NOCOLOK® Flux and brazing pastes command a maximum variety of options in flux and brazing alloy powder applications. Consequently, NOCOLOK® flux pastes can be individually adapted according to respective technical requirements and the brazing processes used.

Possible NOCOLOK® Flux brazing paste variations:

- NOCOLOK® Flux Standard
- NOCOLOK® Cs Flux
- NOCOLOK® Li Flux

**Alloy powder:**
In combination with the various flux powders, NOCOLOK® brazing pastes can contain different brazing alloy according to the application requirements:

<table>
<thead>
<tr>
<th>Alloy Powder</th>
<th>Formula (AlSi)</th>
<th>DIN EN 1044</th>
<th>Trade Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>AlSi12</td>
<td>AL104</td>
<td>AA 4047</td>
<td></td>
</tr>
<tr>
<td>AlSi10</td>
<td>AL103</td>
<td>AA 4045</td>
<td></td>
</tr>
<tr>
<td>AlSi7,5</td>
<td>AL102</td>
<td>AA 4343</td>
<td></td>
</tr>
</tbody>
</table>

The grain size of the brazing powder can be adapted to all corresponding applications.

### Overview

#### NOCOLOK® Flux Pastes

<table>
<thead>
<tr>
<th>Based on</th>
<th>Products</th>
<th>Tariff Schedules</th>
<th>Trade Name</th>
<th>Packaging Options</th>
<th>Available Range</th>
<th>Flux Powder [%]</th>
<th>Carrier [%]</th>
<th>Filler [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAB Flux (non-corrosive)</td>
<td>Flux Paste</td>
<td>3810 9090</td>
<td>NOCOLOK® 028/xx (xx means % of Flux)</td>
<td>Plastic container</td>
<td>30–62</td>
<td>Glycol based 38–70</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Flux Paste</td>
<td>3810 9090</td>
<td>NOCOLOK® S01-/xx (xx means % of Flux)</td>
<td></td>
<td></td>
<td>20–40</td>
<td>Glycol based 38–70</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Metallized Flux Paste</td>
<td>3810 9090</td>
<td>NOCOLOK® 7028E (AlSi12) NOCOLOK® 8028E (AlSi10) NOCOLOK® 9028E (AlSi7)</td>
<td>Plastic container</td>
<td>1 kg, buckets 5, 10, 15 or 20 kg</td>
<td>21–40</td>
<td>Glycol based 17–55</td>
<td>8–53</td>
<td></td>
</tr>
<tr>
<td>Ultra Flux Paste</td>
<td>3810 9090</td>
<td>NOCOLOK® Ultra Flux Paste xx</td>
<td></td>
<td></td>
<td>20–40</td>
<td>Hydrocarbons polymers, mineral oil 60–80</td>
<td>Option</td>
<td></td>
</tr>
</tbody>
</table>

**Applications**

- Flux Pastes are mainly used inside B-tubes and folded tubes, in order to provide a line of flux on a cladded surface. These paste formulations are available in FG (fine grade) version, the N version (“new” – i.e. with adjusted rheology and re-mixing characteristics) and UV version (ultraviolet sensitive pigments for special application monitoring).

- Metallized Flux Pastes (Brazing Pastes) are often used manifolds/tubes or blocks/manifolds or header/tubes or in any place there is need for joint formation with additional filler metal (usually used to compensate for challenging design situations or for larger tolerances on stamped parts).

- Ultra Flux Paste is used inside B-tubes and folded tubes, in order to provide a line of flux on a cladded surface (more “sticky” than glycol family “028”).
Application Areas for NOCOLOK® Flux and Brazing Pastes

- Production of multi-chamber tubes
- Use as B-pipe flux paste (after application bent upwards/opened)
- Furnace brazing
- Flame brazing
NOCOLOK® flux and brazing pastes offer numerous advantages that distinguish them from other products.

1. **Solvent system**
   - Use of systems miscible with water and glycols
   - Equipment and facilities used for paste application can be easily cleaned with water
   - If required, the setting or adjustment of viscosities is possible with certain glycols

2. **Variable viscosity**
   - Depending on requirements, the pastes can be produced in a wide viscosity range and with different solids contents.

   **Flux pastes**
   - Possible viscosity range: 500 – 50,000 mPa·s
   - Flux content: 5 – 60 %
   - Variable flux content at constant viscosity: 15 – 30 %

   **Brazing pastes**
   - Possible viscosity range: 1,000 – 80,000 mPa·s
   - Flux content: 15 – 40 %
   - Plummet content: 15 – 45 %

3. **Minimum precipitation of the pastes**
   - Low settling behaviour of the contained solids even after several weeks of storage
   - Simple agitation, homogenisation is – if necessary – possible

4. **Very good adhesion**
   - Marginal running during application of the paste, even on vertical surfaces
   - By use in multi-chamber tubes, there is no leakage during transport, storage or processing

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**Comparison of vertical adhesion of brazing pastes**

*Above is a conventional brazing paste*
*Below NOCOLOK® brazing paste*
5. Residue-free solvent system

- Evaporation and removal of the glycol carrier system from the surfaces takes place at below 200 °C
- The complete solvent content of the pastes comes off in the first third of the brazing cycle
- Consequently, the removal of the glycol carrier system is possible in the drying phase or in the degreasing furnace before the brazing process

The resulting emissions are thus removed in good time before the brazing process by appropriate channelling of the waste gases. Therefore, the actual brazing process is not affected.

**Differential Thermo Analysis (DTA) of NOCOLOK® Flux Paste – Representative Sample**

At just under 200 °C, the organic solvent have decomposed without residue.

**Available packaging forms**

- Plastic container 1 kg
- Plastic buckets 5, 10, 15 or 20 kg
- Optional: Plastic drums 60 or 200 kg
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www.nocolok.com

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