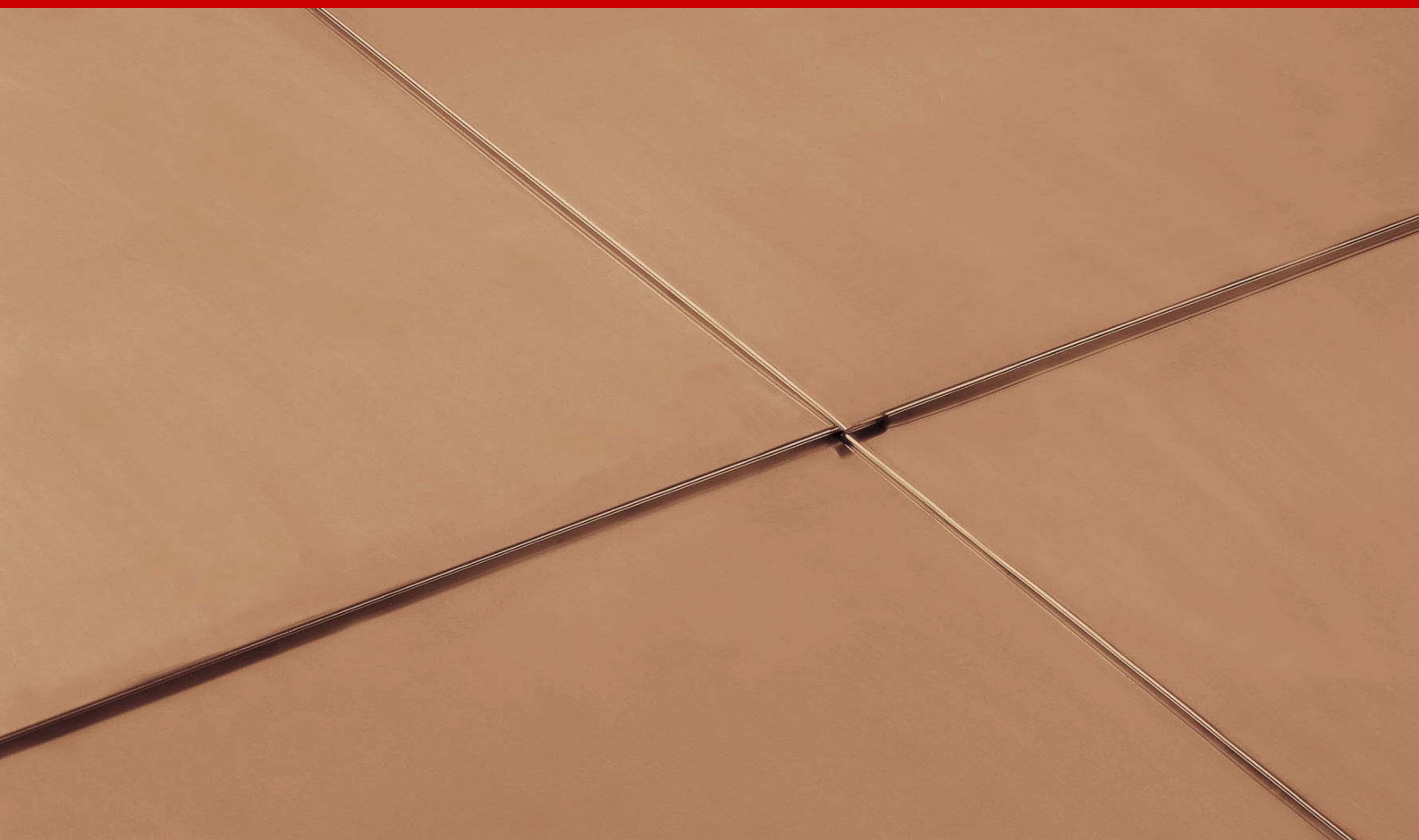


TECU[®] Bronze
NEW BRONZE FOR FAÇADE APPLICATION

 **Technical Data Sheet**



Technical Data Sheet **TECU®** Bronze

| Regulations | | |
|---------------|----------|---------------------------------|
| Regulation | Symbol | Number |
| KME-Numbering | CS04 | - |
| DIN 17670-1 | CuSn4 | 2.1016 |
| DIN EN 1652 | CuSn4 | CW450K |
| BS 2870 | PB102 | - |
| UNS | C 51100* | *Unified Numbering System (USA) |

