Silver-flo™ 18 – Cadmium Free Silver Brazing Filler Metal

Silver-flo™ 18 is a high melting point cadmium free silver brazing filler metal. It has a high melting temperature (784 to 816°C) but a narrow melting range of only 32°C providing good flow properties when molten. The high brazing temperature of the filler metal makes it less easy to use than the high silver content alloys. Consequently it is not widely used. This product is a relatively inexpensive filler metal to purchase. However the cost per brazed joint of actually using the alloy may not be favourable in comparison to lower melting point, higher silver content filler metals. Optimum joint gaps at brazing temperature are 0.075-0.2mm.

**Composition:**
18%Ag, 45.75%Cu, 36%Zn, 0.25%Si

**Conforms to:**
Proprietary JM Specification

**Melting range:**
784-816°C

**Uses for This Product**
Silver-flo™ 18 is not widely used. It may be considered for joining mild steel and copper in for example tube applications. It can be used as the first stage, high melting point alloy in a step or sequential brazing operation. It may also be used for brazing brass joints where filler metal with colour matching characteristics is required. However in this instance care should be taken, as the difference between the melting point of the filler metal and that of the brass could be as little as 80°C for 60/40 brass.

**Conditions for Use**
Silver-flo™ 18 is designed for brazing in air with the use of a flux. Generally it is necessary to use a flux with a higher working range than Easy-flo™ flux, such as Tenacity™ No.4A, Tenacity™ No.5 or Tenacity™ 20.

**Product Availability**

<table>
<thead>
<tr>
<th></th>
<th>Rods</th>
<th>Wire</th>
<th>Foil</th>
<th>Braze-pastes</th>
<th>Powder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability</td>
<td>Limited availability 1.5mm dia</td>
<td>On request</td>
<td>On request</td>
<td>On request</td>
<td>On request</td>
</tr>
</tbody>
</table>

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.