

# SOLDER CONNECTION

## Technical Bulletin



## Solder Alloy No.15 Grade D 30/70 Sn/Pb

### DESCRIPTION

A common application of Solder Alloy No.15 is making permanent but reversible connections between copper pipes in plumbing systems. The greater the tin concentration, the greater the solders tensile and shear strengths. Tin Lead alloy specified as Grade D 30/70 Sn/Pb to BS219 and Alloy No.15 to BSEN29453. Available in tinman sticks and blow pipe.

### PHYSICAL PROPERTIES

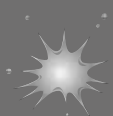
Melting Point, °C Solidus/liquidus	183/257
Density (g/cm <sup>3</sup> )	9.72
Electrical Resistivity (μΩ·m *)	0.185
Thermal Conductivity (W/m·K)	41
Tensile Strength at Break (Kgf/cm <sup>2</sup> *)	350
Tensile Elongation at Break (%)	18
Brinell Hardness (HB)	12

### FURTHER INFORMATION

- \* Electrical Resistivity and thermal conductivity are evaluated usually at 20°C and 85°C respectively
- \* Electrical Resistivity is inverse to electrical conductivity
- \* Electrical Conductivity is often expressed in % IACS which stands for International Annealed Copper Standard. 100% IACS is electrical conductivity of annealed copper which equals to  $58.0 \times 10^6 \text{ S}\cdot\text{m}^{-1}$
- \* Tensile strength in kgf/cm<sup>2</sup> may be converted to psi (pounds per square inch) by multiplying by 14.22

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**SOLDER CONNECTION**  
EXPERTS IN SOLDER TECHNOLOGY

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