CAF® 30
Professional range

June 2003

TECHNICAL DATA SHEET
Cancels and replaces SIL 96 046 3

Description

CAF 30 is a one-component silicone elastomer that cures at room temperature :

- ACETIC.
- NON-FLOWING
- WHITE, BLACK, TRANSLUCENT (standard), RED, GREY, BLUE (on request).
- ADHESIVE.

Applications

It is mainly intended for professional customers as a flexible bonding agent to provide sealing, bonding and protection, etc.
Its high elongation/break properties allow it to absorb significant differential expansion movement.

- Bonding/sealing in the industrial sector.
- Sealing of side windows on trains.
- Sealing of heat sources (ovens, heat exchangers, steam circuits, water heaters).
- Bonding of HCR silicones.
- General servicing and maintenance applications in various sectors : automotive, aeronautical, railways, chemicals, industry, etc.

Advantages

- Choice of colors.
- Good heat stability.
- Good dielectric properties.
- Adhesion to many surfaces.
- Resists water and humidity.
- Quick curing.
- High elongation at break.

Characteristics

1 – Processing/Curing

Processing is particularly easy since the product is delivered ready to use. Application can either be carried out manually or using robotized application equipment.
The **CAF 30** bead is applied to one of the joint surfaces. Assembly must be carried out before the product has formed a skin.
It is recommended not to exert any immediate strain on the assembly.

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Characteristics
(Cont.)

Curing

CAF 30 starts to cure as soon as the product is brought into contact with atmospheric humidity.

- Skin formation time*, min 6
- Cure rate of 2 mm thickness*, h 6
- Cured thickness after 24 h*, mm 4.2

**Temperature 23°C, relative humidity 50%*

The cure rate increases with temperature and hygrometry.

Comment: it is recommended to apply the product to clean, dry surfaces.

2 – Properties before curing

Appearance ..... non-flowing paste

Colors: standard ..... white, black, translucent
on request ..... . red, grey, blue

Cure type ..... acetic

Flowability, in mm ..... ≤ 2
(Standards BOEING S 7502 - NMRPS 459)

Extrusion, g/min. 40
(Standard NMRPS 495 A, 3 mm / 3 bars)

Specific gravity at 25 °C 1,04
(Standard ISO R 1183, DIN 53479, NMRPS 703)

3 – Properties after curing

3.1. Specific gravity at 23 °C 1.05
(Standards ISO 2781, BS 903 Part A1, ASTM D297)

3.2. Mechanical properties after 7 days

Shore A hardness 20
(Standards ISO R 868, DIN 53505, ASTM D 2240
BS 903 Part A7, NFT 46003, NMRPS 471)

Modulus at 100% elongation, MPa 0,6
(Standards ISO R 37 (H2), DIN 53504, ASTM D 412
BS 903 Part A2, NFT 46002 (H2), NMRPS 470)

Tensile strength, MPa 2,2
(Standards ISO R 37 (H2), DIN 53504, ASTM D 412
BS 903 Part A2, NFT 46002 (H2), NMRPS 470)

Elongation at break, % 500
(Standards ISO R 37 (H2), DIN 53504, ASTM D 412
BS 903 Part A2, NFT 46002 (H2), NMRPS 470)

Tear strength, kN/m 5,0
(Standards ASTM D 624 specimen A, NMRPS 492)

Characteristics
(Suite)

3.3. Thermal properties or heat stability

	CAF 30 Black	CAF 30 Other colors
Lower temperature limits: Brittle point (Measured using differential calorimetric analysis)	- 60 °C	- 60 °C
Upper temperature limits: Maximum recommended service temperature - continuous (on 2 mm thick film, 1000 h)	+ 250 °C	+ 250 °C
- peak (on 2 mm thick film, 72 h)	+ 300 °C	+ 250 °C

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 usage, exposure for less than 72 hrs authorizes higher maximum temperatures.

3.4. Adhesion properties

Shear strength on aluminum, MPa 1.5
(Aluminum G3 specimens, joint 1 mm thick,
Standard NMRPS 748)

Type of failure; cohesive, % 100

Primerless self-adhesion on :
glass, enamel, ceramics, epoxy paint, polyester, certain metals. Outside of humid heat conditions on metal and polyester.

Adhesion with a primer :
- Stainless steel, aluminum..... primer PM 820
- ABS ..... primer PP 878
- Polymethyl methacrylate ..... primer 131
- Composites filled with 30% glass fiber ..... primer PP 878
(polyamide, polyester, polypropylene)

3.5. Dielectric properties

Dielectric strength, kV/mm 20
(Standards NFC 26225, ASTM D 419, IEC 243)

Dielectric constant at 1 MHz 3
(Standards NFC 26230, ASTM D 150, IEC 250)

Dielectric dissipation factor at 1 MHz..... 3×10^{-3}
(Standards NFC 26250, ASTM D 150, IEC 250)

Volume resistivity, Ω.cm ..... 2×10^{15}
(Standards NFC 26215, ASTM D 257, IEC 193)

Characteristics (Cont.)

3.6. Heat stability

Classification according to standard NF F 16 101

Fire classification ..... I 4
(according to standard NF T 51071)

Smoke classification
- Opacity (according to standard NF X 10 702) F2
- Combustion gas (according to standard NF X 70-100) F2
- Smoke index F2

Packaging

- 310 ml cartridges on pallets of 1200 units (white, black, translucent).
- 25 kg metal tins on pallets of 10 units (translucent only).
- 210 kg metal drums on pallets of 4 units.

Storage and shelf life

When stored in its original unopened packaging at a temperature of between +2°C and +30°C, **CAF 30** can be used for up to 24 months after its date of manufacture (expiry date).
Comply with storage instructions and expiry date marked on the packaging.
Past this date, Rhodia Silicones no longer guarantees that the product meets sales specifications.

Safety

Consult the Safety Datasheet for **CAF 30**.

Warning to users

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