

# Cu-TBC

## ALLOY NAME

IS	KMW
3331	Cu-TBC

Chemical Composition	(% By Weight)	Main Applications
<b>Cu</b>	99.5 % Min	Earth Moving Equipments
<b>P</b>	0.015 - 0.045 %	
<b>Sn</b>	0.07-0.20 %	Diesel Locomotives

## Physical Properties Typical values in annealed temper at 20°C

Density	8.93	g/cm <sup>3</sup>
Thermal expansion coefficient -191 .. 16	17.3	10 <sup>-6</sup> /K
Specific heat capacity	0.385	J/(g•K)
Thermal conductivity	340	W/(m•K)
Electrical conductivity (1 MS/m = 1 m/(Ω mm <sup>2</sup> ))	46	MS/m
Electrical conductivity (IACS)	80	%
Thermal coefficient of electrical resistance (0 .. 200 C)	3.2	10 <sup>-3</sup> /K
Modulus of elasticity (1 GPa = 1 kN/mm <sup>2</sup> ) cold formed	120	GPA

## Mechanical Properties (EN 1652)

Temper	Tensile Strength Rm MPa (N/mm <sup>2</sup> )	Yield Strength Rp0.2 MPa (N/mm <sup>2</sup> )	Elongation A50mm %	Hardness HV
O (SOFT)	—	—	—	60 Max
HB (Half Hard)	—	—	—	80 to 90
HD (Hard)	—	—	—	105-215

### Fabrication Properties

Capacity for Being Cold Worked  
Soft Soldering / Brazing  
Gas Shield arc welding  
Machinability  
Hot Dip Tinning

Excellent  
Excellent  
Excellent  
20% of Free Cutting Brass  
Excellent