

BLUESIL™ ESA 7252 A & B**High Strength Silicone Elastomer**

Description **BLUESIL™ ESA 7252 A & B** is a two-component silicone elastomer which cures at room temperature by a polyaddition reaction. The curing can be accelerated by heating.

BLUESIL™ ESA 7252 A & B is supplied in the form of a viscous liquid which is transformed, after mixing parts A and B and then curing, into a strong, elastic material.

Applications

- Potting: protection of electrical component, connection box.
- Encapsulating: connectors, captors, sensors in on board electronic.
- Thermal and fire protection in aerospace.

Features

- Outstanding flame resistance.
- Good thermal conductivity: dissipation of calories (encapsulation).
- Low viscosity (easily refilled).
- Fast curing product.
- Non corrosive.

Typical Properties**1. Properties of the non cured product**

<i>Property</i>	BLUESIL™ ESA 7252 A	BLUESIL™ ESA 7252 B
• Appearance	Viscous Liquid	Viscous Liquid
• Color	Black	White
• Specific gravity at 25°C, approx	1.3	1.45
• Viscosity at 25°C, mPa.s, approx	3500	3000

2. A & B components mixed

• Ratio ESA 7252 A / ESA 7252 B	1:1
• Pot-life of mixture at 23°C, hours, approx	1.5
• Time required to obtain final mechanical properties at 23°C, hours, approx	8

3. Cured compound Mechanical properties after curing 8 hours at 23°C

• Shore A Hardness on 6 mm thick specimen (ASTM D 2240), approx.	48
• Tensile Strength, MPa, on 2 mm thick film (NF T 46002), approx.	2.3
• Elongation at break %, on 2 mm thick film (NF T 46002), approx.	170
• Linear shrinkage , %, approx.	0.1

4. Thermal and flammability properties

• Thermal conductivity , W/ (m.K).	0.42
• Expansion coefficient , K-1, approx.	$8 \cdot 10^{-4}$
• Flammability classification , (UL 94)	V0 on 3.4mm

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Typical Properties (cont.)

5. Dielectric properties

• Dielectric strength, kV/mm , (AFNOR NF C 26225 and IEC 243)	18
• Dielectric constant at 1 kHz , (AFNOR C 26 230 and CEI 250)	3.2
• Dielectric dissipation factor at 1 kHz , (AFNOR NF C 26 230 and IEC 250)	5.10^{-3}
• Volume resistivity, W.cm , (AFNOR NF C 26215 and IEC 93)	8.10^{13}

Please note: The typical properties listed in this data sheet are not intended for use in preparing specifications for any particular application of **BLUESIL™** silicone materials. Please contact our Technical Service Department for assistance in writing specifications.

Instructions for use

Remix each of the 2 components (A and B part) every time before using. Mix Part A and Part B components according to recommended weight ratios.

The two components are thoroughly mixed using an electrical or pneumatic mixer, on a low speed setting so as to limit the inclusion of air in the mixture. A dispensing machine can also be used. The mixing can be made with a dynamic mixing head or a static mixer.

The mixture of the two components should be degassed to remove air bubbles which would reduce the mechanical and dielectric properties. Degassing is generally performed in a vacuum of 30 to 50 mbars for about ten minutes, releasing the vacuum twice in the chamber.

BLUESIL™ ESA 7252 A & B can be poured on to metals, glass, laminates or molded articles containing organic resins or silicones, or on all other materials. It is recommended to pour slowly the degassed **BLUESIL™ ESA 7252 A & B** mixture at the lowest point of the volume to be filled, to prevent the formation and entrapment of air bubbles. The container should not be filled completely, to allow the **BLUESIL™ ESA 7252 A & B** to expand at service temperatures.

At a temperature of 23°C, **BLUESIL™ ESA 7252 A & B** cures in approximately 8 hours. Curing can be accelerated by external heat, and the higher the temperature the faster curing will be. For example, at 150°C the product cures in about 5 minutes. Certain materials that the **BLUESIL™ ESA 7252 A & B** may be in contact with when curing could inhibit the reaction. Especially troublesome materials are: sulphur-containing cured natural and synthetic rubber compounds (neoprene, latex, SBR), tin catalyzed silicone rubbers, amine catalyzed epoxies, PVC stabilized with tin salts and some polyurethane elastomers.

Repairing:

An object encapsulated with **BLUESIL™ ESA 7252 A & B** can be repaired simply by cutting away the ESA and replacing the missing elastomer with new **BLUESIL™ ESA 7252 A & B**, which adheres very strongly to itself with no need for a primer.

Storage and shelf life

When stored in its original unopened packaging, at a temperature of between -5°C and +30°C, **BLUESIL™ ESA 7252 A & B** may be stored for up to 20 months, from the date of manufacture. Beyond this date, Bluestar Silicones no longer guarantees the conformity of the products with the sales specifications

Safety

Please read the container labels for **BLUESIL™ ESA 7252 A & B** or consult the Material Safety Data Sheet (MSDS) before handling for safe use, physical and health hazard information. The MSDS is not included with the product packaging, but can be obtained by contacting Bluestar Silicones at 866-474-6342 or consult your Bluestar Silicones representative.

Packaging

BLUESIL™ ESA 7250 A & B is supplied in 25 kg containers.

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Warning to users

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