

GARBAFLEX 177 PH

1/3

Flat and shaped wire

GARBAFLEX 177PH is a precipitation hardenable stainless wire for flat and shaped wire applications in corrosive atmosphere and elevated working temperature.

CHEMICAL COMPOSITION

C (%)	Si (%)	Mn (%)	P max. (%)	S max. (%)	Cr (%)	Ni (%)	Al (%)
0.09	0.70	1.00	0.025	0.015	16.00 - 18.00	6.50 - 7.80	0.70 - 1.50

GARBAFLEX 177 PH

2/3

MECHANICAL PROPERTIES

FOR FLAT ROLLED WIRE

Width (mm)	Tolerance (\pm mm)
1.00 - 5.00	0.050
5.01 - 8.00	0.070
8.01 - 10.00	0.100

Thickness (mm)	Tolerance (\pm mm)
0.30 - 0.80	0.013
0.81 - 1.00	0.019
1.01 - 1.60	0.025
1.61 - 2.30	0.050

FOR SHAPED WIRE

Width (mm)	Tolerance (\pm mm)
- 1.50	0.020
1.51 - 3.00	0.030
3.01 - 5.00	0.040
5.01 - 7.00	0.050
7.00 -	0.060

EXECUTION

Rolled on 2 sides (flat).
Rolled on 4 sides (shaped).

SURFACE CONDITIONS

SURFACE

Bright. Surface defects max. 1% of thickness.

GARBAFLEX 177 PH

3/3

PHYSICAL PROPERTIES

E AND G MODULUS OF ELASTICITY

Abt. 180 kN/mm² in drawn condition.
Abt. 185 kN/mm² after heat treatment.

E AND G MODULUS OF SHEAR

Abt. 70 kN/mm² in drawn condition.
Abt. 73 kN/mm² after heat treatment.
Density: 7.90 kg/dm³.

STANDARDS

NEAREST EQUIVALENT STEEL GRADES

EN/DIN 1.4568, AISI/SAE 631, JIS SUS 631

NEAREST EQUIVALENT STANDARDS

EN 10270-3, ASTM A313, AMS 5678 F, JIS G4314

RECOMMENDATIONS

HEAT TREATMENT

For best spring properties the springs are heat treated at a temperature of 480 °C (896 °F) for 1 hour and then air cooled. The tensile strength of the wire before and after this treatment is given in the table for steel grade GARBA 177PH.