PRODUCT CATALOGUE · NOVEMBER 2026

Product Catalogue

Point Metal A.Ş. is a metals supplier providing copper and copper alloys (including brass and bronze), aluminium, tool and mould steels, stainless steel and engineering plastics from stock, together with a cut-to-size service.



01 **Copper** — 18 products



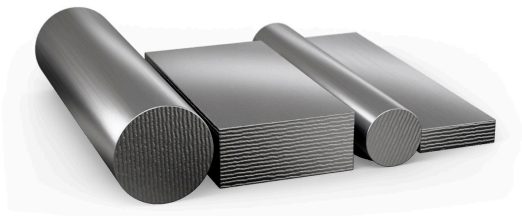
02 **Brass** — 12 products



03 **Bronze** — 16 products



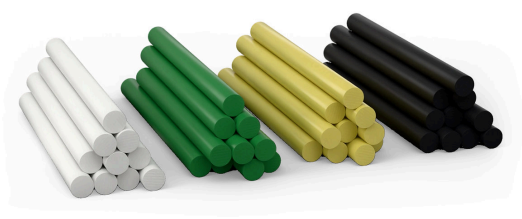
04 **Aluminium** — 11 products



05 **Tool and mould steels** — 5 products



06 **Stainless steel** — 8 products



07 **Engineering plastics** — 26 products

QUOTATION

Send us the product, grade, size and quantity. Drawings or specifications can be sent by WhatsApp or e-mail.

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info@pointmetal.com.tr

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ABOUT US

Point Metal A.Ş.

Point Metal A.Ş. was founded in Çorlu, Tekirdağ in 2022, and in 2025 we opened our branch at the Demirciler Sanayi Sitesi industrial estate in İkitelli, Istanbul. Our founding team has been working in the non-ferrous metals sector since 2017.

Our main focus is copper and copper alloys, including brass and bronze; we also supply aluminium, tool and mould steels, stainless steel and engineering plastics, and we cut material to size. We also import and export non-ferrous metals. Sales are handled by our head office in Çorlu and our branch in İkitelli.

2017	2022	2025	7	96
Founding team starts out in the sector	Point Metal A.Ş. founded	İkitelli branch opened	Product groups	Products

Cutting service

In our warehouse, bars and other solid sections are cut to length on band saws and circular saws, as single pieces or in any quantity. Sheets can be cut on a guillotine. Cutting options and minimum order quantities vary by product; the terms for each product are given in this catalogue and on its product page.

Materials and documents

The grade designations of our products and their international equivalents (EN, DIN, UNS, BS, AISI, JIS) are given in the equivalents table at the end of each section. A material certificate with the chemical analysis of the supplied material is provided on request; for orders that require documents, this should be stated at the quotation stage.

Quotation

Send us the product, grade, size and quantity. Drawings or specifications can be sent by WhatsApp or e-mail.

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COPPER AND COPPER ALLOYS · 18 PRODUCTS

01 Copper



Electrolytic tough pitch copper (Cu-ETP), phosphorus-deoxidised copper (Cu-DHP), speciality copper alloys for resistance spot welding and mould making, copper-nickel tube, and copper tube for air conditioning and plumbing.

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Copper-nickel 7
CuNi 90/10 Tube

Brazing rods 7
Copper-Phosphorus Brazing Rods

Grade equivalents 7

WHICH GRADE?

Cu-ETP (electrolytic tough pitch copper)
Highest electrical conductivity; the standard material for busbars, earthing and electrical components.
Can suffer hydrogen embrittlement during welding or brazing; Cu-DHP is preferred for such work.

Cu-DHP (phosphorus-deoxidised copper)
Deoxidised with phosphorus, so it does not suffer hydrogen embrittlement during welding or brazing. Tube, plumbing and forming applications.
Electrical conductivity is lower than Cu-ETP; Cu-ETP is preferred for busbars and conductive parts.

CuCrZr (chromium-zirconium copper)
Highly conductive and does not soften at elevated temperatures; the standard material for spot-welding electrodes.

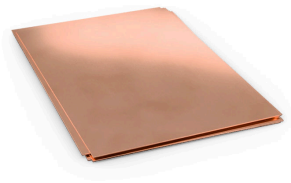
CuBe2 (beryllium copper)
Reaches the highest strength of all copper alloys after heat treatment; non-sparking.
No risk in solid form; grinding, polishing and welding need dust and fume extraction, and machining should be done with coolant.

CuCo2Be / CuCoNiBe
Combines strength with conductivity; heavy-duty electrodes and mould components.

CuNi2SiCr (nickel-silicon-chromium copper)
High strength and wear resistance; die-casting plunger tips, electrode holders and mould components. Beryllium-free.

CuNi 90/10 (copper-nickel)
Resistant to seawater and biofouling; shipboard and seawater cooling lines.

Sheet, strip, rod and flat bar Cu-ETP and Cu-DHP



SHEET / PLATE

Copper Sheet and Plate

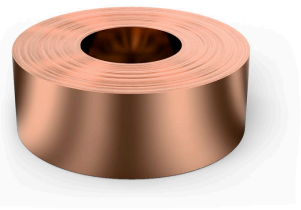
Cu-ETP CW004A Cu-DHP CW024A

TEMPER
Soft · Quarter-hard · Half-hard · Hard

STANDARD SHEET SIZES
660 × 2000 · 1000 × 2000 mm

THICKNESS AND CUT SIZES
0.50–40 mm. For sheet under 5 mm thick, the minimum cut size is 1000 × 1000 mm, or 660 × 500 mm from 660 mm wide sheet.

Sheet standard: EN 1652 · EN 13599 for electrical purposes (Cu-ETP only)



COIL

Copper Coil

Cu-ETP CW004A Cu-DHP CW024A

THICKNESS
0.05–1.00 mm

WIDTH
Up to 1000 mm

TEMPER
Soft · Quarter-hard · Half-hard · Hard

NARROW WIDTHS
Slit to the width you need (Slit Copper Strip), minimum 60 kg

Strip standard: EN 1652 · EN 13599 for electrical purposes (Cu-ETP only)



SLIT STRIP

Slit Copper Strip

Cu-ETP CW004A Cu-DHP CW024A

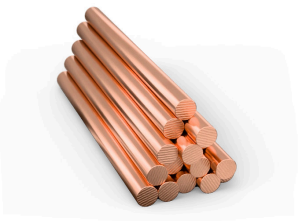
THICKNESS
0.05–1.00 mm

WIDTH
Slit to the width you need

TEMPER
Soft · Quarter-hard · Half-hard · Hard

ORDERING
Minimum 60 kg for custom sizes

Strip standard: EN 1652 · EN 13599 for electrical purposes (Cu-ETP only)



ROD

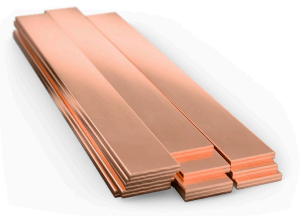
Copper Rod

Cu-ETP CW004A

DIAMETER RANGE
Ø2–160 mm

CUTTING
Cut to length; no minimum cut length. Ø15 mm and below are normally supplied in full lengths.

Rod standard: EN 13601 (electrical) · EN 12163 (general purpose)



FLAT BAR / BUSBAR

Copper Flat Bar (Busbar)

Cu-ETP CW004A

SECTION SIZE
3×10 – 20×200 mm

CUTTING
Cut to length; no minimum cut length.

Flat bar standard: EN 13601 · ASTM B187

Copper tube

Plumbing, air conditioning & refrigeration (ACR) and medical gas



TUBE IN STRAIGHT LENGTHS

Copper Tube in Straight Lengths

Cu-DHP CW024A

METRIC SIZES
Ø10–108 mm · wall 0.70–2.80 mm

INCH SIZES (ASTM B280)
7/8″ – 4 1/8″

LENGTH
4 m / 5 m

CUTTING
Sold in full lengths. For large-quantity orders, thick-walled tubes are cut to length; thin-walled tubes are supplied in the required length, provided it is not shorter than approx. 1 m. Minimum 300 kg for custom sizes made to order.

Tube standards: EN 1057 (water, heating and gas) · EN 12735-1 (air conditioning and refrigeration) · EN 12449 (general purposes)



TUBE IN COILS (PANCAKE COILS)

Copper Tube in Coils (Pancake Coils)

Cu-DHP CW024A

INCH SIZES
3/16″ – 3/4″ · wall 0.7–1.0 mm

METRIC SIZES
Ø6–22 × 1.0 mm

COIL LENGTH
50 m / 100 m (depending on stock)

TEMPER
R220 · annealed (soft)

ORDERING
Full coils only. Minimum 300 kg for custom sizes made to order.

Tube standard: EN 12735-1



INCH-SIZE TUBE

Inch-Size ACR Copper Tube (ASTM B280)

Cu-DHP CW024A

SIZES
7/8″ – 4 1/8″

SOLD BY
By the metre, in full lengths

Tube standard: ASTM B280



MEDICAL GAS TUBE

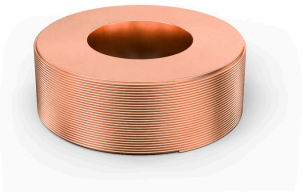
Medical Gas Copper Tube (EN 13348)

Cu-DHP CW024A

DIAMETER
Ø10–54 mm

SOLD BY
By the metre, in full lengths

Tube standard: EN 13348



LEVEL WOUND COIL (LWC)

LWC Copper Tube (Level Wound Coils)

Cu-DHP CW024A

INCH SIZES
3/16″ – 5/8″ · wall 0.28–0.80 mm (some inner-grooved)

METRIC SIZES
8 × 0.45 and 18 × 0.70 mm

TEMPER
R220 annealed (soft) or R290 hard · confirmed with the quote, depending on size

SOLD BY
In coils, by weight (per kg)

Tube standard: EN 12735-2 · level wound coil (LWC)



PRE-INSULATED TUBE

Pre-Insulated Copper Tube

Cu-DHP CW024A

DIAMETER
1/4″ – 3/4″

INSULATION THICKNESS
9 mm / 13 mm

INSULATION MATERIAL
Elastomeric foam (black or white) · PE foam (white)

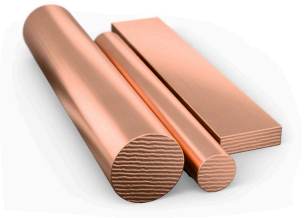
TYPE
Single or twin (split / VRF)

SOLD BY
By the metre; 50 m coils (full rolls) or special lengths to suit the order quantity

Tube standard: EN 12735-1

Speciality copper alloys

For resistance welding electrodes and mould making



ROD · FLAT BAR

CuCrZr Rod and Flat Bar

CuCr1Zr CuCrZr · CW106C

SIZES
Sizes available on request; parts machined to drawing can also be supplied.

