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EN 1652 Grade Cu-ETP R240

Description

Cu-ETP, mat. No CW004A, is an oxygenous copper with Cu $\geq$ 99,9%. To the comparable DIN-mark E-Cu58, mat. No 2.0065 acc. to DIN 1787 : 1973-01 applies: The most excellent material property is its high thermal and electrical conductivity. Tensile strength and Brinell hardness are increasable by cold forming. The material does not show any embrittlement at low temperatures and has a high corrosion resistance particularly to drinking and industrial water. It is not hydrogen resistant. Processing properties: hot forming: very good cold forming: very good machinability: unfavorable hard soldering: good soft soldering: very good gas-shielded welding: moderately burnishing: very good Application: Due to the very high conductivity use in electrical engineering, electronics application. Furthermore in food and beverage industry, refrigeration and air-condition technology, in machine, ship, apparatus and vehicle engineering, in household as well as for hardware, in handcraft and in construction trade. For the electrolytically tinned strip the coatings (Sn bright, Sn matt, Sn fuzed, SnPb) are listed by the application (better solderability, better corrosion resistance, reduction of the electrical contact resistance, better appearance) in the DIN EN 14436 : 2004-11 (Table 5)

Related Standards

[EN 1652](#)[DIN 17670-1](#)[More](#)

Equivalent Materials

[GB T2](#)[GOST M00](#)[UNS C11040](#)[DIN E-Cu58](#)[DIN 2.0065](#)[AS 110](#)[BS C101](#)[JIS C1100](#)[GOST M0](#)[ASTM B152UNSC11000](#)[ASTM B272UNSC11000](#)[UNS C11000](#)[ISO Cu-ETP](#)[AMS C11000](#)[ASME BCu-1b](#)[ASTM B1UNSC11000](#)[ASTM B101UNSC11000](#)

ASTM B116UNSC11000	ASTM B124UNSC11000	ASTM B172UNSC11000		
ASTM B173UNSC11000	ASTM B174UNSC11000	ASTM B187UNSC11000		
ASTM B188UNSC11000	ASTM B189UNSC11000	ASTM B2UNSC11000		
ASTM B224TypeETP	ASTM B226UNSC11000	ASTM B228UNSC11000		
ASTM B229UNSC11000	ASTM B246UNSC11000	ASTM B283UNSC11000		
ASTM B286UNSC11000	ASTM B298UNSC11000	ASTM B33UNSC11000		
ASTM B335UNSC11000	ASTM B370UNSC11000	ASTM B447UNSC11000		
ASTM B47UNSC11000	ASTM B470UNSC11000	ASTM B48UNSC11000		
ASTM B49UNSC11000	ASTM B496UNSC11000	ASTM B5UNSC11000		
ASTM B566UNSC11000	ASTM B638UNSC11000	ASTM B694UNSC11000		
ASTM B738UNSC11000	ASTM B8UNSC11000	ASTM F467Alloy110		
ASTM F468Alloy110	SAE C11000	DIN 2.0060	DIN E-Cu57	
EN CW004A	ASTM C11000	ETP	JIS WRB/C	JIS Cu-ETP
DIN 2.0070	DIN 2.0090	DIN 2.0076	DIN SE-Cu	DIN SF-Cu
DIN SW-Cu	BS C102	ISO CuETP		

Properties

General

Density ρ 8.9 - 8.94 g/cm³ at 20 °C

Mechanical

Elastic modulus E 127 GPa at 20 °C

Elongation A 15 % at 20 °C

Elongation A_{50} 8 % at 20 °C

Poisson's ratio ν	0.34 [-] at 20 °C
Tensile strength R_m	240 - 300 MPa at 20 °C
Yield strength $R_{p0.2}$ $R_{p0.2}$	160 - 180 MPa at 20 °C

Thermal

Coefficient of thermal expansion α	1.68E-5 1/K at 100 °C
Specific heat capacity c_p	13 J/(kg·K) at -253 °C
Thermal conductivity λ	1298 W/(m·K) at -253 °C

Chemical properties

Element	Weight %	Comment
Cu	99.9 %	
O	0.04 %	
Pb	5E-3 %	
Bi	5E-4 %	



This material data has been provided by **WIAM**.

All metrics apply to room temperature unless otherwise stated. SI units used unless otherwise stated.
Equivalent standards are similar to one or more standards provided by the supplier. Some equivalent standards may be stricter whereas others may be outside the bounds of the original standard.