



# Bluesil™ V-622

October 2017

## Silicone Aerospace Sealant

**Description** Bluesil™ V-622 is a black, two component addition cure, flowable silicone aerospace sealant. It is specifically designed for, and qualified to, Pratt & Whitney Specification PWA 407 for use as abradable air seals for compressor blades of jet engines. **Bluesil™ V-622** imparts high thermal stability, good machinability, long work time, and low density. It is also designed to achieve optimum properties at the specified elevated temperature cure schedule.

**Applications** Abradable air seal for the compressor blades of jet engines.

### Typical Properties

<u>TYPICAL PROPERTIES - AS SUPPLIED</u>		<u>TYPICAL CATALYZED PROPERTIES</u>	
<u>Part A - Base Component</u>		Mixed at 24°C (75°F) and 50% R.H.	
• <b>Color</b>	Black	• <b>Mix Ratio</b> , A:B (Parts by weight)	10:1
• <b>Consistency</b>	Pourable	• <b>Viscosity</b> , cP. (mPa.s)	190,000
• <b>Viscosity</b> , cP. (mPa.s)	300,000	Brookfield, HAT, #7 Spindle, 10 rpm	
Brookfield, HAT, #7 Spindle, 10 rpm		• <b>Pot Life</b> , hours	>4
<u>Part B - Catalyst Component</u>			
• <b>Color</b>	Clear		

<u>TYPICAL PROPERTIES OF CURED RUBBER.</u>		
Cured 1 hr. 150°C (300°F) in mold; Post cured 1 hr. 204°C (400°F) out of mold <sup>(1)</sup>		
<u>Property</u>	<u>Test Method</u>	<u>Value</u>
• <b>Color</b>		Black
• <b>Specific Gravity</b>		0.74
• <b>Hardness</b> (Shore A)	ASTM D2240	56
• <b>Tensile Strength</b> , psi (N/mm <sup>2</sup> )	ASTM D412	320 (2.2)
• <b>Elongation</b> (%)	ASTM D412	130
• <b>Lap Shear Strength</b> , psi (N/mm <sup>2</sup> )		200 (1.4)
• <b>Cohesive Failure</b> , % <sup>(2)</sup>	ASTM D816 Method B, Type I (AMS 4910 Titanium Panels)	99
• <b>Coverage</b> , in <sup>3</sup> /lb. (cc/kg)		36.4 (1316)

(1) Cure schedule for A15F18A1 specification

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

**Kit Matching** Bluesil™ V-622 is kit matched when manufactured. This product should be processed using the specific matched Part A and Part B units supplied with the kit. Using a different lot of Part A or Part B may affect the properties of the product.

**Cure Inhibition** Bluesil™ V-622 cures by addition polymerization using PT catalysts which may be inhibited by certain other materials. Especially troublesome materials are: Amine catalyzed epoxies, sulfur catalyzed rubbers such as neoprene latex SBR, vinyl coated wire, vinyl tapes, solder flux, tin catalyzed silicone rubbers, resinous woods, and some polyurethane elastomers.

**Mixing Equipment** Unwaxed paper, stainless steel, glass, or high-density polyethylene or polypropylene containers, stainless steel spatulas, and metal power mixing equipment should be used to prevent product contamination. Do not use rubber or vinyl containers or mixing equipment. Power mixing equipment and spatulas should be wiped clean after every use and washed with a suitable solvent to maintain contaminant free mixing equipment and assure product quality.



## Bluesil™ V-622

### Instruction for use

1. Mix Part A and Part B components according to recommended weight ratios. If power equipment is to be used, it is generally recommended to keep mixing speed at or below 350 rpm to prevent heat buildup, which can cause loss of working time and premature curing of the rubber. It is recommended that the container be filled to not more than 1/3 the container height to allow sufficient room for expansion during the deaeration procedure.
2. For these products requiring deaeration, place mixed material in a vacuum chamber and exert 29 inches Vacuum on the material. Some products will require that the vacuum be interrupted or "bumped" several times before the material crests and falls by itself. After the material has receded, keep the mixed material under full vacuum for a minimum of 15 minutes. Bleed air slowly into the chamber until atmospheric equilibrium is reached. Remove mixed and vacuumed material from the chamber. The material is now ready for pouring.
3. Some Elkem Silicones Aerospace and Industrial products have a very long mixed pot life. Storing the mixture in a tightly sealed container at 0°F (-18°C) may extend the pot life even longer. Care should be taken when using this method to prevent moisture from condensing on the inside of cold containers and contaminating the mixture.

### Storage and shelf life

When stored in its original unopened packaging, at a temperature of 27°C (80°F), **Bluesil™ V-622** may be stored for 12 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 Sheet of **Bluesil V-622**.

### Packaging

**Bluesil V-622** is available in 2.74 kg kits.

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#### Warning to the users

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