

Alleima® 10RE51

Hollow bar

Datasheet

Alleima® 10RE51 is a duplex (austenitic-ferritic) stainless steel characterized by resistance to stress corrosion cracking (SCC), high resistance to pitting, crevice and general corrosion and very high mechanical strength.

Standards

- UNS: S32900
- EN Number: 1.4460

Product standards

EN 10297-2, EN 10294-2, ASTM A790

Chemical composition (nominal) %

C	Si	Mn	P	S	Cr	Ni	Mo
0.04	0.5	0.8	≤0.040	≤0.030	26	5	1.3

Mechanical properties

At 20°C (68°F)

Proof strength				Tensile strength		Elong.
$R_{p0.2}^{a)}$		$R_{p1.0}^{a)}$		R_m		$A^{b)}$
MPa	ksi	MPa	ksi	MPa	ksi	%
≥485 ^{c)}	≥70 ^{c)}	≥470 ^{d)}	≥68 ^{d)}	620-800	90-116	≥20

1 MPa = 1 N/mm²

a) $R_{p0.2}$ and $R_{p1.0}$ correspond to 0.2% offset and 1.0% offset yield strength, respectively.

b) Based on $L_0 = 5.65 \sqrt{S_0}$ where L_0 is the original gauge length and S_0 the original cross-section area.

c) Requirement according to ASTM A790

d) Requirement according to EN 10297-2

Disclaimer:

Recommendations are for guidance only, and the suitability of a material for a specific application can be confirmed only when we know the actual service conditions. Continuous development may necessitate changes

in technical data without notice. This datasheet is only valid for Alleima materials.