

## Cu-DHP

Phosphorous deoxidised copper (CW024A, C122 ) is widely used in architectural and construction materials and in some industrial segments.

### Properties

- Lower electrical and thermal conductivity
- Resists hydrogen embrittlement
- Excellent corrosion resistance
- Excellent formability
- Good weldability
- Resists hydrogen embrittlement
- High scrap value

### Composition

- Cu min 99,90 %
- P 150...400 ppm

### Electrical conductivity

- min 85 % IACS

### Thermal conductivity

- min 339 W/m<sup>2</sup>K

### Typical applications

Building and construction (Nordic products): roofing, wall panels, cassettes, profiles etc., window and doorframes, interior decoration. Materials are made in different colours: Nordic Plain, Nordic Brown, Nordic Brown Light, Nordic Green and Nordic Green Living.

Boilers and gas heaters, household products, decoration



**Cu-DHP**

European standard number CW024A  
 UNS code C12200  
 Manufacturing location Pori

**Chemical properties**

P 0.015-0.040 %

**Physical Properties**

Density  
 g/cm<sup>3</sup> 8.9  
 lb/in<sup>3</sup> 0.323  
 Electrical Conductivity\*\*\*\*  
 (Nominal value in black) min 85  
 %IACS min 85  
 Thermal Conductivity  
 W/(m °K) min 339  
 Btu/ft h °F min 196  
 Modulus of Elasticity  
 GPa 117  
 X1000 ksi 17  
 Coef. of Thermal Exp.  
 at 20 °C (68 °F)  
 10<sup>-6</sup>/°C 17.6  
 10<sup>-6</sup>/°F 9.8

**Tempers**

**Mechanical Properties**

EN H040 / R200  
 Tensile Strength Rm N/mm<sup>2</sup> 200 - 250  
 Yield Strength (0.2 %) N/mm<sup>2</sup> max 100  
 Elongation % A50 / A min - / 42  
 Hardness (HV) 40 - 65  
 Thickness mm (Pori) 0.2 - 20

EN H040 / R220  
 Tensile Strength Rm N/mm<sup>2</sup> 220 - 260  
 Yield Strength (0.2 %) N/mm<sup>2</sup> max 140  
 Elongation % A50 / A min 33 / 42  
 Hardness (HV) 40 - 65  
 Thickness mm (Pori) 0.2 - 20

EN H065 / R240  
 Tensile Strength Rm N/mm<sup>2</sup> 240 - 300  
 Yield Strength (0.2 %) N/mm<sup>2</sup> min 180  
 Elongation % A50 / A min 8 / 15  
 Hardness (HV) 65 - 95  
 Thickness mm (Pori) 0.2 - 6, 12 - 25

EN H090 / R290  
 Tensile Strength Rm N/mm<sup>2</sup> 290 - 360  
 Yield Strength (0.2 %) N/mm<sup>2</sup> min 250  
 Elongation % A50 / A min 4 / 6  
 Hardness (HV) 90 - 110  
 Thickness mm (Pori) 0.2 - 25

EN H110 / R360  
 Tensile Strength Rm N/mm<sup>2</sup> min 360  
 Yield Strength (0.2 %) N/mm<sup>2</sup> min 320  
 Elongation % A50 / A min 2 /  
 Hardness (HV) min 110  
 Thickness mm (Pori) 0.2 - 20

Data for information only and not for use as purchase specification.  
 Other tempers - as ASTM - are available upon request.  
 Yield strength, Elongation and Hardness are typical values for each temper.  
 Elongation: The first value is for thickness up to and incl. 0.25 mm / next is > 0.25 mm  
 \*) Pori: Electrical conductivity according to EN 13599  
 Pori: Thicknesses up to 100 mm available in hot roller temper. For strips in coils max. thickness 4 mm. Material thicknesses for building purposes typically 0.5 -2 mm.