ORDERING
Cut to length, minimum 1 kg. Rods of Ø15 mm and below are normally supplied uncut, in full lengths (3 m).

Rod EN 12163 · flat bar EN 12167 · application ISO 5182



ROD · FLAT BAR

CuBe2 Beryllium Copper

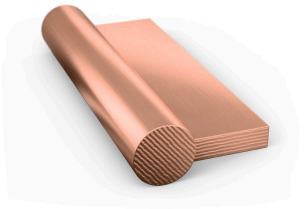
CuBe2 Beryllium copper · CW101C

DIAMETER
Ø10–100 mm

FLAT BAR
10×20 – 50×100 mm

ORDERING
Cut to length, minimum 1 kg

Rod and bar: ASTM B196 (flat bar cut from plate: ASTM B194)



ROD · FLAT BAR

CuCoNiBe Rod and Flat Bar

CuCo1Ni1Be CuCoNiBe · CW103C

SIZES
Sizes available on request; parts machined to drawing can also be supplied.

ORDERING
Cut to length, minimum 1 kg

Rod EN 12163 · flat bar EN 12167



ROD · FLAT BAR

CuCo2Be Rod and Flat Bar

CuCo2Be Cobalt beryllium copper · CW104C

SIZES
Sizes available on request; parts machined to drawing can also be supplied.

ORDERING
Cut to length, minimum 1 kg

Rod EN 12163 · flat bar EN 12167 · ASTM B441



ROD

CuNi2SiCr Rod

CuNi2SiCr ≈ CW111C

DIAMETER
Ø10–100 mm

ORDERING
Cut to length, minimum 1 kg

Rod standard: EN 12163 (nearest grade CW111C)

Copper-nickel Seawater applications



TUBE

CuNi 90/10 Tube

CuNi10Fe1Mn CuNi 90/10 · CW352H

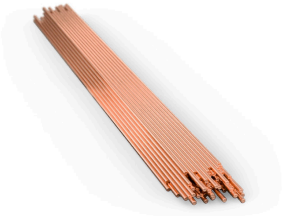
STOCK SIZES
12×1 · 16×1 · 16×1.2 · 19×1 mm

LENGTH
16×1.2: 5.5 m · others 6 m

ORDERING
Sold by the length (full lengths)

Tube standard: ASTM B111 (seamless)

Brazing rods Copper-phosphorus brazing alloy



BRAZING ROD

Copper-Phosphorus Brazing Rods

Copper-phosphorus brazing alloy BCu94P · CuP 179

SIZES
E.g. 3.0 × 500 mm rod

SOLD BY
By weight (per kg), minimum 1 kg

GRADE EQUIVALENTS

Grades and international equivalents

GRADE	DESIGNATION / EN	DIN	UNS	BS	JIS	DENSITY
Cu-ETP	Cu-ETP · CW004A	2.0060	C11000	C101	C1100	8.9 g/cm³
Cu-DHP	Cu-DHP · CW024A	2.0090	C12200	C106	C1220	8.94 g/cm³
CuCr1Zr	CuCrZr · CW106C	2.1293	C18150	–	–	8.91 g/cm³
CuBe2	Beryllium copper · CW101C	2.1247	C17200	–	C1720	8.3 g/cm³
CuCo1Ni1Be	CuCoNiBe · CW103C	–	–	–	–	8.8 g/cm³
CuCo2Be	Cobalt beryllium copper · CW104C	2.1285	≈ C17500	C112	–	8.75 g/cm³
CuNi2SiCr	CuNi2SiCr · ≈ CW111C	–	≈ C18000	–	–	8.8 g/cm³
CuNi10Fe1Mn	CuNi 90/10 · CW352H	2.0872	C70600	CN102	–	8.9 g/cm³

Resistance welding electrode classes (RWMA, via the UNS equivalent): CuCrZr (C18150) Class 2 · CuCo2Be (C17500) and CuNi2SiCr (C18000) Class 3 · CuBe2 (C17200) Class 4.

“Close” marks grades whose composition ranges do not match exactly but are used interchangeably in practice. For critical applications, values should be verified on the material certificate.

02 Brass

BRASS · 12 PRODUCTS



Copper-zinc alloys. CW614N (Ms58) rod and profiles, best suited to machining; CW508L (Ms63) and CW505L (Ms70) sheet and strip, suited to cold forming.

IN THIS SECTION

Rod and profiles 9
Brass Rod · Brass Hexagon Rod · Brass Square Rod · Brass Flat Bar · Brass Tube · Brass Angle · Brass U-Channel · Custom Brass Profiles

Sheet and strip 10
Brass Sheet and Plate · Brass Coil · Slit Brass Strip

Brazing rods 11
Brass Brazing Rod (CuZn40)

Grade equivalents 11

WHICH GRADE?

MS58 (CuZn39Pb3 · CW614N)
Leaded free-machining brass; the easiest brass to machine. Turned and CNC parts, valves, fittings and fasteners.
Not suitable for cold forming such as bending and deep drawing; MS63 or MS70 is preferred for that work.

MS63 (CuZn37 · CW508L)
Lead-free sheet and strip grade suitable for cold forming; bending, blanking and deep drawing.

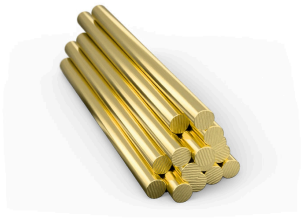
MS70 (CuZn30 · CW505L)
Lead-free; its higher copper content makes it more ductile, with very good cold-forming properties. Parts that need deep drawing or tight bends.

Brass profiles (angle, U-channel, custom section)
Angles and U-channels are MS58; custom sections are produced to drawing. Stair nosing, decorative corners, glass and panel edges.
Sold in full lengths (3000–3200 mm).

CuZn40 brass brazing rod
Filler rod for brazing steel, cast iron, copper and brass parts (EN ISO 17672 Cu 470).
Sold by weight, minimum 1 kg.

Rod and profiles

CW614N (Ms58) free-machining brass; rods cut to the length you need



ROD

Brass Rod

MS58 CuZn39Pb3 · CW614N

DIAMETER RANGE
Ø2–220 mm

LENGTH
3000–3200 mm

CUTTING
Cut to length; no minimum cut length. Ø15 mm and below are normally supplied in full lengths.

Rod standard: EN 12164



HEXAGON

Brass Hexagon Rod

MS58 CuZn39Pb3 · CW614N

ACROSS FLATS (A/F)
3–100 mm

LENGTH
3000–3200 mm

CUTTING
Cut to length; no minimum cut length. 15 mm A/F and below are normally supplied in full lengths.

Rod standard: EN 12164



SQUARE

Brass Square Rod

MS58 CuZn39Pb3 · CW614N

SECTION SIZE
3×3 – 120×120 mm

LENGTH
3000–3200 mm

CUTTING
Cut to length; no minimum cut length. 15×15 mm and below are normally supplied in full lengths.

Rod standard: EN 12164



FLAT BAR

Brass Flat Bar

MS58 CuZn39Pb3 · CW614N

SECTION SIZE
On request

LENGTH
3000–3200 mm

CUTTING
Cut to length; no minimum cut length.

Flat bar standard: EN 12167



TUBE

Brass Tube

MS58 CuZn39Pb3 · CW614N

OUTSIDE DIAMETER (OD)
Ø3–100 mm

LENGTH
3000–3200 mm (full lengths)

CUTTING
Sold in full lengths. For orders specifying lengths and quantities, tubes are cut if the wall thickness is suitable for sawing; very thin-walled tubes are not cut.

Tube standard: EN 12168



ANGLE

Brass Angle

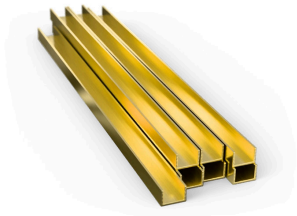
MS58 CuZn39Pb3 · CW614N

SECTION SIZE
10×10×1.5 – 40×40×4 mm

LENGTH
Full lengths, 3000–3200 mm

ORDERING
Sold in full lengths only

Profile standard: EN 12167



U-CHANNEL

Brass U-Channel

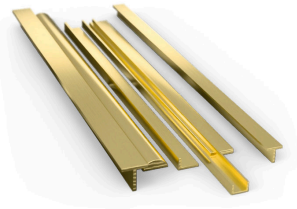
MS58 CuZn39Pb3 · CW614N

SECTION SIZE
10×10×1 – 20×20×2 mm

LENGTH
Full lengths, 3000–3200 mm

ORDERING
Sold in full lengths only

Profile standard: EN 12167



PROFILE

Custom Brass Profiles

Project-specific CUSTOM SECTION

SECTION SIZE
Project-specific (from a drawing or sample)

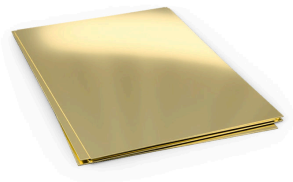
LENGTH
Full lengths, 3000–3200 mm

ORDERING
Sold in full lengths only

Profile standard: EN 12167

Sheet and strip

CW508L (Ms63) and CW505L (Ms70), soft · half-hard · hard



SHEET / PLATE

Brass Sheet and Plate

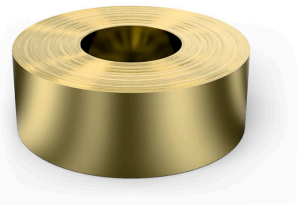
MS63 CuZn37 · CW508L **MS70** CuZn30 · CW505L

TEMPER
Soft · Half-hard · Hard

STANDARD SHEET SIZES
660 × 2000 · 660 × 3000 · 1000 × 2000 · 1000 × 3000 mm

THICKNESS AND CUT SIZES
0.50–50 mm. Custom sizes are supplied from stock or produced to order, depending on size and quantity. For sheet under 5 mm thick, the minimum cut size is 1000 × 1000 mm, or 660 × 500 mm from 660 mm wide sheet.

