

Bluesil™ V 1082

October 2017

Condensation Cure Silicone Elastomer

Description **Bluesil™ V 1082** is a translucent, high strength, two component, tin catalyzed, room temperature cure silicone rubber. It is a medium viscosity material providing excellent cured rubber properties, long library life and life-like texture. **Bluesil™ V 1082** is the most flexible and softest rubber in the Elkem Silicones moldmaking product line – two clear catalysts are available, HiProClear and HiPro ST ~ PEX, depending on the desired hardness. **Bluesil™ V 1082** can be easily pigmented, which makes it ideal for robotic or animatronic skins, prosthetics, and props for theme parks and the film industry.

- Applications**
- Skins for robotic and animatronic figures for both indoor and outdoor applications
 - Special effect skins and props for the film industry
 - Theme park props and reproduction molds

Typical Properties

As Supplied:	
<u>Part A Base Component</u>	
• Color	Translucent
• Consistency	Viscous Liquid
• Viscosity, cps	40 000
<u>Part B Catalyst Component</u>	
• Color	Translucent
• Viscosity, cps	100

Catalyzed Properties	
Mixed at ~24° C (75°C) and 50% RH)	
• Mix Ration (by Weight)	10 :1
• Viscosity, cps	30 000
• Work Life ⁽¹⁾ , minutes	120
• Pot Life ⁽²⁾ , minutes	300

Typical Cure Rubber Properties ~ 7 days at ~ 24°C (7°F) and 50% RH)			
<u>Property</u>	<u>Method</u>	<u>Value</u>	
		<u>HiPro Clear</u>	<u>HiPro ST ~ PEX</u>
• Color		Translucent	Translucent
• Specific Gravity		1.10	1.10
• Hardness,	ASTM 2240	9 Shore A	40 Shore 00
• Tensile, psi	ASTM 412	480 570 110	550
• Elongation, %	ASTM 412	0.2	550 100
• Tear, ppi	ASTM D624	0.4	0.2
• Linear Shrinkage ⁽³⁾ , %			0.4
~ room temperature 24 hrs 7 days			
• Temperature Range, C° (F°)		-50 to 150 (-58 to 302)	

(1) Time to double in viscosity (2) Snapback Time (3) 8 x 8 x 0.25 inch molded sheet ,cured at room temperature

Please note: The typical properties listed in this bulletin 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.

Processing

1. Stir the base (Part A) well before use (except when machine dispensing).
2. Shake the catalyst container (Part B) well before use.
3. Weigh the desired amount of base into a clean mixing container. Tip the container and roll the base all the way around the side wall up to two inches from the top. This will prevent the catalyst from becoming absorbed into the container. It is recommended that the container be filled to not more than 1/3 the container depth to allow sufficient room for expansion during the deaeration procedure.
4. Weigh the proper amount of catalyst into the container. Mix the base and catalyst together by stirring with a stiff, flat ended metal spatula until a uniform color is obtained. Scrape the container walls and bottom well to insure a thorough mix.
5. Place the container into a vacuum chamber and evacuate the entrapped air from the mixture using a vacuum pump capable of achieving 29 inches of mercury vacuum. The mixture will rise, crest and then collapse in the container. Interruption (bumping) of the vacuum may be necessary to prevent overflowing the container. Keep the mixture under full vacuum for 2-3 minutes after the material has receded in the container.
6. Bleed air slowly into the vacuum chamber. When the chamber is at atmospheric equilibrium, remove the cover plate and take out the container.
7. Pour the deaired material slowly in a steady stream from one end of the mold box so that the material flows evenly over the pattern. This should minimize entrapment of air bubbles under the flowing material. A "print" coat may be poured first over the pattern which will also help reduce the possibility of entrapping air on the pattern and in the cured rubber. A mold release (petroleum jelly) may be applied on the pattern first to improve release.
8. Allow the rubber to cure for 16-24 hours at 75±5°F (24°C) before removing the cured rubber mold from the pattern. Heatacceleration is not recommended with this product.
9. For best results, allow the mold to air cure an additional 24 hours before using it in production. Full cure is achieved in 3-7 days.
10. For bonding to wood or metals, use **Bluesil® V-04** primer. Follow recommendations on the **Bluesil® V-04** technical data sheet for best results.

CATALYZED PROCESSING PROPERTIES ARE AFFECTED BY TEMPERATURE AND HUMIDITY VARIATION

1. For best results, mix and cure the material at 75°F (24°C) and 50% relative humidity.
 2. Higher temperature and humidity will decrease the work life and pot life of the material. The faster cure will also affect the flow properties. Refrigeration of the base prior to use in hot
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environments has shown to improve the handling properties of this material.

3. Lower temperatures and humidity will increase the work life and pot life of the material. The slower cure will increase the flow time. Cure temperatures below 68°F (20°C) are not recommended and have been found to cause a reduction in final cure hardness and properties.

4. It is important that the catalyst containers are tightly closed after use. Catalyst exposed to air for extended periods of time will hydrolyze (cure). An indication of hydrolysis is a film or crust formation on the surface of the catalyst. The use of hydrolyzed catalyst is not recommended and may cause incomplete cure.

Storage and shelf life

Bluesil™ V 1082 when stored in its original unopened packaging, at 24°C (77°F), may be stored for 36 months from the date of manufacture. Comply with the storage instructions and expiry date marked on the packaging. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.





Safety

Please consult the Safety Data Sheet of **Bluesil™ V 1082**

Packaging

Bluesil™ V 1082 is available in 20 kg and 200 kg containers.

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