



## Technical Data Sheet

### QM 135

*Quantum Silicones' 35 Durometer Condensation Cure  
Moldmaking Material*

#### **Product Description**

Quantum Silicones' QM 135 is a two component, room temperature condensation cure silicone material. The cured rubber has excellent mechanical properties and good shelf-life stability. This material is an excellent choice for the molding of intricate patterns, skin molding and applications where high durometer, dimensional stability and extremely tough rubber are required.

#### **Key Features**

- High tear strength
- Low viscosity
- Fast demold time
- Excellent dimensional stability

#### **Main Applications**

- Molds for small and large statues
- Molds for polyester, polyurethane and epoxy resin castings
- Molds for technical articles and prototypes
- Molds for furniture and picture frame replication

#### **Typical Properties**

<b>UNCATALYZED PROPERTIES</b>	
Base Appearance	Beige
Base Viscosity, cps	45,000
Mix Ratio	10:1 <b>by weight</b>
<b>CATALYST<sup>(1)</sup></b>	<b>QM CAT 135</b>
Color	Purple
Viscosity, cps	150
Specific Gravity	1.03

## **Typical Properties Continued**

<b>CATALYZED PROPERTIES-QM 135</b>	
<b>PROPERTY</b>	<b>QM CAT 135</b>
Catalyzed Color	Light Purple
Catalyzed Viscosity, cps	31,000
Specific Gravity g/cm <sup>3</sup>	1.11
Pot Life <sup>(2)</sup> (minutes)	~45 minutes
Tack-Free Time	~4-6 hours
Demold Time	~12-16 hours

<b>TYPICAL CURED PROPERTIES (3 DAYS @ 25C)</b>	
Durometer, Shore A	30 to 35
Tensile Strength, psi	>500
Elongation, %	>400
Tear B, pli	>150
Linear Shrinkage, %	<0.3

(1) A styrene resistant specialty catalyst is available. Please see individual data sheets for more information.

(2)Pot Life is defined as the time at which the catalyzed 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. In addition, if the product is to be used with aggressive resins such as high styrene polyester resins, it is recommended that the rubber be allowed to cure for 48 hours.

The standard catalyst for the QM135 is QM Cat 135 at a 10% level **by weight**. In order to achieve optimum physical properties and hardness from QM 135 the use of QM Cat 135 is highly recommended. QM Cat Blue is available for those needing a longer working time or those hand mixing larger quantities of QM 135. Faster cure can be obtained using DBT or a higher level of QM 135. However, rapid cure of QM 135 can often result in a small sacrifice of physical properties or an increase in hardness.

### **Mixing and De-aeration**

The following procedure should be followed for obtaining optimal performance from the QM 100 series.

Charge 100 parts, **by weight**, of QM 135 and 10 parts, **by weight**, of Cat 135 into a clean, compatible metal or plastic container. 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 siloxane material 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.

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

QM 135 and QM Cat 135 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 6 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 1-800-852-3147.

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