Sheet standard: EN 1652 · ASTM B36



COIL

Brass Coil

MS63 CuZn37 · CW508L **MS70** CuZn30 · CW505L

THICKNESS
0.10–1.00 mm

WIDTH
Up to 660 mm

TEMPER
Soft · Half-hard · Hard

NARROW WIDTHS
Slit to the width you need (Slit Brass Strip), minimum 60 kg

Strip standard: EN 1652



SLIT STRIP

Slit Brass Strip

MS63 CuZn37 · CW508L | **MS70** CuZn30 · CW505L

THICKNESS
0.10–1.00 mm

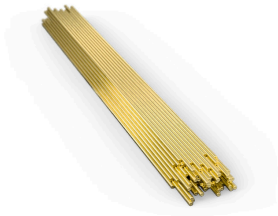
WIDTH
Slit to the width you need

TEMPER
Soft · Half-hard · Hard

ORDERING
Minimum 60 kg for custom sizes

Strip standard: EN 1652

Brazing rods Brass brazing alloy (CuZn40)



BRAZING ROD

Brass Brazing Rod (CuZn40)

Brass brazing alloy CuZn40 · Cu 470

DIAMETER
Ø0.50–5 mm

SOLD BY
Weight (kg), minimum 1 kg

GRADE EQUIVALENTS

Grades and international equivalents

GRADE	DESIGNATION / EN	DIN	UNS	BS	JIS	DENSITY
MS58	CuZn39Pb3 · CW614N	2.0401	C38500	CZ121	≈ C3604	8.47 g/cm³
MS63	CuZn37 · CW508L	2.0321	C27200	CZ108	C2720	8.44 g/cm³
MS70	CuZn30 · CW505L	2.0265	C26000	CZ106	C2600	8.53 g/cm³

“Close” marks grades whose composition ranges do not match exactly but are used interchangeably in practice. For critical applications, values should be verified on the material certificate.

03 Bronze

BRONZE · 16 PRODUCTS



Cast tin bronzes and gunmetals (CuSn10, CuSn12, CuSn14, RG5, RG7), aluminium bronzes and phosphor bronze. Cast solid and hollow bars are cut to the length you require; we also supply sheet and strip.

IN THIS SECTION

Cast tin bronzes 13
CuSn10 Cast Tin Bronze · CuSn12 Cast Tin Bronze · CuSn14 Cast Tin Bronze · RG5 Gunmetal (CuSn5Zn5Pb5) · RG7 Gunmetal (CuSn7Zn4Pb7)

Aluminium bronzes 13
CuAl10Ni5Fe4 Aluminium Bronze · CuAl11Ni6Fe5 Aluminium Bronze · CuAl10Fe3Mn2 Aluminium Bronze · CuAl10Ni (CuAl10Fe5Ni5) Cast Aluminium Bronze · CuAl9Ni Aluminium Bronze · CuAl11Ni Aluminium Bronze · CuAl10Fe Aluminium Bronze · CuAl14Fe4Mn2 Aluminium Bronze

Phosphor bronze 14
CuSn6 / CuSn8 Phosphor Bronze Rod · Phosphor Bronze Sheet and Plate · Phosphor Bronze Strip

Grade equivalents 15

WHICH GRADE?

CuSn10 cast tin bronze
A good balance of wear resistance and toughness for general-purpose bushes and gears; also used for pump and valve parts and parts in contact with seawater.

CuSn12 cast tin bronze
High wear resistance for worm wheels and heavily loaded bushes.

CuSn14 cast tin bronze
The hardest tin bronze in our range; slideways and bearings under very high surface pressure, and heavily loaded worm wheels.
Low ductility; aluminium bronze is more suitable for shock loads.

RG5 (CuSn5Zn5Pb5)
Easy to machine, with good pressure tightness; valves, fittings and general-purpose bushes.
Contains lead, so it is not used for drinking-water installations.

RG7 (CuSn7Zn4Pb7)
Leaded bearing bronze; good sliding properties where lubrication is limited.
Not intended for continuous dry running; reduces the risk of seizure when lubrication is marginal or interrupted.

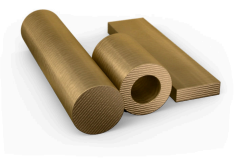
CuAl10Fe5Ni5 cast nickel aluminium bronze
High strength and resistance to impact and seawater corrosion; heavy-duty bushes and pump parts.
For lubricated bushes and gears, tin bronzes with better sliding properties are usually preferred.

CuAl10Ni5Fe4 nickel aluminium bronze rod
Wrought (extruded or forged) rod; homogeneous structure and high strength. Shafts, heavy-duty bushes and fasteners for seawater service.

CuSn6 / CuSn8 phosphor bronze
Good spring properties and good fatigue and wear resistance; precision bushes, springs and contacts.
Conductivity is moderate (CuSn6 approx. 17 % IACS, CuSn8 approx. 13 % IACS); if high conductivity is needed, see copper alloys.

Cast tin bronzes

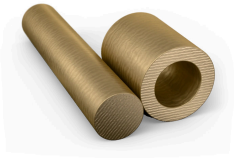
Solid bar, hollow bar (for bushes), flat and square bar · sand cast and continuously cast



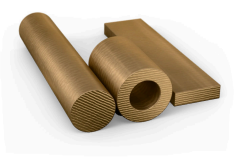
CuSn10 Cast Tin Bronze
CC480K



CuSn12 Cast Tin Bronze
CC483K



CuSn14 Cast Tin Bronze
CuSn14-C



RG5 Gunmetal (CuSn5Zn5Pb5)
CC491K



RG7 Gunmetal (CuSn7Zn4Pb7)
CC493K

SOLID BAR · HOLLOW BAR · FLAT BAR

SOLID BAR
Ø10–300 mm

HOLLOW BAR (CAST, FOR BUSHES)
OD 10–300 mm · ID on request

FLAT AND SQUARE BAR
On request

LENGTH
Up to 3 m

CASTING PROCESS
Sand casting and continuous casting

ORDERING
Cut to length, minimum 5 kg

Casting standard: EN 1982

Aluminium bronzes

Wrought and cast grades; bar, bushes, flat bar and castings to pattern



BAR · BUSH · FLAT

CuAl10Ni5Fe4 Aluminium Bronze

CuAl10Ni5Fe4 CW307G

FORMS
Solid bar, hollow bar (bushes), flat bar and plate; castings to pattern

PRODUCTION
Bar, bushes and flat bar are extruded or forged; parts to pattern are produced as castings

LENGTH
Up to 3 m

ORDERING
Cut to size, minimum 5 kg

Rod standard: EN 12163 · forgings: EN 12420



BAR · BUSH · FLAT

CuAl11Ni6Fe5 Aluminium Bronze

CuAl11Ni6Fe5 CuAl11Fe6Ni6 · CW308G

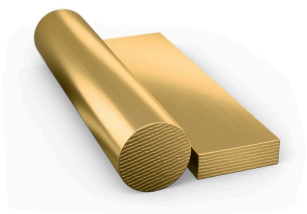
FORMS
Solid bar, hollow bar (bushes), flat bar and plate; castings to pattern

PRODUCTION
Bar, bushes and flat bar are extruded or forged; parts to pattern are produced as castings

SIZE
To order

ORDERING
Cut to size, minimum 5 kg

Rod standard: EN 12163 · forgings: EN 12420



BAR · BUSH · FLAT

CuAl10Fe3Mn2 Aluminium Bronze

CuAl10Fe3Mn2 CW306G

FORMS
Solid bar, hollow bar (bushes), flat bar and plate; castings to pattern

PRODUCTION
Bar, bushes and flat bar are extruded or forged; parts to pattern are produced as castings

SIZE
To order

ORDERING
Cut to size, minimum 5 kg

Rod standard: EN 12163 · forgings: EN 12420



BAR · BUSH · FLAT

CuAl10Ni (CuAl10Fe5Ni5) Cast Aluminium Bronze

CuAl10Ni CuAl10Fe5Ni5-C · CC333G

FORMS

Solid bar, hollow bar (bushes), flat bar and plate; castings to pattern

PRODUCTION

Sand casting and continuous casting

SOLID BAR

Ø10–300 mm

HOLLOW BAR (CAST, FOR BUSHES)

OD 10–300 mm · ID on request

FLAT AND SQUARE BAR

On request

LENGTH

Up to 3 m

ORDERING

Cut to size, minimum 5 kg

Casting standard: EN 1982



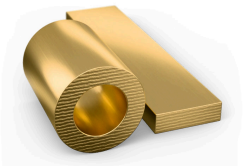
CuAl9Ni Aluminium Bronze
DIN 2.0970



CuAl11Ni Aluminium Bronze
DIN 2.0980



CuAl10Fe Aluminium Bronze
DIN 2.0940



CuAl14Fe4Mn2 Aluminium Bronze

BAR · BUSH · FLAT

FORMS

Solid bar, hollow bar (bushes), flat bar and plate; castings to pattern

PRODUCTION

Cast (continuous, centrifugal or sand cast)

