



Combined Metals Company, LLC

Data Sheet

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 | - | $\geq 0.20+4(C+N)$ | - | - | - |
| 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

For further information:

COMBMET.COM

Call: (800) 323-0758

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