| Chemical composition Composition in % (m/m) in acc. to EN 1652 | | |
|---|------|------|
| Element | Min. | Max. |
| Cu | Rem. | - |
| Fe | - | 0,10 |
| Ni | - | 0,20 |
| P | 0,01 | 0,40 |
| Pb | - | 0,02 |
| Sn | 3,50 | 4,50 |
| Zn | - | 0,2 |
| Others total | - | 0,2 |

| Mechanical properties of CuSn4 in acc. to EN 1652 | | | | | | | | | |
|---|------------|--------------------|--|------|---|------|--|----------------|------|
| Material | | Material condition | Tensile strength R_m N/mm ² | | 0,2%-Proof strength $R_{p 0,2}$ N/mm ² | | elongation A_{50mm} for thicknesses from 0,1 mm up to and including 2,5 mm % | Hardness HV | |
| Symbol | Number | | Min. | Max. | Min. | Max. | | Min. | Min. |
| | | R290 | 290 | 390 | - | 190 | 40 | - | - |
| | | H070 | - | - | - | - | - | 70 | 100 |
| | | R390 | 390 | 490 | 210 | - | 11 | - | - |
| | | H115 | - | - | - | - | - | 115 | 155 |
| CuSn4 | CW450 K | R480 | 480 | 570 | 420 | - | 4 | - | - |
| | | H150 | - | - | - | - | - | 150 | 180 |
| | | R540 | 540 | 630 | 490 | - | 3 | - | - |
| | | H170 | - | - | - | - | - | 170 | 200 |
| | | R610 | 610 | - | 540 | - | - | - | - |
| | | H190 | - | - | - | - | - | 190 | - |

Technical Data Sheet **TECU®** Bronze

| Physical Properties of CuSn4 ¹⁾ | |
|---|---|
| Density : | 8,85 g/cm ³ |
| Melting point | 950 - 1.070°C |
| Thermal conductivity: | 100 W/m·K |
| Electrical conductivity: | ≥ 9 - 15 MS/m ≥ 15 - 25 % IACS ²⁾ |
| Coefficient of expansion: | 17·10 ⁻⁶ /K |
| Modulus of elasticity: | 120 GPa ³⁾ |
| ¹⁾ Reference value temperature +20°C ²⁾ IACS =International Annealed Copper Standard ³⁾ 1 GPa = 1 kN/mm ² | |

| Product specifications for thicknesses 0,70 – 1,00 mm | | |
|--|---|------------------------------|
| Properties of | Façade Grade TECU® Bronze | |
| Material width | ≤ 670 mm | |
| Thickness tolerance | ± 0,02 mm | |
| Edge curvature - measured over 1m length - measured over 5m length | < 0,2 mm/m <1,0 mm | |
| Flatness (wave height) measured over 1 m length | < 0,2 % of wave length | |
| Technological data | EN 1652 R290 Tensile strength (R _m): 290 – 390 N/mm ² Proof strength (R _{p0,2}): max. 190 N/mm ² Elongation (A50): ≥ 40% | |
| Internal diameter of coil - Ø | 500 mm | |
| Availability | Sheets and strips | |
| Possible range of applications: | <ul style="list-style-type: none"> - Wall cladding - Copings - Verges | |
| Hallmarking | in acc. to EN 1652 | |
| Processing criteria | Coldforming | excellent |
| | Galvanising | excellent |
| | Dip-tining | excellent |
| | Soldering | excellent |
| | Welding | good |
| | Natural water, neutral o. alkaline saline solutions | good |
| Corrosion resistance | Land- sea- and/or industrial-atmosphere | good |
| | Acids, humid sulfuric solutions | non-resistant |
| | Tensile crack corrosion | less sensitive ^{*)} |
| | ^{*)} under influence of ammonia or ammonia-acalic solutions in non-relaxed conditions (pull- and/or notch-tension) | |
| | | |
| | | |

Technical Data Sheet **TECU**[®] Bronze**KM Europa Metal AG***TECU*[®] *Technical Consulting Center*

Klosterstr. 29

D-49074 Osnabrück

GERMANY

Tel. +49 (0)541 / 321-4323

Fax. +49 (0)541 / 321-4030

info-tecu@kme.com

<http://www.thecopperlink.com><http://www.kme.com>

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