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

1. Properties before curing

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

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| Cured thickness after 24 h* , mm | 4.3 |
| Skin formation time* , minutes, approx | 7 |
| Curing rate for 2 mm , hours: | 6 |
| Application temperatures , °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.)

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

4. Thermal properties

| Properties | CAF 1 | CAF 1 Extra Fluid |
|---|----------------------|-------------------|
| Temperature range in continuous use, °C (on 2 mm thickness film, 1000 h) | - 65 to + 225 | - 65 to + 250 |
| Maximum peak temperature in use, °C (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 |
|---|-------------|-------------------|
| Thermal conductivity at 30°C, W/m.K (Standard NF x 10021) | 0.3 | 0.3 |
| Thermal conductivity at 150°C, W/m.K (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 |
|---------------------|-------|-------------------|
| 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 |
|---|--------------|-------------------|
| Dielectric strength, kV/mm <small>(Standards NF C 26225 - ASTM D 419 - IEC 243)</small> | 20 | 18 |
| Dielectric constant at 1 MHz <small>(Standards NF C 26230 - ASTM D 150 - IEC 250)</small> | 3 | 2,8 |
| Dielectric dissipation factor at 1 MHz <small>(Standards NF C 26230 - ASTM D 150 - IEC 250)</small> | 3.10^{-3} | 3.10^{-3} |
| Volume resistivity, W.cm <small>(Standards NF C 26215 - ASTM D 257 - IEC 93)</small> | $1. 10^{15}$ | $8. 10^{14}$ |

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)

CAF 1, CAF 1 EXTRA-FLUID

Technical Data Sheet n° 1147-V4 – 2020/01/29

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| Storage and shelf life | <p>When stored in its original packaging:</p> <p>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.</p> <p>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.</p> <p>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.</p> |
| Safety | <p>Please consult the Safety Data Sheet of:</p> <p>CAF 1 and CAF 1 EXTRA FLUID</p> |

Visit our website www.silicones.elkem.com

Warning to the users

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