

# ALPHA<sup>®</sup> VACULOY<sup>®</sup> 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 QQ-S-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 QQ-S-571F.

Element	Vaculoy SMG	J-STD-006A (Variation A)	QQ-S-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.



## 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.**

## CONTACT INFORMATION

[www.macdermidalpha.com](http://www.macdermidalpha.com)

<b>North America</b> 140 Centennial Avenue Piscataway, NJ 08854 1.800.367.5460	<b>Europe</b> Unit 2, Genesis Business Park Albert Drive Woking, Surrey, GU21 5RW, UK 44.01483.758400	<b>Asia</b> 8/F., Two Sky Parc 51 Hung To Road Kwun Tong, Kowloon, Hong Kong, SAR China 852.2500.5365
---	---	--

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

DISCLAIMER: All statements, technical information and recommendations contained herein are based on tests we believe to be reliable, but the accuracy or completeness thereof is not guaranteed. No statement or recommendation shall constitute a representation unless set forth in an agreement signed by officers of seller and manufacturer. NO WARRANTY OF MERCHANTABILITY, WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY IS MADE. The following warranty is made in lieu of such warranties and all other warranties, express, implied, or statutory. Products are warranted to be free from defects in material and workmanship at the time sold. The sole obligation of seller and manufacturer under this warranty shall be to replace any noncompliant product at the time sold. Under no circumstances shall manufacturer or seller be liable for any loss, damage or expense, direct, indirect, incidental or consequential, arising out of the inability to use the product. Notwithstanding the foregoing, if products are supplied in response to a customer request that specifies operating parameters beyond those stated above, or if products are used under conditions exceeding said parameters, the customer by acceptance or use thereof assumes all risk of product failure and of all direct, indirect, incidental and consequential damages that may result from use of the products under such conditions, and agrees to exonerate, indemnify, defend and hold harmless MacDermid, Incorporated and its affiliates therefrom. No suggestion for product use nor anything contained herein shall be construed as a recommendation to use any product in a manner that infringes any patent or other intellectual property rights, and seller and manufacturer assume no responsibility or liability for any such infringement.

© 2019 MacDermid, Inc. and its group of companies. All rights reserved. "(R)" and "TM" are registered trademarks or trademarks of MacDermid, Inc. and its group of companies in the United States and/or other countries.