

CAF[®] 33 AXAD BLACK

Activated Range

Description	<p>CAF 33 AXAD BLACK is a two component room temperature vulcanising silicone elastomer:</p> <ul style="list-style-type: none">- activated acetic,- thixotropic,- black.
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Examples of applications	<p>CAF 33 AXAD BLACK is mainly used in sealing and bonding applications for:</p> <ul style="list-style-type: none">• Household electrical appliances:<ul style="list-style-type: none">- oven fascias,- oven door staples,- vitroceramic hobs.• Glass bonding applications:<ul style="list-style-type: none">- bonding of boat port-hole glass,- bonding of light lenses.• Industrial applications:<ul style="list-style-type: none">- sealing of retention tanks.
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Advantages	<p>CAF 33 AXAD BLACK cures quickly at room temperature without release of acetic acid and its setting time can be accelerated with temperature. CAF 33 AXAD BLACK sets in confined spaces and in high section thicknesses.</p> <p>CAF 33 AXAD BLACK gives goods mechanical performance levels, very good heat stability, primerless adhesion on many surfaces and good resistance to chemical agents.</p> <p>CAF 33 AXAD BLACK therefore provides perfect assembly and complete sealing when jointing different materials subject to thermal strains.</p>
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Characteristics	<p>1 – Processing / Curing</p> <p><i>1.1 Processing</i></p> <p>Processing is particularly easy since this product is delivered "ready-to-use" in the correct mixing proportions. The similar viscosity of parts A and B enable quick and easy mixing that may be performed, for example, using static mixers, disposable or otherwise. Application can be carried out either manually or using robotic application equipment.</p> <p>CAF 33 AXAD BLACK is applied onto one of the two joint surfaces. These must be assembled before the product has started to set.</p> <p>It is recommended not to subject the assembly to stress immediately and to apply CAF 33 AXAD BLACK on clean and dry surfaces.</p>
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CAF[®] 33 AXAD BLACK

Characteristics (cont')

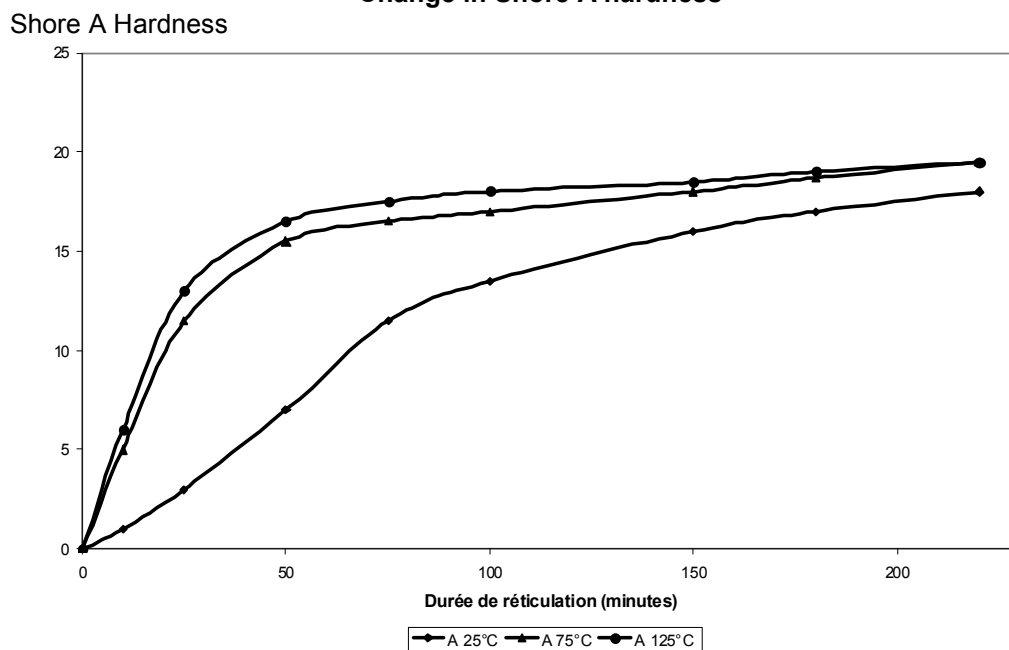
1.2 Curing

CAF 33 AXAD BLACK starts curing even in confined spaces as soon as the two parts A and B are mixed. At room temperature, the pot life is of around 3 to 5 minutes.

After 60 to 90 minutes at room temperature, the cured thickness is infinite and the product is sufficiently "cohesive" for the assembled part to be handled.

