

BLUESIL™ V-2033

Technical Data Sheet n°1 –April/2019

Description **Bluesil™ V-2033** is a two-component, polycondensation cure silicone rubber compound. It is designed to produce quick turnover molds while still maintaining excellent detail reproduction and excellent release characteristics.

Examples of applications

- Furniture and Architectural Molding
- Prototype tooling
- Casting of rigid, flexible and foam polyurethanes, polyester, epoxy, cementacious media

Key benefits

- Excellent detail reproduction
- Medium to high durometer for polycondensation moldmaking materials
- Resistance to casting resins

Typical properties**Properties as Supplied**

Properties	Units	Bluesil™ V-2033	Bluesil™ Hi Pro Red 33 Catalyst
Appearance		Off white to beige, flowable	Red Liquid
Viscosity	cps	70,000	800

***Please note:** These typical properties are not intended for use in preparing specifications. Please contact our local Sales Department for assistance in writing specification.*

Properties before Cured

Mixed at 24°C (75°F) and 50% R.H. Mix Ratio A:B at 10:1 (by weight)

Properties	Units	Mixed product
Viscosity	cps	40,000
Pot Life ¹	mins	180
Demold Time, ambient	hours	16
24h hardness	Shore A	27
Specific gravity		1.13

¹ Time at which material gels.

Properties after curing

Cured 7 days at 24°C (75°F) and 50% R.H.

Mechanical Properties	Test Method	Units	Mixed product
Hardness	ASTM D2240	Shore A	33
Tensile strength	ASTM D412	psi	650
Elongation at break	ASTM D412	%	250
Tear Resistance	ASTM D624	ppi	140
Linear Shrinkage	24hrs	%	0.6
	7 days	%	1.0

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. Initially, slowly stir in the catalyst to insure no catalyst is splashed out of the container. Mix the base and catalyst together 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 BLUESIL™ V-04 primer. Follow recommendations on the BLUESIL™ 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.

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.

Packaging Bluesil™ V-2033 is available in 20 kg and 200 kg containers.

Storage and shelf life When stored in its original unopened packaging, at a temperature of 24°C (75°F), **Bluesil™ V-2033** may be stored for 9 months from the date of manufacture. Beyond this date, Elkem Silicones no longer guarantees that the product meets the sales specifications.

Safety Please consult the Safety Data of **Bluesil™ V-2033**.

Visit our website www.silicones.elkem.com

 **EUROPE**

*Elkem 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*

 **NORTH AMERICA**

*Elkem Silicones USA
2 Tower Center Boulevard
Suite 1601
East Brunswick, NJ 08816-1100
United States
Tel. (1) 732 227-2060
Fax. (1) 732 249-7000*

 **LATIN AMERICA**

*Elkem Silicones Brazil Ltda.
Av. Duquesa de Goiás, 716
2º andar
05680-002 Sao Paulo
Brazil
Tel. (55) 11 4380-6900*

 **ASIA PACIFIC**

*Elkem Silicones Hong Kong
Trading Co. Ltd
29th Floor, 88 Hing Fat Street
Causeway Bay
Hong Kong
Tel. (852) 3106 8200
Fax (852) 2979 0241*

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