Non-Cu Leaching Products / Post-flux

Minimizes Cu leaching problem with three-metals alloy for various applications. Pb-free compatible liquid flux is also available.

Non-Cu Leaching Product

**LFM-41**
A core solder which is available for various products, such as SR-34 super and others.

Examples of application:
For thin copper wire soldering by hand.

**LFM-59**
Using at higher soldering temperature than 400 degrees minimizes Cu leaching phenomenon during soldering.

Examples of application:
For dip soldering, such as coil wire.

**LFM-62**
Soldering with extremely fine wire thinner than 50μm. Workable at high soldering temperature over 400°C.

Examples of application:
For dip soldering with extremely fine wire.

What is [Cu leaching]?

In the case of soldering, parent material’s Cu content dissolves into liquid solders making Cu wire thinner. This problem is critical especially for Pb-free soldering. Corrosion amount varies, depending on solder components, soldering temperature, and time.

Before soldering
Cu wire

Soldering
Sn-0.7Cu
Sn-3.0Ag-0.5Cu

Soldering

Remaining amount 69%
Remaining amount 18%

Difference in remaining amount between other alloys and Cu. (comparison)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Sn-0.7Cu</th>
<th>Sn-3.0Ag-0.5Cu</th>
<th>LFM-41</th>
<th>LFM-59</th>
<th>LFM-62</th>
</tr>
</thead>
<tbody>
<tr>
<td>350°C</td>
<td>63.6</td>
<td>52.2</td>
<td>56</td>
<td>46.6</td>
<td>46.5</td>
</tr>
<tr>
<td>400°C</td>
<td>47.1</td>
<td>33.9</td>
<td>27.3</td>
<td>24.0</td>
<td>45.1</td>
</tr>
</tbody>
</table>

*Because LFM-59 and LFM-62 have higher melting point, evaluation was done only at 400°C. (Unit: %)

Non-Cu leaching product specification

<table>
<thead>
<tr>
<th>Product name</th>
<th>Alloy component</th>
<th>Melting point temperature</th>
<th>Core solder</th>
<th>Applicable product</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFM-41</td>
<td>Sn-0.3Cu</td>
<td>217-230°C</td>
<td>O</td>
<td>052</td>
</tr>
<tr>
<td>LFM-59</td>
<td>Sn-3.5Cu</td>
<td>227-237°C</td>
<td>X</td>
<td>052</td>
</tr>
<tr>
<td>LFM-62</td>
<td>Sn-3.5Cu</td>
<td>228-234°C</td>
<td>X</td>
<td>052</td>
</tr>
</tbody>
</table>

*LFM-41, a core solder, is available in various types such as SR-34 Super, SR34, KR-19, KR-19F, RMA, HR-19, and GUMMW-19.
*LFM-59 and LFM-62 contain anti-oxidant. As these fluxes can minimize oxidized residue of solder flux during high temperature dip soldering, the consumed amount of flux is reasonably decreased.
*When the ordered product is out of stock, please contact our sales representatives for details.

Post-flux

**RC-281PF Flux**

Highly reliable and desirable countermeasure against bridges, icicles, and insufficient soldering.

Examples of application:
Print wiring assembly and special metal soldering.

Post-flux product specification

<table>
<thead>
<tr>
<th>Product name</th>
<th>Solid content</th>
<th>Relative density</th>
<th>Color tone</th>
<th>Chlorine content</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC-281PF Flux</td>
<td>12%</td>
<td>0.615</td>
<td>Light yellow</td>
<td>0</td>
</tr>
</tbody>
</table>

*Please contact our sales representative for details.

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