SIZE

To order

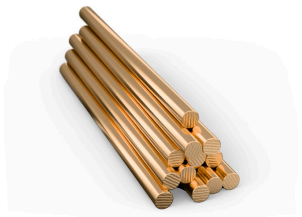
ORDERING

Cut to size, minimum 5 kg

CuAl9Ni: Casting standard: DIN 1714 (EN 1982) · CuAl11Ni: Casting standard: DIN 1714 (EN 1982) · CuAl10Fe: Casting standard: DIN 1714 (EN 1982) · CuAl14Fe4Mn2: Cast or forged; standard to order

Phosphor bronze

Drawn rod, sheet and strip



DRAWN ROD

CuSn6 / CuSn8 Phosphor Bronze Rod

CuSn6 CW452K **CuSn8** CW453K

DIAMETER

On request

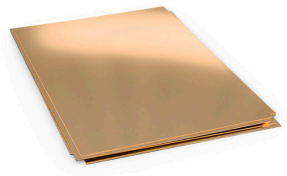
LENGTH

Up to 3 m

ORDERING

Cut to length, minimum 5 kg

Rod standard: EN 12163



SHEET

Phosphor Bronze Sheet and Plate

CuSn5 CW451K **CuSn6** CW452K **CuSn8** CW453K

THICKNESS

0.50–20 mm

SHEET SIZE

660 × 2000 mm

TEMPER

CuSn5 R310–R690 · CuSn6 R350–R720 · CuSn8 R370–R740

ORDERING

Minimum cut size 660 × 500 mm

Sheet standards: EN 1652 · ASTM B103



STRIP (IN COILS)

Phosphor Bronze Strip

CuSn5 CW451K · **CuSn6** CW452K · **CuSn8** CW453K

THICKNESS
0.10–1.00 mm

STOCK COIL WIDTH
320 mm

TEMPER
CuSn6 R420–R720 (EN 1654) · CuSn5 / CuSn8: EN 1652 material conditions

ORDERING
Stock coil (320 mm): minimum 5 kg. Strip narrower than 320 mm or in custom widths: lead time approx. 1 week, minimum 60 kg.

Strip standards: EN 1652 · EN 1654 · ASTM B103

GRADE EQUIVALENTS

Grades and international equivalents

GRADE	DESIGNATION / EN	DIN	UNS	BS	JIS	DENSITY
CuSn10	CuSn10-C · CC480K	–	≈ C90500 / C90700	CT1	–	8.8 g/cm³
CuSn12	CuSn12-C · CC483K	2.1052	C90800	PB2	–	8.7 g/cm³
CuSn14	CuSn14-C	–	–	–	–	8.7 g/cm³
RG5	CuSn5Zn5Pb5-C · CC491K	2.1096	C83600	LG2	–	8.7 g/cm³
RG7	CuSn7Zn4Pb7-C · CC493K	2.1090	C93200	–	–	8.8 g/cm³
CuAl10Ni5Fe4	CuAl10Ni5Fe4 · CW307G	2.0966	C63000	CA104	≈ C6301	7.6 g/cm³
CuAl11Ni6Fe5	CuAl11Fe6Ni6 · CW308G	2.0978	–	–	–	7.4 g/cm³
CuAl10Fe3Mn2	CuAl10Fe3Mn2 · CW306G	2.0936	≈ C62400	–	–	7.6 g/cm³
CuAl10Ni	CuAl10Fe5Ni5-C · CC333G	2.0975 (G-CuAl10Ni)	≈ C95800	AB2	–	7.6 g/cm³
CuAl9Ni	G-CuAl9Ni · nearest EN 1982: CuAl10Ni3Fe2-C (CC332G)	2.0970	–	–	–	7.5 g/cm³
CuAl11Ni	G-CuAl11Ni · nearest EN 1982: CuAl11Fe6Ni6-C (CC334G)	2.0980	–	–	–	7.6 g/cm³
CuAl10Fe	G-CuAl10Fe · nearest EN 1982: CuAl10Fe2-C (CC331G)	2.0940	–	–	–	7.5 g/cm³
CuAl14Fe4Mn2	CuAl14Fe4Mn2	–	≈ C95900	–	–	7.06 g/cm³
CuSn6	CuSn6 · CW452K	2.1020	C51900	PB103	≈ C5191	8.8 g/cm³
CuSn8	CuSn8 · CW453K	2.1030	C52100	PB104	C5212	8.8 g/cm³
CuSn5	CuSn5 · CW451K	–	C51000	PB102	≈ C5102	8.8 g/cm³

“Close” marks grades whose composition ranges do not match exactly but are used interchangeably in practice. For critical applications, values should be verified on the material certificate.

ALUMINIUM · 11 PRODUCTS

04 Aluminium



Sheet, bar, flat bar, tube, profiles and angles in grades 1050, 2024, 5083, 5754, 6061, 6082, 7020 and 7075, supplied from stock or made to order, depending on size.

IN THIS SECTION

Sheet, plate and coil 17
Aluminium Sheet and Plate · Aluminium Coil · 7020-T651 Plate for Defence Applications

Bar and tube 17
Aluminium Round Bar · Aluminium Flat Bar · Aluminium Square Bar · Aluminium Hexagon Bar · Aluminium Tube

Profiles and angles 18
Custom Aluminium Profiles · Aluminium Angle

Welding wire 19
Aluminium Welding Wire (MIG & TIG)

Grade equivalents 19

WHICH GRADE?

1050 (Al99.5)
Pure aluminium (99.5 %); the grade with the best formability, corrosion resistance and conductivity.
Low strength; 5754 or 6082 is preferred for load-bearing parts.

5754 (AlMg3)
Medium strength, corrosion-resistant and weldable; formed sheet, tanks and cladding. Also used in ship and boat building.

5083 (AlMg4.5Mn0.7)
One of the most seawater-resistant alloys and very well suited to welding. Ships, tanks and mould base plates.

6061 (AlMg1SiCu)
General-purpose structural alloy; machines well, is weldable and takes anodising. Our square and hexagon bars, technical profiles and angles are also in this grade.

6082 (AlSi1MgMn)
The most widely used structural and machining alloy in Europe; among the strongest in the 6xxx series. CNC parts and mould base plates.

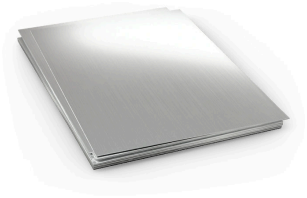
7075 (AlZn5.5MgCu)
One of the strongest aluminium alloys; moulds, aerospace and highly loaded parts.
Not suitable for fusion welding; 7020 is preferred for welded high-strength structures.

2024 (AlCu4Mg1)
High-strength copper-bearing alloy; aerospace and highly loaded machine parts.
Not suitable for welding.

7020 T651 (AlZn4.5Mg1)
Weldable high-strength alloy; T651 plate for defence and armoured vehicle projects.
Sizes and thicknesses are quoted per project.

Sheet, plate and coil

From thin sheet to heavy plate



SHEET / PLATE

Aluminium Sheet and Plate

1050 Al99,5 · EN AW-1050A | **2024** AlCu4Mg1 · EN AW-2024 | **5083** AlMg4,5Mn0,7 · EN AW-5083 | **5754** AlMg3 · EN AW-5754 | **6061** AlMg1SiCu · EN AW-6061 | **6082** AlSi1MgMn · EN AW-6082 | **7075** AlZn5,5MgCu · EN AW-7075

STANDARD SHEET SIZES

1000 × 2000 mm · also 1250 × 2500 and 1500 × 3000 mm

THICKNESS

0.50–50 mm · thicker plate quoted as made to order

TEMPER

1050 H14/H24 · 5754 and 5083 H111/H22 · 6xxx T6/T651 · 7075 T651 · 2024 T351

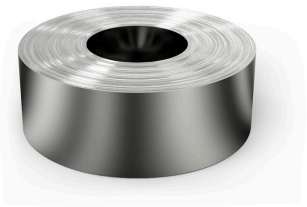
CUTTING

Sheet up to 10 mm thick is not cut; it is sold in standard sheet sizes. Thicker plate can be cut to size.

ORDERING

Minimum 10 kg · size information on request

Sheet standard: EN 485-2 · tolerances EN 485-3 / EN 485-4



COIL

Aluminium Coil

1050 Al99,5 · EN AW-1050A | **5754** AlMg3 · EN AW-5754

THICKNESS

0.50–1.00 mm

WIDTH

1000 mm

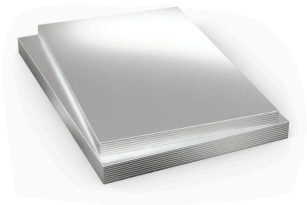
TEMPER

H14 · H24 · O (annealed)

ORDERING

On request; size and quantity to suit your requirements

Coil standard: EN 485-2 · tolerances EN 485-4



PLATE

7020-T651 Plate for Defence Applications

7020 AlZn4,5Mg1 · EN AW-7020

THICKNESS

8–150 mm

PLATE SIZE

Quoted per project (made to order)

TEMPER

T651

ORDERING

Minimum 10 kg · size information on request

EN 485-2 · project specification

Bar and tube

Cut to length in any quantity



ROUND BAR

Aluminium Round Bar

2024 AlCu4Mg1 · EN AW-2024 | **5083** AlMg4,5Mn0,7 · EN AW-5083 | **6061** AlMg1SiCu · EN AW-6061 | **6082** AlSi1MgMn · EN AW-6082 | **7075** AlZn5,5MgCu · EN AW-7075

DIAMETER

Ø3–400 mm · other sizes on request

LENGTH

3 m · made-to-order lengths: minimum 300 kg

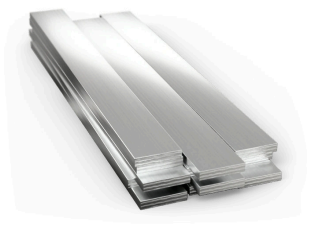
TEMPER

6061, 6082, 7075: T6 / T651 · 2024: T351 · 5083: H111 / H112

CUTTING

Cut to length in any quantity. Diameters of Ø15 mm and below are normally supplied in full lengths (3 m).

