ZOLLERN

Solid metals. Fine solutions.

Copper-aluminium casting alloy **AMS 4881** alloy 1566

Parts made of this high-strength cast alloy are hardened and tempered in accordance with the Aerospace Material Specification in annealing furnaces to AMS 2750 = TQ50.
Hardening: 871 – 927°C for at least 2 hours, quenching in water.
Tempering: 496 – 538°C for at least 2 hours, cooling in air.
Non-destructive tests such as X-ray, penetration test must be agreed separately.
Parts made of the similar casting material AMS 4880 have lower strength, with higher toughness.

ZOLLERN brand	AMS 4881
AMS designation	78Cu-11Al-5.1Ni-4.8Fe
ASTM designation	C95520

// **Composition** (weight by per cent in %)

Cu	Al	Ni	Fe	Mn	Zn
min. 74.5	10.5 – 11.5	4.2 – 6.0	4.0 – 5.5	max. 1.5	max. 0.30

Sn	Co	Si	Cr	Pb
max. 0.25	max. 0.20	max. 0.15	0.05	max. 0.03

// **Strength properties** at room temperature tensile specimen from a centrifugally cast bush

	(minimum values)			
1] AMS 4881, centrifugal casting	R_m N/mm²	$R_{p0.2}$ N/mm²	A_5 %	HRC
[1] up to 25 mm (1 inch)	896	655	3	28
[1] over 25 mm (1 inch)	860	621	2	28

Information

Higher strength values are achieved with the forging material CW308G = CuAl11Ni6Fe6 after hardening and tempering. The toughness is slightly better than AMS 4881.

ZOLLERN

Solid metals. Fine solutions.

Copper-aluminium casting alloy **AMS 4881** alloy 1566

Parts made of this high-strength cast alloy are hardened and tempered in accordance with the Aerospace Material Specification in annealing furnaces to AMS 2750 = TQ50.
Hardening: 871 – 927°C for at least 2 hours, quenching in water.
Tempering: 496 – 538°C for at least 2 hours, cooling in air.
Non-destructive tests such as X-ray, penetration test must be agreed separately.
Parts made of the similar casting material AMS 4880 have lower strength, with higher toughness.

Areas of application

- Centrifugally cast bearing bushes, mainly in aviation

Machinability

Carbide tools are needed for turning and milling and sharp drill bits are needed for drilling and thread cutting. This results in machinability that is better than that of austenitic steel.
Shorter rolling and flowing chips are formed.

ZOLLERN GmbH & Co. KG

Hitzkofer Straße 1
72517 Sigmaringendorf-
Laucherthal
Germany
T +49 7571 70-984
F +49 7571 70-82984
zgm@zollern.com
www.zollern.com