

# Available steels and alloys by Dumont

Carbon steel is an extremely hard alloy (> 59 HRC) composed of C, Mn, and Si. While Carbon ensures strong tips, it will nevertheless easily rust. This alloy is magnetic and cannot be sterilized.

Inox 02 is composed of C, Mn, Cr and Si is a standard magnetic stainless steel. This alloy is not as hard as carbon steels because it contains Chromium. Inox 02 will resist temperatures of around 400°C (DIN 50 914) but cannot be sterilized.

Inox 08 is a medical stainless steel composed of C, Mn, Cr, Mo and V that provides an excellent resistance to corrosion and a good resistance to salt. Although not as hard as Carbon steels, Inox 08 offers excellent resistance to corrosion. This magnetic alloy supports temperatures of around 400° C (DIN 50914) and is suitable for autoclave sterilization at 180°C.

Dumoxel is composed of C, Cr, Ni, Mo and Cu and is the most popular alloy among our customers. This alloy was developed and patented by Dumont to offer the best in resistance to corrosion thanks to its high concentration of molybdenum and chromium. Dumoxel also guarantees an excellent resistance to sulphuric environments, hydrochloric acid, as well as to all other mineral and organic acids. Dumoxel is 95% antimagnetic, resistant up to temperatures of around 400° C (DIN 50 914) and is suitable for autoclave sterilization at 270°C.

This Dumont patented alloy is composed of C, Cr, Mo, Mn, Co, Ni and Si. Dumostar is more elastic and more resistant to corrosion than the best stainless steels. It is also perfectly compatible with human tissues and is resistant to mineral and organic acids as well to salt. Although slightly more expensive than other alloys, Dumostar is 100% antimagnetic and is resistant to sterilization temperatures of up to 500°C. This is the most cost effective and appropriate alloy for laboratory use.

Antimagnetic is composed of C, Cr, Ni and Mo. It offers a good resistance to corrosion thanks to its high concentration of molybdenum and is 80% antimagnetic but is not as hard as Inox. Antimagnetic is resistant up to temperatures of around 400°C (DIN 50 914) and is suitable for autoclave sterilization at 270°C.

Titanium is an alloy composed of C, Fe, O, H, N and Ti. It is totally resistant to corrosion from nitric acid, chloride, salt water, and the like. This alloy is not as hard as Inox 08 but is 40% lighter and more flexible. Titanium 100% antimagnetic and resistant up to temperatures of around 430°C.

Nickel is a 100% antimagnetic alloy composed of Cu, Ni, Mn and Zn. It is widely appreciated as it does not damage the components handled by it.

Ceramic ZrO2 is even harder than stainless steel and does not contain carbon or other metal additives. It offers good resistance to chemicals and is Electro Static Discharge safe. Black Ceramic is antimagnetic (Zero residual magnetism) and microwave-sterilization compatible. It does not produce metallic contamination and offer good thermal isolation for soldering; solder will not adhere to its surface. Black ceramic is clean room safe and are available in antistatic versions for CMOS.

Ceramic ZrO2 is even harder than stainless steel and does not contain carbon or other metal additives. It offers good resistance to chemicals and is Electro Static Discharge safe. White Ceramic is antimagnetic (Zero residual magnetism) and microwave-sterilization compatible. It does not produce metallic contamination and offer good thermal isolation for soldering; solder will not adhere to its surface. White ceramic is clean room safe and are available in anti-static versions for CMOS.

Brass is composed of Cu, Pb, Sn, Ni and Zn. This alloy is 100% antimagnetic and is widely used for handling delicate components, especially in watch-making.