Bar standard: EN 755-2 (extruded) · EN 754-2 (cold drawn)



FLAT BAR

Aluminium Flat Bar

5083 AlMg4,5Mn0,7 · EN AW-5083 | **6061** AlMg1SiCu · EN AW-6061 | **6082** AlSi1MgMn · EN AW-6082 | **7075** AlZn5,5MgCu · EN AW-7075

SECTION SIZE
On request

LENGTH
3 m

CUTTING
Cut to length in any quantity

Flat bar standard: EN 755-2 · tolerances EN 755-5



SQUARE BAR

Aluminium Square Bar

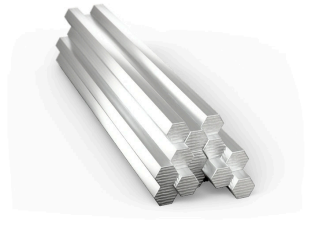
6061 AlMg1SiCu · EN AW-6061

SECTION SIZE
Available on request

LENGTH
3 m · made-to-order lengths: minimum 300 kg

CUTTING
Cut to length in any quantity. Sizes of 15×15 mm and below are normally supplied in full lengths (3 m).

Bar standard: EN 755-2



HEXAGON BAR

Aluminium Hexagon Bar

6061 AlMg1SiCu · EN AW-6061

ACROSS FLATS (A/F)
Available on request

LENGTH
3 m · made-to-order lengths: minimum 300 kg

CUTTING
Cut to length in any quantity. Sizes of 15 mm A/F and below are normally supplied in full lengths (3 m).

Bar standard: EN 755-2 · tolerances EN 755-6



TUBE

Aluminium Tube

5083 AlMg4,5Mn0,7 · EN AW-5083 | **6061** AlMg1SiCu · EN AW-6061 | **6082** AlSi1MgMn · EN AW-6082

SIZES
On request · custom sizes can be produced to order

LENGTH
3 m / 6 m (depending on diameter)

CUTTING
Cut to length in any quantity

Tube standard: EN 755-2 · seamless tube tolerances EN 755-7 / EN 754-7

Profiles and angles

Full lengths only



PROFILE

Custom Aluminium Profiles

6061 AlMg1SiCu · EN AW-6061

SECTION SIZE
Project-specific / from a dedicated die

LENGTH
3 m / 6 m

ORDERING
Sold in full lengths only

Profile standard: EN 755-2 · tolerances EN 755-9



ANGLE

Aluminium Angle

6061 AlMg1SiCu · EN AW-6061

SECTION SIZE
20×20×2 – 50×50×5 mm

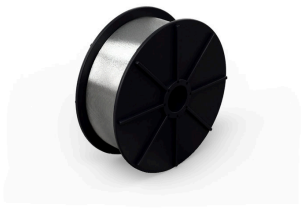
LENGTH
3 m / 6 m

ORDERING
Sold in full lengths only

Profile standard: EN 755-2 · tolerances EN 755-9

Welding wire

MIG wire and TIG rods



WELDING WIRE

Aluminium Welding Wire (MIG & TIG)

ER5356 AlMg5Cr(A) · **ER4043** AlSi5 · **On request** ER5183 · ER4047

DIAMETER
MIG Ø1.2 · TIG Ø2.4 / 3.2 mm

SOLD BY
Weight (kg), minimum 1 kg

GRADE EQUIVALENTS

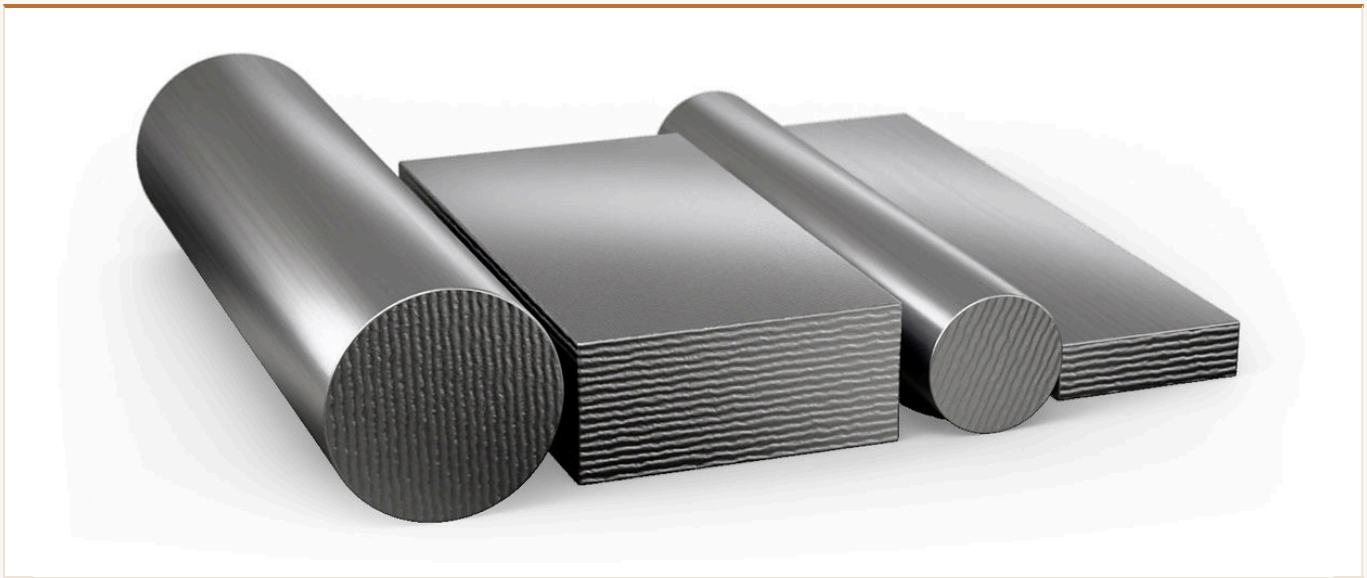
Grades and international equivalents

GRADE	DESIGNATION / EN	DIN	UNS	BS	JIS	DENSITY
1050	Al99,5 · EN AW-1050A	3.0255	A91050	–	A1050	2.7 g/cm³
2024	AlCu4Mg1 · EN AW-2024	3.1355	A92024	–	A2024	2.78 g/cm³
5083	AlMg4,5Mn0,7 · EN AW-5083	3.3547	A95083	–	A5083	2.66 g/cm³
5754	AlMg3 · EN AW-5754	3.3535	A95754	–	–	2.66 g/cm³
6061	AlMg1SiCu · EN AW-6061	3.3211	A96061	–	A6061	2.7 g/cm³
6082	AlSi1MgMn · EN AW-6082	3.2315	A96082	–	–	2.7 g/cm³
7075	AlZn5,5MgCu · EN AW-7075	3.4365	A97075	–	A7075	2.81 g/cm³
7020	AlZn4,5Mg1 · EN AW-7020	3.4335	A97020	–	–	2.77 g/cm³

“Close” marks grades whose composition ranges do not match exactly but are used interchangeably in practice. For critical applications, values should be verified on the material certificate.

TOOL AND MOULD STEELS · 5 PRODUCTS

05 Cold-work tool steels and plastic mould steels



Cold-work tool steels for blanking, punching and forming tools, and pre-hardened mould steels for plastic moulds. Supplied as round bar and flat bar / block, cut to the size you need.

IN THIS SECTION

Cold-work tool steels 21
1.2379 Cold-Work Tool Steel · 1.2842 Cold-Work Tool Steel · 1.2767 Tool Steel

Plastic mould steels 21
1.2312 Plastic Mould Steel · 1.2085 Stainless Mould Steel

Grade equivalents 21

WHICH GRADE?

1.2379 cold-work tool steel (AISI D2)
High-carbon, 12 % chromium cold-work tool steel; very high wear resistance and edge retention, with good dimensional stability in heat treatment. Blanking, punching, fine-blanking and cold-forming dies.
Not suitable where impact and edge chipping dominate (thick sheet, scrap shears); 1.2767 is preferred in those cases. Working hardness 56–62 HRC.

1.2842 cold-work tool steel (AISI O2)
Oil-hardening manganese cold-work tool steel; keeps its dimensions well in heat treatment and holds its cutting edge. An economical choice for cutting dies, gauges and shear blades.
Through-hardens up to sections of about 20–40 mm; 1.2379 is preferred for thicker parts and long runs.

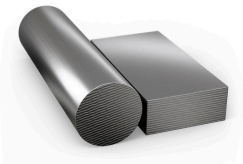
1.2767 nickel tool steel
Very tough tool steel with about 4 % nickel; cutting, bending and coining tools working under impact and high pressure. As it can be mirror-polished, it is also used for plastic moulds that need a glossy surface.
Wear resistance is not as high as 1.2379. Working hardness 48–54 HRC.

1.2312 plastic mould steel (P20+S)
Pre-hardened (280–325 HB) plastic mould steel; machined directly without heat treatment, with very good machinability. Mould bases, clamping plates and cavities with a technical surface finish.
The sulphur addition limits surface quality; not suitable for cavities that need mirror polishing or chemical texturing (etching).

