



## DKL Low Melt 70 Solder Alloy

### DESCRIPTION

DKL Low Melt 70 Solder Alloy is a Bismuth / Lead / Cadmium / Tin, low temperature soldering alloy. It is suitable for soldering all common metals including mild steels, coppers, brasses and bronze alloys. It's low melting point allows it to be used at lower temperatures where other solders would cause too much thermal stress on assemblies. It has often been used as a tube bending alloy where the low melting point allows removal of the alloy by placing the tube in hot water. Other uses are thermal indication and fusible safety links. As the alloy expands on solidification it also finds use as a fixture or tooling alloy allowing delicate items to be securely held whilst machining or grinding.

### CHEMICAL PROPERTIES

Bismuth (Bi)	50%
Lead (Pb)	27%
Cadmium (Cd)	10%
Tin (Sn)	13%
All % are nominal.	

### PHYSICAL PROPERTIES

Density	9.4g/cm <sup>3</sup>
Tensile Strength	24.7 MPa
Elongation	2000%
Brinell Hardness	7.2
Solidus	70°C
Liquidus	70°C
Specific Heat (Solid)	0.167 j/g. °C
Specific Heat (Liquid)	0.205 j/g. °C
Latent Heat Of Fusion	32.5 j/g
Thermal Conductivity	0.188 j/cm sec °C
Electrical Resistivity	43 μΩ.cm
Dimensional Change After Casting	5 Minutes +0.27% 30 Minutes +0.45% 1 Hour +0.51%



## APPLICATION

DKL Low Melt 1 Solder can be used with most DKL Soldering Fluxes. A temperature controlled soldering iron should be used for making solder joints. Flux residues should be removed after soldering.

## AVAILABILITY

DKL Low Melt 70 Solder is available in Blowpipe Strips (approx. 85g), Tinmans Sticks (approx. 250gm) and 1kg Bars.

## HEALTH AND SAFETY

Eye and skin protection should be worn when handling and using this material. Avoid breathing fumes that may be evolved during use. Ensure adequate extraction is provided in the workspace. For more detailed information consult the Material Safety Data Sheet (MSDS) which is available on request.

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