

磷青銅特性及規格一覽表

Product Standards for Phosphor Bronze Materials

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化學成份 / Chemical Composition

| 合金編號 Alloy No. | 化學成份 Chemical Composition | | | | | 特性與用途 Features and Application | | |
|-------------------|---------------------------|-------|-------|----------|-----------|--------------------------------|------------------------|--|
| | 鐵 Fe | 鉛 Pb | 鋅 Zn | 錫 Sn | 磷 P | 銅+錫+磷 Cu+Sn+P | 特性 Features | 用途 Application |
| C5111 | <0.10 | <0.05 | <0.20 | 3.5-5.5 | <0.03 | >99.7 | 延展性、 耐疲勞性、 而蝕性均佳 | 電子、電器用彈簧、開 關、導線架、連接器、 隔膜片、風箱、保險絲 夾頭、通信、資訊、計 測機器用之開關、繼電 器、連接器等 |
| C5191 | <0.10 | <0.05 | <0.20 | 5.5-7.0 | 0.03-0.35 | >99.7 | | |
| C5210 | <0.10 | <0.05 | <0.20 | 7.0-9.0 | 0.03-0.35 | >99.7 | | |
| C5210(SP) | <0.10 | <0.05 | <0.20 | 7.0-9.0 | 0.10-0.20 | >99.7 | | |
| C5240 | <0.10 | <0.05 | <0.20 | 9.0-11.0 | 0.10-0.20 | >99.7 | | |

物理特性 / Physical Properties

| 合金編號 Alloy No. | 比重 Specific gravity | 縱彈性係數 Modulus of Elasticity (kN/mm ²) | 熱膨脹係數 Coefficient of Thermal Expansion (10 ⁻⁶ /K) | 熱傳導係數 Thermal Conductivity (W/m · K) |
|-------------------|------------------------|---|--|--|
| C5111 | 8.83 | 105.00 | 18.00 | 67.00 |
| C5191 | 8.83 | 105.00 | 18.00 | 67.00 |
| C5210 | 8.80 | 100.00 | 18.00 | 63.00 |
| C5210(SP) | 8.80 | 110.00 | 18.20 | 63.00 |
| C5240 | 8.78 | 100.00 | 18.40 | 50.00 |

機械性質 / Mechanical Properties

| 合金編號 Alloy No. | 質別 Quality Grade | 抗拉試驗 Tensile test | | | 導電率 Electric Conductivity (%) |
|-------------------|---------------------|------------------------|--------------------------|--|-------------------------------------|
| | | 硬度 Hardness (HV) | 伸長率 Elongation (%) | 抗拉強度 Tensile Strength (Kgf/mm ²) | |
| C5111 | 1/2H | 140-160 | >15 | | >18 |
| | 3/4H | 160-180 | - | | |
| | H | 180-200 | >7 | | |
| | EH | 200-220 | >4 | | |
| | SH | 220-240 | - | | |
| C5191 | 1/2H | 150-170 | >20 | 50-62 | >13 |
| | 3/4H | 160-180 | - | - | |
| | H | 180-200 | >8 | 60-70 | |
| | EH | 200-220 | >5 | >65 | |
| C5210 | 1/2H | 150-170 | >27 | 48-62 | >12 |
| | 3/4H | 170-190 | - | - | |
| | H | 190-210 | >20 | 60-72 | |
| | EH | 210-230 | >11 | 70-80 | |
| | SH | 230-250 | >9 | 75-81 | |
| C5210(SP) | EH | 210-260 | >15 | 68-78 | >12 |
| | SH | 230-270 | >10 | 73-83 | |
| | ESH | 250-290 | >5 | 78-88 | |
| | XSH | >260 | >1 | >83 | |
| C5240 | EH | 230-270 | >9 | 75-85 | >12 |
| | SH | 250-290 | >5 | 85-95 | |
| | ESH | 270-310 | >1 | 95-105 | |
| | XSH | >290 | - | >100 | |