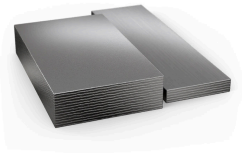
1.2085 stainless mould steel
Pre-hardened stainless mould steel with about 16 % chromium; resistant to moisture, cooling water and mildly corrosive plastics such as PVC, and easy to machine as delivered. Mould bases, frames and plates.
Not fully rust-proof; not recommended for cavities that need polishing, texturing or etching.

Cold-work tool steels

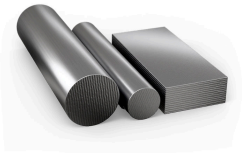
For blanking, punching, forming and thread-rolling tools



1.2379
X153CrMoV12



1.2842
90MnCrV8



1.2767
45NiCrMo16

ROUND BAR · FLAT BAR / BLOCK

FORM
Round bar · flat bar / block

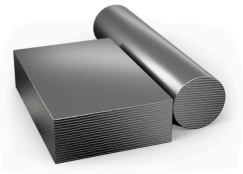
SIZE
On request; cut to the size you need

GRADE	SUPPLY CONDITION	WORKING HARDNESS
1.2379 Cold-Work Tool Steel	Soft annealed, max. 255 HB (standard condition)	56–62 HRC depending on the application (after hardening and tempering)
1.2842 Cold-Work Tool Steel	Soft annealed, max. 229 HB (standard condition)	Approx. 56–60 HRC (after hardening and tempering)
1.2767 Tool Steel	Soft annealed, max. 285 HB (standard condition)	48–54 HRC (after hardening and tempering)

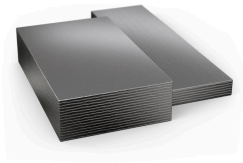
Grade standard: EN ISO 4957

Plastic mould steels

Pre-hardened, for plastic moulds, mould frames and plates



1.2312
40CrMnMoS8-6



1.2085
X33CrS16

ROUND BAR · FLAT BAR / BLOCK

FORM
Round bar · flat bar / block

SIZE
On request; cut to the size you need

SUPPLY CONDITION
Pre-hardened (quenched and tempered), 280–325 HB

GRADE	WORKING HARDNESS
1.2312 Plastic Mould Steel	Used at the supplied hardness (approx. 28–34 HRC)
1.2085 Stainless Mould Steel	Used at the supplied hardness (approx. 30–34 HRC)

1.2312: Composition: steelmakers' data sheets (not listed as a separate grade in EN ISO 4957) · 1.2085: Composition: steelmakers' data sheets (Stahl-Eisen-Liste grade; not listed in EN ISO 4957)

GRADE EQUIVALENTS

Grades and international equivalents

MATERIAL NO.	EN DESIGNATION	AISI	JIS	UNS	DENSITY
1.2379	X153CrMoV12	≈ D2	≈ SKD11	≈ T30402	7.7 g/cm³
1.2842	90MnCrV8	≈ O2	–	–	7.85 g/cm³
1.2767	45NiCrMo16	≈ 6F7	≈ SKT6	–	7.85 g/cm³
1.2312	40CrMnMoS8-6	≈ P20+S	–	–	7.85 g/cm³
1.2085	X33CrS16	≈ 420FM	–	–	7.65 g/cm³

"Close" marks grades whose composition ranges do not match exactly but are used interchangeably in practice. For critical applications, values should be verified on the material certificate.

06 Stainless steel

STAINLESS STEEL · 8 PRODUCTS



304, 316 and 310S stainless steel sheet, coil, round bar, hexagon bar, flat bar, angle and tube, plus titanium-stabilised 321 tube: 304 for general-purpose and food applications, 316 for chloride environments, 310S and 321 for high temperatures.

IN THIS SECTION

Sheet and coil 23
Stainless Steel Sheet · Stainless Steel Coil

Bar and sections 23
Stainless Steel Round Bar · Stainless Steel Hexagon Bar · Stainless Steel Flat Bar · Stainless Steel Angle

Stainless steel tube 24
Stainless Steel Tube · 321 Stainless Steel Tube

Grade equivalents 24

WHICH GRADE?

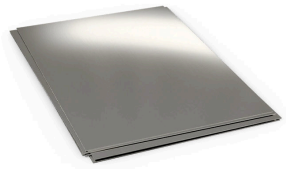
304 stainless steel (1.4301)
The most widely used austenitic stainless steel (18/8 chromium-nickel). Resistant to corrosion in atmospheric, water and food environments; easy to form and weld. Food and kitchen equipment, architectural applications and general engineering.
In chloride environments (seawater, brine), 316 is preferred because of the risk of pitting. Bars up to Ø15 mm are sold in full lengths.

316 stainless steel (1.4401)
Austenitic stainless steel with 2.0–2.5 % molybdenum; its resistance to pitting and crevice corrosion in chloride environments is markedly higher than that of 304. Marine, chemical, pharmaceutical and food equipment.
Low-carbon 316L (1.4404) is available on request for welded fabrication.

310S heat-resistant stainless steel (1.4845)
Heat-resistant austenitic stainless steel with 24–26 % chromium and 19–22 % nickel; resists scaling in air up to about 1050 °C. Furnace parts, heat-treatment fixtures, burner and boiler components.
Supplied as sheet and bar. In sulphur-bearing combustion gases the service temperature falls to about 950 °C.

321 stainless steel tube (1.4541)
Titanium-stabilised austenitic stainless steel; resists intergranular corrosion after welding and in long-term service at 425–850 °C. Exhaust, heat exchanger, expansion joint and boiler tubes.
Seamless and welded; sold by the metre in full lengths.

Sheet and coil 304 · 316 · 310S



SHEET / PLATE

Stainless Steel Sheet

304 1.4301 · X5CrNi18-10 | **316** 1.4401 · X5CrNiMo17-12-2 | **310S** 1.4845 · X8CrNi25-21

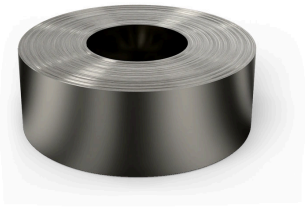
GRADES
304 · 316 · 310S

FINISH
2B, BA (bright annealed) or satin (No.4) · to order

SIZE
Thickness and sheet size to order

CUTTING
Cut to the size you need on request

Sheet standards: EN 10088-2 · ASTM A240



COIL

Stainless Steel Coil

304 1.4301 · X5CrNi18-10 | **316** 1.4401 · X5CrNiMo17-12-2

GRADES
304 · 316

FINISH
2B or BA (bright annealed) · to order

SIZE
Thickness and width to order

Coil standards: EN 10088-2 · ASTM A240

Bar and sections Round, hexagon, flat bar and angle



ROUND BAR

Stainless Steel Round Bar

304 1.4301 · X5CrNi18-10 | **316** 1.4401 · X5CrNiMo17-12-2 | **310S** 1.4845 · X8CrNi25-21

GRADES
304 · 316 · 310S

FINISH
Cold drawn, peeled or ground (to order)

CUTTING
Ø15 mm and below normally in full lengths; larger diameters cut to length

Bar standards: EN 10088-3 · ASTM A276 / A479



HEXAGON BAR

Stainless Steel Hexagon Bar

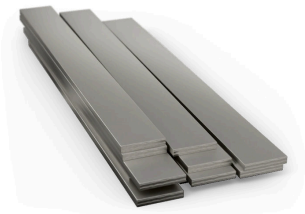
304 1.4301 · X5CrNi18-10 | **316** 1.4401 · X5CrNiMo17-12-2

GRADES
304 · 316

SIZE
Across flats (A/F) up to 70 mm

CUTTING
15 mm A/F and below normally in full lengths; larger sizes cut to length

Bar standards: EN 10088-3 · ASTM A276 / A479



FLAT BAR

Stainless Steel Flat Bar

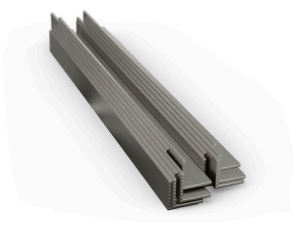
304 1.4301 · X5CrNi18-10 | **316** 1.4401 · X5CrNiMo17-12-2

GRADES
304 · 316

TYPE
Hot rolled or cold drawn (to order)

SIZE
Thickness × width to order

Flat bar standards: EN 10088-3 · ASTM A276 / A484



ANGLE

Stainless Steel Angle

304 1.4301 · X5CrNi18-10 **316** 1.4401 · X5CrNiMo17-12-2

GRADES
304 · 316

SECTION
Equal leg; leg × thickness to order

Section standards: EN 10088-3 · ASTM A276 / A484

Stainless steel tube

304 and 316 tube; 321 seamless and welded tube



TUBE

Stainless Steel Tube

304 1.4301 · X5CrNi18-10 **316** 1.4401 · X5CrNiMo17-12-2

GRADES
304 · 316

TYPE
Welded or seamless (to order)

SIZE
Outside diameter × wall thickness, to order

FINISH
Satin (ground) or polished for decorative tube; annealed and pickled for process tube

SALE
Full lengths

Welded tube: EN 10217-7, ASTM A312 / A554 · seamless tube: EN 10216-5, ASTM A312



SEAMLESS AND WELDED TUBE

321 Stainless Steel Tube

1.4541 X6CrNiTi18-10

TYPE
Seamless and welded

TUBE STANDARD
Seamless: EN 10216-5, ASTM A312 / A213 / A269 · Welded: EN 10217-7, ASTM A312 / A269

SIZE
On request (outside diameter × wall thickness)

SUPPLY CONDITION
Solution annealed; pickled or bright-annealed surface

SOLD BY
By the metre, in full lengths

Material: EN 10088 · seamless tube: EN 10216-5 · welded tube: EN 10217-7 · ASTM A312

GRADE EQUIVALENTS

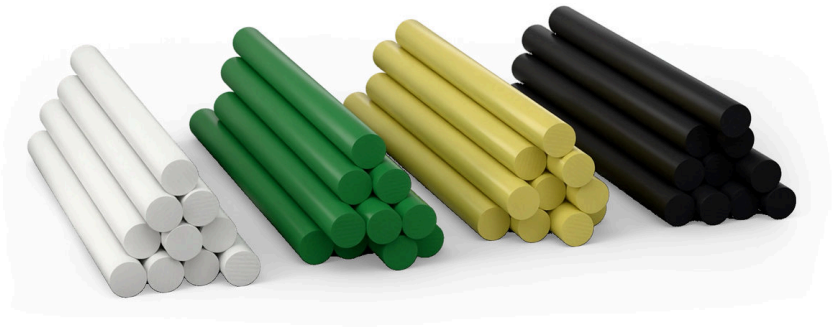
Grades and international equivalents

MATERIAL NO.	EN DESIGNATION	AISI	JIS	UNS	DENSITY
304	1.4301 · X5CrNi18-10	304	SUS304	S30400	7.9 g/cm³
316	1.4401 · X5CrNiMo17-12-2	316	SUS316	S31600	8.0 g/cm³
310S	1.4845 · X8CrNi25-21	310S	SUS310S	S31008	7.9 g/cm³
1.4541	X6CrNiTi18-10	321	SUS321	S32100	7.9 g/cm³

“Close” marks grades whose composition ranges do not match exactly but are used interchangeably in practice. For critical applications, values should be verified on the material certificate.

