

# CAF 1, CAF 1 EXTRA-FLUID

<b>Description</b>	<p><b>CAF 1</b> and <b>CAF 1 Extra Fluid</b> are one component room temperature curing silicone elastomers:</p> <ul style="list-style-type: none"> <li>• Acetic.</li> <li>• Variable rheology, from self-leveling to fluid, from CAF 1 to CAF 1 Extra Fluid.</li> <li>• Red.</li> </ul>
<b>Examples of applications</b>	<p><b>CAF 1</b> and <b>CAF 1 Extra Fluid</b> are mainly used in sealing and bonding applications in which low viscosity is required.</p> <p><b>CAF 1</b> and <b>CAF 1 Extra Fluid</b> are notably used for:</p> <ul style="list-style-type: none"> <li>• Sealing of electrical heating elements (CAF 1 Extra Fluid).</li> <li>• Engine sealing in automotive after sales service (CAF 1).</li> <li>• General maintenance in the aeronautics industry (CAF 1).</li> </ul>
<b>Key benefits</b>	<ul style="list-style-type: none"> <li>• <b>CAF 1</b> and <b>CAF 1 Extra Fluid</b> cure quickly and have very good resistance to high temperature.</li> <li>• <b>CAF 1</b> and <b>CAF 1 Extra Fluid</b> therefore ensure perfect sealing and bonding between different materials subject to thermal strain.</li> <li>• <b>CAF 1</b> and <b>CAF 1 Extra Fluid</b> also have high resistance to chemical agents.</li> </ul>

## Typical properties

### 1. Properties before curing

Properties	CAF 1	CAF 1 Extra Fluid
<b>Appearance</b>	Viscous paste	Fluid paste
<b>Odour</b>	Acetic	Acetic
<b>Colour</b>	Red	Red
<b>Density at 25°C</b> (Standards ISO R 1183, DIN 53479, NM 703)	1.2	1.1
<b>Brookfield viscosity, mPa.s</b> (Standards NF T 76105, ASTM D 445)	250,000	7,500
<b>Flowability, min</b> (Standard MIL S 880-2-D, NM 458)	5	/

### 2. Curing

Curing of **CAF 1** and **CAF 1 Extra Fluid** starts as soon as the product comes into contact with atmospheric humidity.

<b>Cured thickness after 24 h*</b> , mm	4.3
<b>Skin formation time*</b> , minutes, approx	7
<b>Curing rate for 2 mm</b> , hours:	6
<b>Application temperatures</b> , °C	

\*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

(Standards ISO 2781, ASTM D 297, BS 903 part. A1.)

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CAF 1: 1.15

CAF 1 Extra Fluid: 1.12

3.2. Mechanical properties after 7 days at room temperature

Properties	CAF 1	CAF 1 Extra Fluid
<b>Shore A hardness</b> (Standards ISO R 868, DIN 53505, ASTM D 2240, BS 903 Part A7, NF T 46003, NM 471)	47	54
<b>Modulus at 100% elongation, MPa</b> (Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)	2	2.2
<b>Tensile strength, MPa</b> (Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)	4.4	3
<b>Elongation at break, %</b> (Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)	200	110
<b>Tear strength, kN/m</b> (Standards ASTM D 624 specimen A, NM 492)	6	4

## 4. Thermal properties

Properties	CAF 1	CAF 1 Extra Fluid
<b>Temperature range in continuous use, °C</b> (on 2 mm thickness film, 1000 h)	- 65 to + 225	- 65 to + 250
<b>Maximum peak temperature in use, °C</b> (on 2 mm thickness film, 72 h)	+ 300	+ 275

**N.B.:** These thermal values are not absolute limits. They represent the range within which initial mechanical properties are not modified by more than 50%. Furthermore, for peak uses, exposure for periods shorter than 72 h would authorize higher maximum temperatures.

## 5. Thermal conductivity

Properties	CAF 1	CAF 1 Extra Fluid
<b>Thermal conductivity at 30°C, W/m.K</b> (Standard NF x 10021)	0.3	0.3
<b>Thermal conductivity at 150°C, W/m.K</b> (Standard NF x 10021)	0.25	0.25

## 6. Adhesion properties

On aluminium AG3 (joint 1 mm thick, curing 7d at 23°C, NM 748)

Properties	CAF 1	CAF 1 Extra Fluid
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Shear strength, MPa	1.8	1
Cohesive failure, %	100	0

**On other surfaces:** (CAF 1 and CAF 1 Extra Fluid)  
 Glass, enamel, ceramics: Primerless self-adhesion  
 Metals: Primer 131  
 Polar plastics: Primers PM 824 or PM 820

## 7. Dielectric properties

Properties	CAF 1	CAF 1 Extra Fluid
<b>Dielectric strength, kV/mm</b> <small>(Standards NF C 26225 - ASTM D 419 - IEC 243)</small>	20	18
<b>Dielectric constant at 1 MHz</b> <small>(Standards NF C 26230 - ASTM D 150 - IEC 250)</small>	3	2,8
<b>Dielectric dissipation factor at 1 MHz</b> <small>(Standards NF C 26230 - ASTM D 150 - IEC 250)</small>	3.10 <sup>-3</sup>	3.10 <sup>-3</sup>
<b>Volume resistivity, W.cm</b> <small>(Standards NF C 26215 - ASTM D 257 - IEC 93)</small>	1. 10 <sup>15</sup>	8. 10 <sup>14</sup>

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

### Instruction of use

Processing is particularly easy because the product is delivered ready to use. Application can either be carried out manually or using robotized application equipment.

**CAF 1** and **CAF 1 Extra Fluid** are applied on one of the two joint surfaces. Assembly must be carried out before the product has formed a skin. It is recommended to apply **CAF 1** and **CAF 1 Extra Fluid** to clean and dry surfaces.

### Regulation

Please consult your local ELKEM SILICONES sales office.

### Limitations

Please consult your local ELKEM SILICONES sales office.

### Packaging

- CAF 1 is available in
  - Drum of 230 KG (507.15 LB)
  - Drum of 25 KG (55.13 LB)
  - Piece of 0.1 KG (0.22 LB)
  - Piece of 1 PC
- CAF 1 EXTRA FLUID is available in
  - Piece of 1.15 KG (2.54 LB)

### Storage and shelf life

When stored in its original packaging:

CAF 1 may be stored at temperatures between 2°C / 36°F and 30°C / 86°F for up to 24 months from its date of manufacturing.

CAF 1 EXTRA FLUID may be stored at temperatures between 2°C / 36°F and 30°C / 86°F for up to 24 months from its date of manufacturing.

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Comply with the storage instructions and expiration date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.

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**Safety**

Please consult the Safety Data Sheet of:  
CAF 1 and CAF 1 EXTRA FLUID

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

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