DKL Metals Ltd. Bo'ness Road, Grangemouth, Stirlingshire, FK3 9XF

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DKL E-Qual Lead Free Solid Solder Wire

DESCRIPTION

E-Qual Lead Free Solder Wire Alloys are designed to be substituted for tin/lead alloys in all electronics assembly soldering operations, where automatic wire feed of the solder wire is used, such as in Selective and Robotic soldering equipment. Some adjustment to equipment settings will be required but the resulting soldered joints will perform as well as tin/lead solder joints in most respects. E-Qual Lead Free alloys eliminate the handling and waste management hazards due to lead, for operators using conventional lead-containing alloys. Where lead has also been eliminated from other coating and soldering processes in PCB and component manufacture, the use of E-Qual Lead Free alloys will ensure that RoHS compliant lead-free assemblies are produced. Temperature profiles designed for tin/lead alloys will need to be revised accordingly to cater for the melting point of E-Qual Lead Free Alloys, being approximately 35°C higher than that of tin/lead eutectic alloy, though the superheat needed has been found to be less than that required for tin-lead. E-Qual Lead Free Solder Wire Alloys are available in various grades to suit customers' requirements.

CHEMICAL PROPERTIES

97TSC SAC305	ISO 9453:2020(E) Alloy 711	Sn96.5%, Ag3.0%, Cu0.5%
SN100C	ISO 9543:2020(E) Alloy 403	Sn99.3%, Cu0.65%, Ni0.05%

All % are nominal.

PHYSICAL PROPERTIES

	97TSC SAC305	**SN100C**
Ultimate Tensile Strength	52MPA @ 21°C	35MPA @ 21°C
Shear Strength (steel)	27%	48%
Density	7.4 g/cm^3	7.47 g/cm^3
Solidus	217°C	227°C
Liquidus	220°C	227°C

APPLICATION

E-Qual Lead Free Solder Wire Alloys are designed for the automated top up of Selective Soldering Machines and will be used in a suitable feed system.

AVAILABILITY

E-Qual Lead Free Solder Wires are available in 2mm and 3mm diameters and are supplied on 4kg DIN K125 plastic reels.

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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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