Moreover, the cure rate can be greatly increased by raising the temperature (up to 150°C at most)

CAF 33 AXAD BLACK
Change in Shore A hardness



2. Properties before curing

Properties	CAF 33 AXAD BLACK PART A	CAF 33 AXAD BLACK PART B
Appearance	Non flowing	Non flowing
Colour	Translucent	Black
Odour	Acetic	Alcohol
Volume dosage	90 %	10 %
Specific gravity (Standards NM 703, ISO R 1183, DIN 53479)	1.04	1.43
Flowability (BOEING S 7502 Test)	≤ 5 mm	≤ 5 mm

3. Properties after curing

3.1. Specific gravity of cured product at 25°C..... 1.12
(Standards ISO R 2781, BS 903 Part A1, ASTM D 297)

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Characteristics (cont')

3.2. Mechanical properties after 7 days at room temperature

Measured on 2 mm thick films:

Shore A Hardness.....	25
<i>(Standards ISO R 868, DIN 53505, ASTM D 2240, BS 903 Part A7, NF T 46003, NM 471)</i>	
Modulus at 100 % Elongation, MPa	0.6
<i>(Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)</i>	
Tensile strength, MPa.....	2.4
<i>(Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)</i>	
Elongation at break, %	500
<i>(Standards ISO R 37 (H2), DIN 53504, ASTM D 412, BS 903 Part A2, NF T 46002 (H2), NM 470)</i>	
Tear strength, kN/m	6
<i>(Standard ASTM D 624 specimen A, NM 492)</i>	

3.3. Thermal properties

Lower temperature limit in use

Brittle point – 65°C
 (Measured by differential calorimetric analysis)

Upper temperature limits

Maximum temperature in continuous use (1000 h) + 180°C
 Maximum temperature in peak use (72 h) + 250°C

Note: *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.*

3.4. Compression set

Test intended to measure the aptitude of the product to get back to its initial state after compression.

0 % = integral recovery

100 % = no elastic recovery of the product

(standards ASTM D 395 (specimen 1, method B)

(Standards ISO R 1817 - ASTM D 471 - NM 525).

Cure time of films at room temperature	Test temperature on compressed pile 25% for 3 days	Compression set
1 day	125 °C	70 %
7 days	125 °C	50 %
7 days	150 °C	60 %

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Characteristics (cont')

3.5 Adhesion

Tests performed on tensile-shear specimens with a 1 mm thick silicone joint. (Standard NM 748).

3.5.1 Adhesion on AG 3 aluminium

Curing conditions	Type of joint failure	Tensile strain (MPa)
1 day at R.T.*	80 % cohesive	1.6
3 days at R.T.*	100 % cohesive	1.9
7 days at R.T.*	100 % cohesive	2.1
7 days at R.T.* + 3 days at 250°C + 1 day at R.T.*	100 % Cohesive break	1.2

*R.T. : Room temperature

3.5.2 Adhesion on various substrates

It is recommended to apply an adhesion primer on metal and plastic substrates

- GlassNo treatment
- Stainless steelBLUESIL PRIM 131
- MetalsBLUESIL PRIM 131
- Polyethylene Corona treatment
- PVCBLUESIL PRIM PM 820
- Talc filled polypropyleneBLUESIL PRIM PM 820
- PolyamideBLUESIL PRIM PM 820
- ABSBLUESIL PRIM PM 820

3.5. Dielectric properties

Dielectric strength, KV/mm..... 20
(Standards NF C 26225, ASTM D 419, IEC 243)

Dielectric constant at 1 MHz..... 3.2
(Standards NF C 26230, ASTM D 150, IEC 250).

Dielectric dissipation factor at 1 MHz..... 3×10^{-3}
(Standards NF C 26230, ASTM D 150, IEC 250)

Volume resistivity, Ω .cm 0.3×10^{15}
(Standards NF C 26215, ASTM D 257, IEC 193)

3.6. Thermal conductivity

Thermal conductivity at 25 °C, W/m. K..... 0.22
(Standard NF X 10021)

Thermal conductivity at 150 °C, W/m.K 0.20
(Standard NF X 10021)

CAF[®] 33 AXAD BLACK

Packaging	- Two-component 264 ml cartridges. - 30 l tins, on pallets of 10 units (9 tins of part A, 1 tin of part B).
Storage and shelf-life	When stored in its original unopened packaging at a temperature of between + 2°C and +30°C, CAF 33 AXAD BLACK can be used for up to 18 months from its date of manufacture (expiry date). Comply with storage instructions and expiry date marked on the packaging Past this date, Bluestar Silicones no longer guarantees that the product meets sales specifications.
Safety	Consult the Safety Data Sheets for CAF 33 AXAD BLACK .

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