

## Materials Data Sheet

### Stainless Steel Tubing for Implants 316 LVM

### To ISO 5832-1, ASTM 138-08

#### Chemical Composition

|            | wt %          |
|------------|---------------|
| Chromium   | 17,00 - 19,00 |
| Molybdenum | 2,25 - 3,00   |
| Nickel     | 13,00 - 15,00 |
| Silicon    | max. 0,750    |
| Manganese  | max. 2,000    |
| Copper     | max. 0,500    |
| Carbon     | max. 0,030    |
| Phosphorus | max. 0,025    |
| Sulfur     | max. 0,010    |
| Nitrogen   | max. 0,100    |
| Iron       | balance       |

#### Physical Properties

|                       |                        |
|-----------------------|------------------------|
| Melting Point         | 1750°C                 |
| Density               | 7,94 g/cm <sup>3</sup> |
| Modulus of Elasticity | 192 GPa                |

#### Mechanical Properties

##### Annealed

|                           |              |
|---------------------------|--------------|
| Ultimate Tensile Strength | min. 490 MPa |
| Yield Strength $R_{p0,2}$ | min. 190 MPa |
| Fracture Elongation       | min. 40 %    |

##### Cold worked

|                           |              |
|---------------------------|--------------|
| Ultimate Tensile Strength | min. 860 MPa |
| Yield Strength $R_{p0,2}$ | min. 690 MPa |
| Fracture Elongation       | min. 12 %    |

#### Note

The mechanical Properties are only for orientation and can be changed if necessary.