ENGINEERING PLASTICS · 26 PRODUCTS

07 Engineering plastics



PTFE and carbon-filled PTFE, PEEK, cast nylon (PA 6 G), acetal (POM-C), PET-P, PE-1000, PE-500, PP, epoxy glass (FR4 / G10), cotton phenolic and acrylic. Sheet, rod and tube, cut to size; minimum order 5 kg.

IN THIS SECTION

High-performance plastics 26
PTFE · Carbon-filled PTFE (25 % carbon) · PEEK

Engineering plastics (up to 100 °C) 26
Cast nylon (PA 6 G) · Acetal (POM-C) · PET-P (semi-crystalline PET)

Industrial plastics 27
PE-1000 (PE-UHMW) · PE-500 (PE-HD) · Polypropylene (PP-H)

Laminates and acrylic 28
Epoxy glass laminate (FR4 / G10) · Cotton phenolic laminate (HGW 2082) · Acrylic (PMMA)

Materials and properties 28

WHICH GRADE?

PTFE
Resists almost all chemicals and has the lowest coefficient of friction of any plastic; continuous service up to 260 °C.
Can deform over time under load (creep); PEEK is more suitable for load-bearing parts.

PEEK
Continuous service up to about 250–260 °C, retaining much of its strength at high temperature; resistant to chemicals and wear.
One of the most expensive engineering plastics.

Cast nylon (PA 6 G)
High wear resistance and toughness; used instead of metal for gears, rollers, bushes and wear strips.
Absorbs moisture and its dimensions can change somewhat; acetal (POM-C) or PET-P is preferred for close tolerances.

Acetal (POM-C)
Dimensionally stable and very easy to machine; widely used for precision machine parts.
Not resistant to strong acids.

PET-P (semi-crystalline PET)
Absorbs very little moisture; high dimensional stability and wear resistance.
Less tough than POM-C; for parts subject to impact, POM-C or cast nylon (PA 6 G) is preferred.

PE-1000 (PE-UHMW)
Very high wear and impact resistance and low friction; the standard material for conveyor components and wear strips.
Not suitable for joining by welding; PE-500 or PP is preferred for welded tanks and containers.

PE-500 (PE-HD / HDPE)
Absorbs virtually no moisture, is easy to machine and weldable; widely used for chopping boards, food machinery parts and wear strips.

Polypropylene (PP-H)
Resistant to most acids and alkalis, weldable and lightweight; used for chemical tanks.

Epoxy glass laminate (FR4 / G10)
Excellent electrical insulating properties and high mechanical strength; absorbs very little moisture.

Cotton phenolic laminate (HGW 2082)
Its fabric reinforcement makes it tough and resistant to cracking; used for insulating and wear parts.

Acrylic (PMMA)
Transparent, lighter than glass and more impact-resistant.
Continuous service temperature is 70 °C for extruded sheet and 80 °C for cast sheet.

High-performance plastics 260 °C continuous



SHEET · ROD · TUBE

PTFE

PTFE unfilled

CONTINUOUS SERVICE TEMP.
260 °C

Sheet	THICKNESS 0.5–100 mm · other sizes on request · SHEET SIZE 1000 × 1000 · 1200 × 1200 · 1000 × 2000 mm · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø5–300 mm · LENGTH 1000–2000 mm (depending on diameter) · ORDERING Cut to length, minimum order 5 kg
Tube	SIZE Outside diameter × inside diameter and length to order · ORDERING Cut to length, minimum order 5 kg



SHEET · ROD · TUBE

Carbon-filled PTFE (25 % carbon)

Carbon-filled PTFE PTFE + 25 % carbon

FILLER
25 % carbon · black

CONTINUOUS SERVICE TEMP.
260 °C

Sheet	SIZE Thickness and sheet size to order · ORDERING Cut to size, minimum order 5 kg
Rod	SIZE Diameter and length to order · ORDERING Cut to length, minimum order 5 kg
Tube	SIZE Outside diameter × inside diameter and length to order · ORDERING Cut to length, minimum order 5 kg



SHEET · ROD

PEEK

PEEK natural

CONTINUOUS SERVICE TEMP.
260 °C

Sheet	THICKNESS 5–100 mm · other sizes on request · SHEET SIZE 500 / 620 / 1000 × 1000–3000 mm (depending on thickness) · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø5–200 mm · LENGTH 1000 / 3000 mm · ORDERING Cut to length, minimum order 5 kg

Engineering plastics (up to 100 °C) 100 °C continuous · gears, bushes and precision parts



SHEET · ROD · TUBE

Cast nylon (PA 6 G)

Cast nylon Cast PA 6 · PA 6 G

CONTINUOUS SERVICE TEMP.
100 °C

Sheet	THICKNESS 10–200 mm · other sizes on request · SHEET SIZE 1000 × 2000 mm · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø30–500 mm · LENGTH 1000 mm (2000 / 3000 mm on request) · ORDERING Cut to length, minimum order 5 kg
Tube	SIZE Outside diameter × inside diameter and length to order · ORDERING Cut to length, minimum order 5 kg



SHEET · ROD

Acetal (POM-C)

POM POM-C · copolymer

CONTINUOUS SERVICE TEMP.
100 °C

Sheet	THICKNESS 8–100 mm · other sizes on request · SHEET SIZE 1000 × 2000 mm · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø10–300 mm · LENGTH 1000 / 3000 mm · ORDERING Cut to length, minimum order 5 kg



SHEET · ROD

PET-P (semi-crystalline PET)

PET-P semi-crystalline

CONTINUOUS SERVICE TEMP.
100 °C

Sheet	THICKNESS 8–100 mm · other sizes on request · SHEET SIZE Sheet sizes on request · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø10–200 mm · LENGTH 1000 / 3000 mm · ORDERING Cut to length, minimum order 5 kg

Industrial plastics

Wear strips, liners, tanks and food applications



SHEET · ROD

PE-1000 (PE-UHMW)

PE-1000 PE-UHMW

CONTINUOUS SERVICE TEMP.
80 °C

Sheet	THICKNESS 5–100 mm · other sizes on request · SHEET SIZE 1000 × 2000 · 2000 × 3000 · 2000 × 4000 mm · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø10–300 mm · LENGTH 1000 / 2000 mm · ORDERING Cut to length, minimum order 5 kg



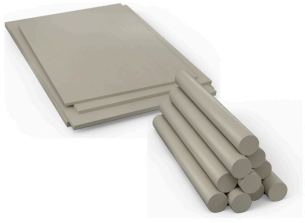
SHEET · ROD

PE-500 (PE-HD)

PE-500 PE-HD

CONTINUOUS SERVICE TEMP.
80 °C

Sheet	THICKNESS 2–100 mm · other sizes on request · SHEET SIZE 1000 × 2000 · 2000 × 3000 mm · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø16–300 mm · LENGTH 1000 / 2000 mm · ORDERING Cut to length, minimum order 5 kg



SHEET · ROD

Polypropylene (PP-H)

PP PP-H · homopolymer

CONTINUOUS SERVICE TEMP.
100 °C

Sheet	THICKNESS 1–100 mm · other sizes on request · SHEET SIZE 1000 × 2000 · 1500 × 3000 mm · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Ø10–300 mm · LENGTH 1000 / 2000 mm · ORDERING Cut to length, minimum order 5 kg

Laminates and acrylic

Electrical insulating laminates and acrylic sheet



SHEET · ROD

Epoxy glass laminate (FR4 / G10)

FR4 / G10 EP GC 201/202

CONTINUOUS SERVICE TEMP.

130 °C

Sheet	THICKNESS 3–100 mm · other sizes on request · SHEET SIZE Sheet sizes on request · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Details on request · LENGTH Details on request · ORDERING Cut to length, minimum order 5 kg



SHEET · ROD

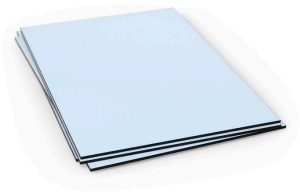
Cotton phenolic laminate (HGW 2082)

Cotton phenolic laminate HGW 2082 · PF CC 201

CONTINUOUS SERVICE TEMP.

120 °C

Sheet	THICKNESS 8–100 mm · other sizes on request · SHEET SIZE Sheet sizes on request · ORDERING Cut to size, minimum order 5 kg
Rod	DIAMETER Details on request · LENGTH Details on request · ORDERING Cut to length, minimum order 5 kg



SHEET / PLATE

Acrylic (PMMA) Sheet

Acrylic PMMA · acrylic

THICKNESS

2–50 mm · other sizes on request

SHEET SIZE

2050 × 3050 mm

CONTINUOUS SERVICE TEMP.

