

# ALPHA<sup>®</sup> EXACTALLOY<sup>®</sup> MICRO PREFORMS

## DESCRIPTION

**ALPHA Exactalloy Micro Preforms** provide a high performance solution for power devices that require a high thermal conductivity die attach to lead frame solution for Surface Mount Technology (SMT) devices. These devices also include a full range of diodes like Axial, Press-Fit, Button, Dish and many others that are used in automotive assembly. These solder preforms are specifically intended to be used in either a reduction or inert environment, and thus do not contain flux. Alpha offers a number of alloys to address various end use applications.

READ ENTIRE TECHNICAL DATA SHEET BEFORE USING THIS PRODUCT

## FEATURES & BENEFITS

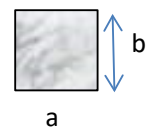
### FEATURES

- Wide variety of high Pb alloys
- 99.99% alloy purity to ensure uniform solder and minimal formation of undesirable intermetallics
- Packaged in glass bottles under Argon gas

### Benefits

- High quality, high purity alloy preform resulting in low voiding solder joints
- Highly engineered packaging solution that minimizes product loss due to damage and cold welding
- Quantity per jar ensures Indium-containing alloys will not cold weld during shipment
- Wide alloy flexibility
- Broad disc diameter offering

## PRODUCT INFORMATION



### Legend

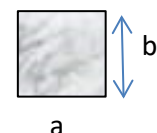
a = length

b = width

c = thickness (c < 0.15mm in size)

d = diameter

| Tolerance | a      | b      | c     | d      |
|-----------|--------|--------|-------|--------|
| (mm)      | ± 0.05 | ± 0.05 | ± 10% | ± 0.05 |



| Size & Tolerance |                                        |
|------------------|----------------------------------------|
| a, b & d         | +/- 0.05mm (tolerance)                 |
| c                | <0.15mm (size);<br>+/- 10% (tolerance) |

| Alloy      | Melting Range, °C       |
|------------|-------------------------|
| J-STD-006B | Pb92.5/In5/Ag2.5        |
|            | 300                     |
|            | Pb92.5/Sn5/Ag2.5        |
|            | 287 to 296              |
|            | Pb93.5/Sn5/Ag1.5        |
|            | 280 to 285              |
|            | Pb95/Sn5                |
|            | 305 to 312              |
|            | Pb88/Sn10/Ag2           |
|            | 268 to 299              |
| Packaging  | 30cc jar with Argon gas |

Note: Contact your local Alpha Sales Office to discuss other alloy, size, and packaging options.

## APPLICATION GUIDELINES

ALPHA Exactalloy Micro Preforms are specifically designed to provide low-voiding solder joints with uniform thickness for attaching semiconductor die to package lead frames and lead paddles. Typically, the die is sandwiched between two pieces of ALPHA Exactalloy Micro Preforms. High temperature alloys are required to ensure that the SMT semiconductor device is able to withstand Pb-free reflow process that reaches 245 to 260 °C for SAC alloys. The high-Pb alloys used for the die attach process will not be disturbed during the board attachment process when using SAC alloys.

## 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.**

## STORAGE

The parts are packaged in 30cc glass jars under Argon gas. When properly stored in a dry, ambient environment, a shelf life of one year is guaranteed. Storage in a nitrogen cabinet is recommended after opening.

## CONTACT INFORMATION

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

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

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