

**Description**

CAF 3 is a one component, flowing silicone elastomer which cures at room temperature on contact with atmospheric humidity.

The product is :

- Acetic.
- Flowing.
- Translucent.

**Examples of applications**

CAF 3 is mainly used in industrial sealing and bonding applications when requiring a flowing product.

CAF 3 is notably used for:

- Potting and insulation of electronic sensors
- Bonding of various materials
- General maintenance in industry

**Key benefits**

CAF 3 is quick curing, has very good mechanical properties and good high temperature resistance.

CAF 3 therefore provides perfect assembly and complete sealing between different materials subject to thermal stresses.

CAF 3 also has good resistance to chemical agents.

**Typical properties**

|                            | CAF 3        |
|----------------------------|--------------|
| Hardness ISO 868           | 26 sh.A      |
| Viscosity NF T 76102       | 140000 mPa.s |
| Elongation NF ISO 37       | 260 %        |
| Tensile strength NF ISO 37 | 1.3 MPa      |
| Flowability BOEING S 7502  | < 12 min     |

**1. Properties before curing**

| <i>Properties</i> | <b>CAF 3</b>  |
|-------------------|---------------|
| <b>Appearance</b> | Flowing paste |
| <b>Colour</b>     | Translucent   |
| <b>Cure type</b>  | Acetic        |

|                                                                                     |         |
|-------------------------------------------------------------------------------------|---------|
| <b>Specific gravity at 23°C</b><br><i>(Standards ISO R 1183, DIN 53479, NM 703)</i> | 1.01    |
| <b>Flowability, min</b><br><i>(Standards MIL S 880 2 D – NM 458)</i>                | 2 to 12 |
| <b>Brookfield viscosity</b><br><i>(Standard NFT 76105, ASTM D 445, NM 99)</i>       | 140 000 |

## 2. Curing

CAF 3 starts curing as soon as the products come into contact with atmospheric moisture.

Skin formation time\*, min..... 8

Time required to cure 2 mm\*, hours..... 5

Cured thickness after 24h\*, mm..... 4.5

\*Temperature 23°C, relative humidity 50%

The curing rate increases with temperature and hygrometry.

## 3. Properties after curing

3.1 Specific gravity at 23°C..... 1.04

(Standards ISO R 2781, BS 903 Part A1 - ASTM D 297)

3.2 Mechanical properties after 7 days at room temperature (Measured on a 2 mm thick film)

| Properties                                                                                                                                 | CAF <sup>3</sup> |
|--------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>Shore A hardness</b><br><i>(Standards ISO R 868-DIN 53505-ASTM D 2240, BS 903 Part A7, NFT 46003 - NM 471)</i>                          | 26               |
| <b>Modulus at 100% elongation, MPa</b><br><i>(Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)</i> | 0.5              |
| <b>Tensile strength, MPa</b><br><i>(Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)</i>           | 1.3              |
| <b>Elongation at break, %</b><br><i>(Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)</i>          | 260              |
| <b>Tear strength, kN/m</b><br><i>(Standards ASTM D 624 specimens A, NM 492)</i>                                                            | 2.5              |

## 4. Thermal properties

| Properties                                                                         | CAF <sup>3</sup> |
|------------------------------------------------------------------------------------|------------------|
| Lower usage temperature limit, Brittle point, °C                                   | - 60             |
| Temperature range in continuous use, °C<br><i>(on 2 mm thickness film, 1000 h)</i> | +200             |
| Maximum recommended peak temperature, °C<br><i>(on 2 mm thickness film, 72 h)</i>  | +225             |

N.B. These values are not absolute limits, but the range within which variations in mechanical properties are not reduced by more than 50%.  
In the case of exposure for periods shorter than 72 h, the product withstands higher peak temperatures.

## 5. Thermal conductivity

Thermal conductivity at 30°C, W/m.K..... 0.2  
(Standard NF X 10021)

Thermal conductivity at 150°C, W/m.K,..... 0.15  
(Standard NF X 10021)

## 6. Adhesion properties

(1 mm thick joint, curing 7 days at 23°C, NM 748)

| Properties                                                        | CAF <sup>3</sup> |
|-------------------------------------------------------------------|------------------|
| Shear strength, MPa :<br><br>- On glass<br><br>- On aluminium AG3 | 0.6<br><br>0.5   |
| Type of failure                                                   | 100% cohesive    |

On other surfaces:

Enamel, ceramics, epoxy..... Primerless self-adhesion

Certain plastics..... Primers PM 820 or PM 824

Metals..... Primer 131

## 7. Dielectric properties

| Properties                                                                            | CAF <sup>3</sup> |
|---------------------------------------------------------------------------------------|------------------|
| Dielectric strength, kV/mm<br><br><i>(Standards NF C 26225 - ASTM D 419, IEC 243)</i> | 19               |

|                                                                                                                                |         |
|--------------------------------------------------------------------------------------------------------------------------------|---------|
| <b>Dielectric constant at 1 MHz</b><br><br><i>(Standards NF C 26230 - ASTM D 150, IEC 250)</i>                                 | 2.7     |
| <b>Power factor at 1 MHz</b><br><br><i>(Standards NF C 26230 - ASTM D 150, IEC 250)</i>                                        | 2.10-3  |
| <b>Volume resistivity, <math>\Omega \cdot \text{cm}</math></b><br><br><i>(Standards AFNOR NF C 26215 - ASTM D 257, CEI 93)</i> | 1. 1015 |

Please note: The typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specifications.

|                           |                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Instruction of use</b> | <p>Processing is particularly easy, since the products are delivered ready to use. Application can be carried out either manually or using robotic application equipment.</p> <p>CAF 3 is applied to one of the two joint surfaces and assembled before the product has formed a skin.</p> <p>It is recommended to apply CAF 3 to clean and dry surfaces.</p> |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                  |                                                                                                                                                                                          |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Packaging</b> | <ul style="list-style-type: none"> <li>CAF 3 is available in <ul style="list-style-type: none"> <li>Drum of 210 KG (463.05 LB)</li> <li>Piece of 0.1 KG (0.22 LB)</li> </ul> </li> </ul> |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                               |                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage and shelf life</b> | <p>When stored in its original packaging:</p> <p>CAF 3 may be stored at a temperature between 2 °C/ 36 °F and 30 °C/ 86 °F for up to 18 months from its date of manufacturing.</p> <p>Comply with the storage instructions and expiry date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.</p> |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| <b>Regulation</b> | Please consult your local ELKEM SILICONES sales office. |
|-------------------|---------------------------------------------------------|

|                    |                                                         |
|--------------------|---------------------------------------------------------|
| <b>Limitations</b> | Please consult your local ELKEM SILICONES sales office. |
|--------------------|---------------------------------------------------------|

|               |                                                              |
|---------------|--------------------------------------------------------------|
| <b>Safety</b> | <p>Please consult the Safety Data Sheet of:</p> <p>CAF 3</p> |
|---------------|--------------------------------------------------------------|

Visit our website [www.silicones.elkem.com](http://www.silicones.elkem.com)

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