

# KHP<sup>®</sup>10 (CuFe0,1P)

## Standard Designation

EN not standardized / UNS C19210

## Chemical Composition

Cu	Fe [%]	P [%]	
Balance	0.05 - 0.15	0.025 - 0.04	

## Description / Applications

KHP<sup>®</sup>10 ranges among the CuFe alloys. KHP<sup>®</sup>10 has a very high electrical conductivity and a higher strength than pure copper.  
Applications: lead frames, bus bars, tabs

## Physical Properties<sup>1)</sup>

Density	8.9 g/cm <sup>3</sup>	Thermal expansion coefficient	17·10 <sup>-6</sup> /K
Electrical conductivity	52 m/Ω·mm <sup>2</sup> 90 % IACS <sup>2)</sup>	Modulus of elasticity	125 GPa <sup>3)</sup>
Thermal conductivity	350 W/m·K		

<sup>1)</sup> Guideline values for soft temper, measured at room temperature<sup>3)</sup> 1 GPa = 1 kN/mm<sup>2</sup><sup>2)</sup> IACS = International Annealed Copper Standard

## Processing information

Weldability	medium	Stress corrosion cracking	none
Solderability	medium		

## Mechanical properties

Temper	Tensile Strength Rm [MPa]	Yield Strength Rp0,2 [MPa]	Elongation A50 [%]	Hardness HV	Bendability <sup>1)</sup>			
					90° r/t <sup>2)</sup>		180° r/t <sup>2)</sup>	
					GW <sup>3)</sup>	BW <sup>4)</sup>	GW <sup>3)</sup>	BW <sup>4)</sup>
R300	300 - 370	max. 300	min. 10	80 - 110	0	0	0,5	0,5
R350	350 - 420	min. 300	min. 4	100 - 130	0,5	0,5	1	1
R410	410 - 480	min. 350	min. 2	120 - 150	1	2	1,5	3
R440	min. 440	min. 400	min. 1	min. 125	1,5	3,5	2,0	3,5

<sup>1)</sup> The r/t values are valid for a strip thickness up to 0.6 mm (without crack). The data refer to rolled-to-temper material and a width of the bending area of 5 mm.  
V-shape bend test according to ISO 7438

<sup>2)</sup> r = inner radius, t = thickness<sup>3)</sup> GW = good way<sup>4)</sup> BW = bad way

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