

## Technical Data Sheet

### Cable Fill 223-87-1

Cox Sales Company 40 Durometer Addition Cure  
Silicone Elastomer

#### **Product Description**

The 223-87-1 specification covers the engineering requirements for a two component platinum-catalyzed elastomer that cross links at room temperature. The silicone elastomer is used as a void filler and blocking compound in electro-mechanical cables. The high viscosity is ideal for filling large diameter cable. The cured rubber has excellent mechanical properties and good shelf life stability.

#### **Key Features**

- Good Physical Properties
- 1:1 mix ratio
- Machine or hand mix

#### **Typical Properties**

<b>UNCATALYZED PROPERTIES</b>	
Mix Ratio	<b>1:1 by weight</b>
Mix Ratio	<b>1:1 by volume</b>
<b>BASE</b>	
<b>223-87-1A</b>	
Base Appearance	Black
Base Viscosity, cps	110,000-170,000
Base Specific Gravity, g/cm <sup>3</sup>	1.16-1.20
<b>CATALYST</b>	
<b>223-87-1B</b>	
Catalyst Appearance	White
Catalyst Viscosity, cps	130,000-170,000
Catalyst Specific Gravity, g/cm <sup>2</sup>	01.18-1.25

## Typical Properties Continued

CATALYZED PROPERTIES - 223-87-1	
PROPERTY	
Catalyzed Color	Black
Catalyzed Viscosity, cps	130,000-170,000
Pot Life <sup>(1)</sup> (minutes)	45-90

TYPICAL CURED PROPERTIES (3 DAYS @ 25C)	
Durometer, Shore A	40±5
Tensile Strength, psi	>400
Elongation, %	>200
Tear Strength, ppi	>40
Linear Shrinkage, %	<0.1
Dielectric Strength, Volts/mil	>400
Dielectric Constant	3.50
Dissipation Factor	0.00
Volume Resistivity	1.97 x 10 <sup>15</sup>
Useful Temperature Range	-60C to 204C

(1)Pot Life is defined as the time at which the viscosity has doubled.

## Cure Characteristics

The curing process begins as soon as the catalyst is mixed with the base. Under normal temperature (25C) and humidity (50% RH) conditions, the material will cure as described in the data above. Because this system is sensitive to heat and humidity, a change in cure speed may be seen if one or both of these variables are altered. Any large difference in temperature (+/-5C) or humidity (>60-70%) may change the cure profile of the material. For best results, 223-87-1A and 223-87-1B components of the **same lot number** should be used.

## Mixing and De-aeration

The following procedure should be followed for obtaining optimal performance.

Charge 100 parts, **by weight**, of 223-87-1A and 100 parts, **by weight**, of 223-87-1B into a clean, compatible metal or plastic container. **When hand mixing; accurate weighing of components on a suitable scale is essential for optimal product performance.** Shake the catalyst well before use. The volume of the container should be 3-4 times the volume of the material to be mixed. This allows for expansion of the 223-87-1 as it de-gasses.

Mix thoroughly by hand or with mixing equipment while minimizing air entrapment until a homogeneous mixture is obtained. This will occur when the material takes on a uniform color with no visible striations. Once mixing \* is complete it is recommended that the material be de-aired 2-3 times by intermittent evacuation for a few minutes to minimize any imperfections due to bubbles in the cured material. Typically

after releasing the vacuum 2-3 times the mass will collapse on itself at which time the vacuum should be left on only 2-4 minutes longer.

**\* Machine mixed material does not normally need to be de-aired.**

### **Shelf-life and Storage**

223-87-1A and 223-87-1B should be stored in their original, sealed containers in an environment that does not exceed 90F. Under these conditions the expected shelf-life of the material is 12 months.

### **Not for Product Specification**

The technical data listed herein is provided as a reference only and **is not** intended as sales specifications. For sales and technical assistance or for product recommendations, please call (540) 345-2636.

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