ELGILOY SPECIALTY METALS
A Combined Metals Company

MATERIAL DATASHEET

Alloy 439 Stainless Steel

UNS: S43900
EN-DIN: 1.4510

439 Oxidation resistance and corrosion resistance is superior to Type 409 in areas where temperatures may exceed the oxidation limit of Type 409 or where aqueous corrosion resistance, particularly to chlorides, is needed. Applications include: Tubular manifolds and other exhaust system with difficult to form exhaust components.

Nominal Composition

	C	Mn	P	S	Si	Cr	Ni	Ti	Al	N	Fe
min	-	-	-	-	-	17.00	-	>= 0.20+4(C+N)	-	-	-
max	.070	1.0	0.040	0.030	1.00	19.00	0.50	1.10	0.15	0.040	BAL

Physical Properties

	At 70°F	At 20°C
Density	0.278 lb./in^3	7685 kg/m^3
Modulus of Elasticity (E)	28.4 x 10^3 ksi	193 x 10^{3}MPa
Electrical Resistivity	24.0 µ ohm.in	60.0 µ ohm.cm

Applicable Specifications

	ASTM A240

Typical Mechanical Properties – Typical Room Temperature Mechanical Properties

Condition	Tensile Strength (UTS)	0.2% YS	Elongation% in 2” (50.8 mm)	Hardness Rockwell
Annealed	66 ksi (455 MPa)	43 ksi (296 MPa)	32	74 HRBW

Typical mechanical properties are based, AK source on ASTM A240

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