E-Qual Lowsac Type Y Lead Free Solder

- **Low-Cost Tin/Silver/Copper Lead Free Solder**
- **Reduced drossing**
- **Compatible with most flux types**
- **Less Dense, more joints per kilo (compared to tin/lead)**
- **Patent Free**

Description

Formulated as an economic, low-cost, lead free alternative to tin/lead, tin/copper and traditional high silver content SAC alloys, E-Qual Lowsac Type Y offers a balance of cost over performance. This alloy can be used in most wave-soldering applications but may not be suited to all mass production, high reliability assembly environments.

E-Qual Lowsac Type Y is compatible with most flux types including low solids, no-clean and VOC free formulations.

Technical Specifications

Property	Value
Solidus	217°C
Liquidus	228°C
Density	7.33grm/cc
Hardness (Hv)	14.1

Recommended Operating Conditions

E-Qual Lowsac Type Y solder is suitable for use in dynamic and turbulent solder wave systems.
The optimum temperature range for operation of the solder bath is 265°C ± 5°C.
To ensure the continued optimum performance of E-Qual Lowsac Type Y solder in your manufacturing process it is important that periodic analysis of the solder bath contents is undertaken to verify that the alloy composition is maintained within strict limits. Any build-up of undesirable impurity elements or an increase in the copper content may lead to poor flow characteristics potentially compromising joint structure, with a consequent rise in defect rates. Rising copper levels may be controlled with the addition of Lowsac Type Ye top-up alloy (copper free). However in some applications this may not be sufficient to maintain copper levels within recommended operating limits and it will be necessary to partially drain solder pot and add fresh alloy to reduce this contamination.

Verification of bath copper content is easy with our free solder bath analysis programme which gives you full analysis along with trend graphs allowing you to track copper and other contaminant levels over time.

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E-Qual Lowsac Type Y Specification/Operating Guidelines

Element	Typical Lowsac Y %	Typical Lowsac Ye %	Max. suggested impurity levels
Tin (Sn)	Bal	Bal	Bal
Silver (Ag)	0.30 ± 0.10	0.30 ± 0.10	0.20 - 4.0
Copper (Cu)	0.70 ± 0.10	<0.01	1.00
Arsenic (As)	0.01	0.01	0.03% max
Gold (Au)	<0.001	<0.001	0.05% max
Bismuth (Bi)	0.002	0.002	0.04% max
Cadmium (Cd)	<0.001	<0.001	0.005% max
Iron (Fe)	0.004	0.004	0.01% max
Nickel (Ni)	<0.001	<0.001	0.005% max
Zinc (Zn)	<0.001	<0.001	0.005% max
Lead (Pb)	0.02	0.02	0.10% max
Antimony (Sb)	0.02	0.02	0.10% max
Aluminium (Al)	0.0002	0.0002	0.001% max

Manufacturing Control

All E-Qual Lowsac Type Y bar solders are made with fully traceable batches of virgin metals within a Quality Management System that has been approved to BS EN ISO9001 2000 and Environmental Management System approved to BS EN140001. Samples are retained from every batch of solder for a minimum two year period.

Availability

STYLE	NOM. WEIGHT	DIMENSIONS	PACKING
Bar	1kg	300 x 32 x 12mm	20kg Carton
Autofeed Ingot	4kg	500 x 45 x 33mm	4.5kg
Chunks (chopped bar)	-	-	20kg Tub

Please contact us for other available bar/ingot styles.