EUROFLEX®

WE CREATE SOLUTIONS

NI-FREE STAINLESS STEEL MATERIAL FOR MEDICAL INDUSTRY

Higher strength, better corrosion resistance, and improved biocompatibility compared with other Stainless Steel alloys have been demonstrated by an essentially nickel-free Stainless Steel alloy designed for medical implants.Nitrogen is present at levels around 1% compared with 0.10 to 0.50% for the other Stainless Steel alloys and nickel levels are no higher than 0.3%, compared with 9 to 15%. The alloy also includes manganese. The content is higher than the levels in Stainless Steel alloys. The higher manganese content is required to maintain austenite stability in high nitrogen strengthened alloys such as Ni-free alloys. In tests meeting the standards, Ni-free stainless steel has exhibited significantly higher strength than any of the common nickel-containing stainless alloys for medical applications, in both the annealed and cold worked conditions. It has demonstrated corrosion resistance significantly greater than that of the widely applied 316L alloy.

EUROFLEX supplies two different grades

CHEMICAL COMPOSITION

	ASTM 2229	*1.4452*
Carbon	max. 0,08 wt.-%	max. 0,15 wt.-%
Manganese	21,0 - 24,0 wt.-%	12,0 - 16,0 wt.-%
Phosphorus	max. 0,03 wt.-%	max. 0,05 wt.-%
Sulfur	max. 0,01 wt.-%	
Silicon	max. 0,75 wt.-%	max. 1,00 wt.-%
Chromium	19,0 - 23,0 wt.-%	max. 16,0 - 20,0 wt.-%
Nickel	max. 0,05 wt.-%	max. 0,30 wt.-%
Molybdenum	0,05 - 1,50 wt.-%	2,50 - 4,20 wt.-%
Nitrogen	0,85 - 1,10 wt.-%	0,75 - 1,00 wt.-%
Copper	max. 0,25 wt.-%	
Iron	balance	balance

Mechanical Properties (ISO 6892) coldworked:

Tensile Strength	min.1100 MPa
Yield Strength	min. 900 MPa
Elongation min.	min. 5 %

For further information and / or technical details please contact:

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