70 °C (extruded) · 80 °C (cast)

ORDERING

Cut to size, minimum order 5 kg

MATERIALS AND PROPERTIES

Materials and properties

MATERIAL	TYPE	CONT. SERVICE	DENSITY
PTFE	PTFE · unfilled	260 °C	2.16 g/cm³
Carbon-filled PTFE (25 % carbon)	PTFE + 25 % carbon	260 °C	2.1 g/cm³
PEEK	PEEK · natural	260 °C	1.31 g/cm³
Cast nylon (PA 6 G)	Cast PA 6 · PA 6 G	100 °C	1.15 g/cm³
Acetal (POM-C)	POM-C · copolymer	100 °C	1.41 g/cm³
PET-P (semi-crystalline PET)	PET-P · semi-crystalline	100 °C	1.39 g/cm³
PE-1000 (PE-UHMW)	PE-UHMW · PE-1000	80 °C	0.93 g/cm³
PE-500 (PE-HD)	PE-HD · PE-500	80 °C	0.95 g/cm³
Polypropylene (PP-H)	PP-H · homopolymer	100 °C	0.91 g/cm³
Epoxy glass laminate (FR4 / G10)	EP GC 201/202	130 °C	1.9 g/cm³
Cotton phenolic laminate (HGW 2082)	HGW 2082 · PF CC 201	120 °C	1.35 g/cm³
Acrylic (PMMA)	PMMA · acrylic	80 °C	1.19 g/cm³

Continuous service temperatures and densities are typical values; actual values depend on the grade and, for temperature, on the load and application.

TECHNICAL INFORMATION

Grade codes and weight calculation

What do the codes mean?

EN number: the material number in the European standards. For copper and copper alloys it begins with “C” (e.g. CW004A, CC483K) and the second letter shows the product type: W for wrought products (rod, sheet, tube) and C for castings. Aluminium alloys carry the prefix “EN AW-” (e.g. EN AW-6082).

DIN (W.Nr.): the German material number, or Werkstoffnummer (e.g. 2.0060). It is still common on older drawings and specifications.

UNS: the Unified Numbering System used in the United States. Copper and copper alloys begin with “C” (e.g. C11000).

BS: the short designation in the former British Standards (e.g. C101, CZ121).

JIS: the equivalent in the Japanese Industrial Standards. For copper and copper alloys it begins with “C” (e.g. C1100) and for aluminium with “A” (e.g. A6061); for steels, see below.

Steel material numbers and names: under the EN 10027 system, steels are identified by a material number beginning with “1.” (e.g. 1.2379) and by a steel name that reflects the composition (e.g. X153CrMoV12). Tool steels are covered by EN ISO 4957 and stainless steels by EN 10088. **AISI** gives the US equivalent (e.g. D2, 321) and **JIS** the Japanese one (e.g. SKD11, SUS321).

The “≈” sign marks a near equivalent: the composition ranges in the two standards do not match exactly, but they are close enough for the materials to be used interchangeably in practice. For critical applications, we recommend checking the composition and mechanical properties against the material certificate.

The densities are the nominal values used in the weight calculator.

Theoretical weight

Sheet and flat bar	`kg = thickness × width × length × density ÷ 1,000,000`
Round bar	`kg = π ÷ 4 × diameter² × length × density ÷ 1,000,000`
Square bar	`kg = side² × length × density ÷ 1,000,000`
Hexagon bar	`kg = 0.866 × A/F² × length × density ÷ 1,000,000`
Tube	`kg = π × (OD − wall) × wall × length × density ÷ 1,000,000`
Angle	`kg = thickness × (leg A + leg B − thickness) × length × density ÷ 1,000,000`
U-channel	`kg = thickness × (base + 2 × leg − 2 × thickness) × length × density ÷ 1,000,000`
Strip (per metre)	`kg/m = thickness × width × density ÷ 1,000`

All dimensions are in millimetres (mm) and density is in g/cm³. The result is given in kilograms; angles and U-channels are calculated for an ideal cross-section, without corner radii.

NOMINAL DENSITY RANGES (g/cm³)

Copper	8.3–8.94	Brass	8.44–8.53	Bronze	7.06–8.8	Aluminium	2.66–2.81
Tool and mould steels	7.65–7.85	Stainless steel	7.9–8.0	Engineering plastics	0.91–2.16		

Densities by grade are listed in the tables at the end of each section. Values are nominal; actual density may differ slightly with the composition range of the alloy. Weights can also be calculated with the calculator on our website: pointmetal.com.tr/en/metal-weight-calculator

TECHNICAL INFORMATION

Temper codes and standards

Temper designations

Copper and copper alloys (EN 1173)

The temper code is a letter followed by a number; the number gives the minimum value of the property.

R	Tensile strength, N/mm². E.g. R220 at least 220 N/mm² (annealed tube), R290 at least 290 N/mm² (hard tube).
H	Hardness; Vickers for wrought products, Brinell for castings. E.g. H090.
Y	0.2% proof strength, N/mm².
A	Elongation, %.
M	As manufactured; no mechanical properties specified.

Aluminium (EN 515)

After H, the first digit gives the process and the second the degree of hardness: 2 quarter hard, 4 half hard, 6 three-quarter hard, 8 full hard.

O	Fully annealed, soft.
H111	Annealed, with less strain hardening from shaping than required for H11.
H112	Some strain hardening from shaping, without special control over its amount.
H1x	Strain hardened only. E.g. H14: half hard, not annealed after rolling.
H2x	Strain hardened and partially annealed. E.g. H22 quarter hard, H24 half hard.
T6	Solution heat treated and artificially aged.
T651	Solution heat treated, stress relieved by stretching, then artificially aged.
T351	Solution heat treated and stress relieved by stretching; naturally aged (equivalent to T4).

Standards cited in this catalogue

Copper and copper alloys

EN 1652	Plate, sheet, strip and circles for general purposes
EN 1654	Strip for springs and connectors
EN 13599	Copper plate, sheet and strip for electrical purposes
EN 12163	Rod for general purposes
EN 12164	Rod for free machining purposes
EN 12167	Profiles and bars for general purposes
EN 12168	Hollow rod for free machining purposes
EN 13601	Copper rod, bar and wire for general electrical purposes
EN 1057	Seamless, round copper tubes for water and gas in sanitary and heating applications
EN 12735-1	Seamless, round tubes for air conditioning and refrigeration; tubes for piping systems
EN 12735-2	Seamless, round tubes for air conditioning and refrigeration; tubes for equipment
EN 12449	Seamless, round tubes for general purposes
EN 13348	Seamless, round copper tubes for medical gases or vacuum
EN 1982	Ingots and castings
EN 12420	Forgings
DIN 1714	Copper-aluminium casting alloys (withdrawn; superseded by EN 1982)
EN 1173	Material condition or temper designation
ASTM B36	Brass plate, sheet, strip and rolled bar
ASTM B103	Phosphor bronze plate, sheet, strip and rolled bar
ASTM B111	Copper and copper-alloy seamless condenser tubes and ferrule stock
ASTM B187	Copper bus bar, rod and shapes and general purpose rod, bar and shapes
ASTM B194	Copper-beryllium alloy plate, sheet, strip and rolled bar
ASTM B196	Copper-beryllium alloy rod and bar
ASTM B280	Seamless copper tube for air conditioning and refrigeration field service
ASTM B441	Copper-cobalt-beryllium, copper-nickel-beryllium and copper-nickel-lead-beryllium rod and bar
ISO 5182	Resistance welding: materials for electrodes and ancillary equipment
EN ISO 17672	Brazing: filler metals

Aluminium

EN 515	Temper designations
EN 485-2	Sheet, strip and plate: mechanical properties
EN 485-3	Hot-rolled products: tolerances on dimensions and form
EN 485-4	Cold-rolled products: tolerances on shape and dimensions
EN 755-2	Extruded rod/bar, tube and profiles: mechanical properties
EN 755-5	Extruded rectangular bars: tolerances
EN 755-6	Extruded hexagonal bars: tolerances
EN 755-7	Extruded seamless tubes: tolerances
EN 755-9	Extruded profiles: tolerances
EN 754-2	Cold drawn rod/bar and tube: mechanical properties
EN 754-7	Cold drawn seamless tubes: tolerances

Stainless and tool steels

EN 10027	Designation systems for steels: names and steel numbers
EN 10088-2	Stainless steels: delivery conditions for sheet, plate and strip for general purposes
EN 10088-3	Stainless steels: delivery conditions for bars, rods, wire, sections and bright products for general purposes
EN 10216-5	Seamless stainless steel tubes for pressure purposes
EN 10217-7	Welded stainless steel tubes for pressure purposes
EN ISO 4957	Tool steels
ASTM A240	Chromium and chromium-nickel stainless steel plate, sheet and strip for pressure vessels and general applications
ASTM A276	Stainless steel bars and shapes
ASTM A479	Stainless steel bars and shapes for use in boilers and other pressure vessels
ASTM A484	General requirements for stainless steel bars, billets and forgings
ASTM A312	Seamless, welded and heavily cold worked austenitic stainless steel pipes
ASTM A554	Welded stainless steel mechanical tubing
ASTM A213	Seamless ferritic and austenitic alloy-steel boiler, superheater and heat-exchanger tubes
ASTM A269	Seamless and welded austenitic stainless steel tubing for general service

Titles are abbreviated; the full title and current edition of each standard apply.

CONTACT

For quotations and information

For quotes, product enquiries and technical information, you can reach us by WhatsApp, telephone or e-mail. Including the product, grade, size and quantity helps us prepare your quote quickly.

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