

# Bluesil™ ESA 7258 A&B

October 2017

## Two-Component Polyaddition Cure Silicone Elastomer

**Description** **Bluesil™ ESA 7258** is a two-component, heat curing, liquid silicone elastomer that crosslinks by a polyaddition reaction. This product is well suited for applications that require a heat curable silicone elastomer for potting of electronics. **Bluesil™ ESA 7258** cures without regard to the thickness of the material, and cure rate is controlled by the temperature of cure. For many applications, the use of a primer may be required if adhesion is necessary.

- Identification**
- Power supplies
  - Transformers
  - Electrical controls
  - High voltage resistor packs
  - Amplifiers
  - Electronics general potting material
  - Sensors
  - High voltage modulators
  - Connectors
  - Relays

### Applications

TYPICAL PROPERTIES - AS SUPPLIED		TYPICAL CATALYZED PROPERTIES	
<u>Part A - Base Component</u>		Mixed at 24°C (75°F) and 50% R.H.	
• <b>Color</b>	Dark Gray	• <b>Mix Ratio</b> , A:B(Parts by weight)	1:1
• <b>Consistency</b>	Pourable	• <b>Viscosity</b> , cP. (mPa-s)	908
Liquid		• <b>Pot Life</b> , hours at room temp <sup>(2)</sup>	5
• <b>Viscosity, cP (mPa-s)</b>	1250		
<u>Part B – Catalyst Component</u>			
• <b>Color</b>	Beige		
• <b>Consistency</b>	Pourable		
TYPICAL PROPERTIES OF CURED RUBBER, Cured 90 minutes at 100°C <sup>(3)</sup>			
<i>Property</i>		<i>Test Method</i>	
• <b>Color</b>		Dark Gray	
• <b>Specific Gravity</b>		ASTM D792 1.37	
• <b>Hardness, Shore A</b>		ASTM D2240 67	
• <b>Tensile Strength</b> , psi (N/mm <sup>2</sup> )		ASTM D412 398 (2.74)	
• <b>Elongation</b> , %		ASTM D412 44	
• <b>Tear Resistance</b> , ppi (N/mm)		ASTM D624, Die B 16 (2.8)	
• <b>Dielectric Strength</b> , V/mil (kV/mm)		ASTM D149 467 (18.4)	
• <b>Dissipation Factor @ 100kHz</b>		ASTM D150 0.002	
• <b>Dielectric Constant @ 100kHz</b>		ASTM D150 3.17	
• <b>Volume Resistivity</b> , Ω-cm		ASTM D257 7.42 x 10 <sup>14</sup>	

2) Time at which material gels. (3) 6x6x0.075 in molded sheet

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.

**Instructions for use**

Mix Parts A and B separately before blending together. Some filler separation with a small amount of liquid at the top of the container is normal. Once the Parts A and B have been mixed individually in their original containers, both parts can be mixed together at a 1:1 mix ratio by weight or volume and then the blend can be poured into place over desired electronic assembly.

Bubbles may gather in the material during the mixing and pouring processes. If this is not desired, then the material must be deaired. Deairing can be accomplished by placing the mixed product and part in a vacuum chamber and reducing the pressure over the material until the bubbles rise and break.

Alternatively, another method to add silicone to a desired container without capturing bubbles is to use an automated dispensing machine with a vacuum deairing feature. The Parts A and B will be deaired in individual containers under vacuum and then pumped and mixed through a static mixing head to provide air free mixed product prior to cure.

Cure can be accomplished simply by leaving the product for 48 hours at room temperature (or longer if desired). However, the recommended method for cure is via a heat cure. This can be accomplished via a 90 minute cure at temperatures between +100°C, 20 minute cure at +120°C, or a 5 minute cure at +150°C. Contact Elkem Silicones if alternative or more defined temperature cure times are needed.

Note: Make sure to account for a lag in the time it takes for parts to heat up. A large heavy part may take longer to cure than is indicated here.

**Storage and shelf life**

The shelf life, when stored in its original unopened packaging, at a temperature of 24°C (75°F), is 12 months from the date of manufacture for this product.

**Safety**

Please read the container labels for **Bluesil™ ESA 7258 A&B** and 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 Elkem Silicones at 866-474-6342 or consult your Elkem Silicones representative.

**Packaging**

**Bluesil™ ESA 7258 A&B** is available in 18 kg and 180 kg containers.

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