

Rhodorsil V-1082

Condensation Cure Silicone Elastomer

Description

Rhodorsil® 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. **Rhodorsil® V-1082** is the most flexible and softest rubber in the Bluestar Silicones moldmaking product line – two clear catalysts are available, HiProClear and HiPro ST ~ PEX, depending on the desired hardness. **Rhodorsil® 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°F) and 50% RH

• Mix Ratio (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 (75°F) and 50% RH

Property	Method	Value	
		HiPro Clear	HiPro ST ~ PEX
• Color		Translucent	Translucent
• Specific Gravity		1.10	1.10
• Hardness,	ASTM 2240	9 Shore A	40 Shore 00
• Tensile, psi	ASTM 412	480	550
• Elongation, %	ASTM 412	570	550
• Tear, ppi	ASTM D624	110	100
• Linear Shrinkage ⁽³⁾ , %		0.2	0.2
~ room temperature 24 hrs			
7 days		0.4	0.4
• 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 Silbione® silicone materials. Please contact our Technical Service Department for assistance in writing specifications.

Rhodorsil V-1082

Instructions for use

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. Heat acceleration 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 **RHODORSIL® V-04** primer. Follow recommendations on the **RHODORSIL® V-04** technical data sheet for best results.

PROCESSING INFORMATION

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 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

Rhodorsil® 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. Beyond this date, Bluestar Silicones no longer guarantees that the product meets the sales specifications

Safety

Please read the container labels for **Rhodorsil® V-1082** 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

Rhodorsil® V-1082 is available in 20 kg and 200 kg containers.

Rhodorsil® is a registered Trademark of Rhodia

 EUROPE	 NORTH AMERICA	 LATIN AMERICA	 ASIA PACIFIC
<p>Bluestar Silicones France 21 Avenue Georges Pompidou F69486 Lyon Cedex 03 FRANCE Tel. (33) 4 72 13 19 00 Fax (33) 4 72 13 19 88</p>	<p>Bluestar Silicones USA Two Tower Center Boulevard Suite 1601 East Brunswick, NJ 08816-1100 United States Tel. (1) 732 227 2060 Fax (1) 732 249 7000</p>	<p>Bluestar Silicones Brazil Ltda. Av. Maria Coelho Aguiar, 215 Bloco G - 1º Andar 05804-902 - São Paulo - SP - Brazil Tel. (55) 11 3747 7887 Fax (55) 11 3741 7718</p>	<p>Bluestar Silicones Hong Kong Trading Co. Ltd. Unit C, 18/F Manulife Tower 169 Electric Road North Point-Hong Kong Tel. (852) 3106 8200 Fax (852) 2979 0241</p>

Warning to the users

The information contained in this document is given in good faith based on our current knowledge. It is only an indication and is in no way binding, particularly as regards infringement of or prejudice to third party rights through the use of our products. BLUESTAR SILICONES guarantees that its products comply with its sales specifications. This information must on no account be used as a substitute for necessary prior tests which alone can ensure that a product is suitable for given use. Users are responsible for ensuring compliance with local legislation and for obtaining the necessary certifications and authorizations. Users are requested to check that they are in possession of the latest version of this document and BLUESTAR SILICONES is at their disposal to supply any additional information.