A25™ – Soft Soldering Alloy

Johnson Matthey’s A25™ is a 2.5% silver-lead soldering alloy. It offers increased strength and creep resistance at elevated temperatures over conventional tin-lead solders. The silver addition improves wetting of A25™ onto copper and copper-based alloys and to a lesser extent on steels. Flow of the alloy is not as good as tin-lead alloys. The optimum joint gap for A25™ is 0.2mm.

Composition: 2.5% Ag, 97.5% Pb
Conforms to: BS.EN 29453 No.32, EN ISO 9453:2006 Alloy No. 181
Melting range: 304°C

Uses for This Product

A25™ is specified where its increased strength and creep resistance at elevated temperature is an advantage. With the correct choice of flux this alloy will join copper and copper alloys, carbon steels and stainless steels. The use of lead in products is increasingly recognised as being undesirable both in terms of the long-term environmental impact and recyclability of products. Consequently the use of lead containing solders will continue to decline.


The use of lead in potable water systems has also been prohibited in Europe and in many countries worldwide. Despite these considerations many companies continue to use lead containing solders. Lead free alternatives should be considered wherever possible.

Conditions for Use

With the correct choice of flux this alloy will join copper and copper alloys, carbon steels and stainless steels. A suitable flux should be selected from the list below.

<table>
<thead>
<tr>
<th>Flux</th>
<th>Recommended for use on</th>
<th>Corrosive/Non-corrosive</th>
<th>Working Range °C</th>
<th>Product Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soft Solder Flux No. 1S™</td>
<td>Carbon steel / stainless steel</td>
<td>Corrosive</td>
<td>350°C</td>
<td>1 litre container</td>
</tr>
<tr>
<td>Soft Solder Flux No. 2S™</td>
<td>Copper / brass</td>
<td>Non Corrosive</td>
<td>350°C</td>
<td>0.5 litre container</td>
</tr>
<tr>
<td>Soft Solder Flux No. 3S™</td>
<td>Copper / brass / carbon steel</td>
<td>Corrosive</td>
<td>350°C</td>
<td>1kg container</td>
</tr>
<tr>
<td></td>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Product Availability

Wire 0.5mm to 3mm
Other Rings, preformed shapes, soldering pastes on request

Johnson Matthey Plc cannot anticipate all conditions under which this information and our products or the products of other manufacturers in combination with our products will be used. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is given in good faith, being based on the latest information available to Johnson Matthey Plc and is, to the best of Johnson Matthey Plc's knowledge and belief, accurate and reliable at the time of preparation. However, no representation, warranty or guarantee is made as to the accuracy or completeness of the information and Johnson Matthey Plc assumes no responsibility therefore and disclaims any liability for any loss, damage or injury howsoever arising (including in respect of any claim brought by any third party) incurred using this information. The product is supplied on the condition that the user accepts responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. Freedom from patent or any other proprietary rights of any third party must not be assumed. The text and images on this document are Copyright and property of Johnson Matthey. This datasheet may only be reproduced as information, for use with or for resale of Johnson Matthey products. The JM logo©, Johnson Matthey name© and product names referred to in this document are trademarks of Johnson Matthey. Easy-flo® and Silver-flo® are registered to JM in the EU. Sil-fos™ is registered to JM in the UK and certain other countries but is marketed as Mattiphos™ in Germany and the USA.

Johnson Matthey Metal Joining
York Way, Royston, Hertfordshire, SG8 5HJ, UK
Telephone: +44 (0) 1763 253200
Fax: +44 (0) 1763 253168
email: mj@matthey.com
www: jm-metaljoining.com