

ALPHA[®] VACULOY[®] SMG SOLDER

DESCRIPTION

ALPHA Vaculoy SMG solder is alloyed in Alpha's proprietary Vaculoy process utilizing materials of the lowest impurity levels available. This provides the basis for it to far exceed the requirements for solder set by J-STD-006A and previous military specification QQS-571F. In addition, Alpha's unique Vaculoy process removes included oxides. Inspection of each lot of material by both chemical analysis and Dross Inclusion Tests guarantees consistency regarding metallic and non-metallic impurities, including oxides.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

FEATURES & BENEFITS

The proprietary Vaculoy process, used to produce Vaculoy SMG Bar Solder, is a highly effective method for removing included oxides from solder. This is extremely important because included oxides generate excessive drossing and increase the viscosity of the solder. Solder with higher viscosity can result in increased soldering defects (i.e., solder bridging). In addition, the extremely low oxide levels in Vaculoy ensure strong, clean and well-formed solder joints.

The exceedingly low levels of metallic and non-metallic impurities associated with ALPHA Vaculoy SMG solder produces the highest quality solder joints while minimizing defect rates. This is due to the superior fluidity of the solder and the elimination of included oxides for greatly reduced drossing and improved wetting characteristics.

APPLICATION GUIDELINES

ALPHA Vaculoy SMG solder can be used in all applications where regular solder is used (i.e., wave soldering, drag soldering, solder leveling, lead tinning, etc), but is specially produced to meet the very stringent demands of Surface Mount soldering.

TECHNICAL SPECIFICATION

The following table indicates the Alloy and Impurity Specification limits for Vaculoy SMG solder alloy Sn63 in relation to J-STD-006A and QQS-571F.

Element	Vaculoy SMG	J-STD-006A (Variation A)	QQS-571
Sn	62.8 to 63.5	62.8 to 63.5	62.8 to 63.5
Pb	Balance	Balance	Balance
Sb	≤0.12	≤0.50	≤0.5
Cu	≤0.005	≤0.08	≤0.08
Au	≤0.005	≤0.05	≤0.08
Ag	≤0.003	≤0.10	≤0.10
Al	≤0.005	≤0.005	≤0.005
As	≤0.01	≤0.03	≤0.03
Bi	≤0.005	≤0.10	≤0.10
Cd	≤0.001	≤0.002	≤0.005
In	≤0.005	≤0.10	≤0.10
Fe	≤0.005	≤0.02	≤0.02
Ni	≤0.005	≤0.01	≤0.01
Zn	≤0.002	≤0.002	≤0.005
S	≤0.001	N/A	≤0.005
P	≤0.002	N/A	≤0.010
Oxides	*	N/A	N/A

* Passes Alpha Dross Inclusion Test

AVAILABILITY

Vaculoy SMG is available in solder alloy Sn63/Pb37 in the following bar/wire sizes:

- 2.2lb (1kg) bar
- 4.4lb (2kg) bar
- 0.125 inch diameter solid wire for automatic feed systems

RECYCLING SERVICES

We provide safe and efficient recycling services to help companies meet their environmental and legislative requirements and at the same time, maximize the value of their waste streams. Our service collects solder dross, solder scrap, and various forms of solder paste waste. Please contact your local sales representative for recycling capabilities in your area or [link here](#).



SAFETY & WARNING

It is recommended that the company/operator read and review the Safety Data Sheets for the appropriate health and safety warnings before use. **Safety Data Sheets are available at MacdermidAlpha.com/assembly-solutions/knowledge-base.**

CONTACT INFORMATION

To confirm this document is the most recent version, please contact Assembly@MacDermidAlpha.com

www.macdermidalpha.com

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Also read carefully warning and safety information on the Safety Data Sheet. This data sheet contains technical information required for safe and economical operation of this product. READ IT THOROUGHLY PRIOR TO PRODUCT USE . Emergency safety directory assistance: US 1 202 464 2554, Europe + 44 1235 239 670, Asia + 65 3158 1074, Brazil 0800 707 7022 and 0800 172 020, Mexico 01800 002 1400 and (55) 5559 1588

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