm diameter x 9.5mm length Please ask for prices for larger quantities.

TI006110

Max. Lump size **10mm**
 Condition..... **Pellets**

High Purity **99.999%**

Web Code

609-177-118
 147-144-895
 393-112-098

Quantity

Weight

20 g
 50 g
 100 g

1 Pot

YEN 28800
 YEN 46600
 YEN 79500

Typical Analysis : Al 2, Cu 1, Fe 3, Si 1, Sn 1
 Pellets - nominal size 9.5mm diameter x 9.5mm length Please ask for prices for larger quantities.



Sphere

TI006830

Diameter **3mm**

Purity..... **99.6+%**

Quantity

Web Code
 220-739-924
 757-094-570
 347-398-370

Quantity

Spheres

50 pcs YEN 20400
 100 pcs YEN 33800
 200 pcs YEN 60000

1 Pot

Typical Analysis : Al 500, Co 2, Cr 500, Cu 200, Fe 300, Mg 20, Mn 500, Ni 500, Si 200, Sn 200, Ta 10, V 500.



Single Crystal

TI002122

Oriented **(0001)**
 Condition..... **Unpolished**

Thickness **1mm**

Web Code
 366-248-096

Quantity

Size
 3x5

1pc
 YEN POA

Titanium

Ti



Single Crystal

TI002120

Oriented **(0001)**
 Diameter **5mm**

Thickness **1mm**
 Condition **Unpolished**

Quantity

Web Code
 769-085-275

1pc
 YEN POA

TI002121

Oriented **(0001)**
 Diameter **8mm**

Thickness **1mm**
 Condition **Unpolished**

Quantity

Web Code
 690-308-068

1pc
 YEN POA

Metal – Titanium

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