



# Technical Data Sheet

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## QM 135

35 Shore A Condensation Cure Moldmaking Material

### PRODUCT DESCRIPTION

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

| UNCATALYZED      |            |            |
|------------------|------------|------------|
| TEST             | QM 135     | QM CAT 135 |
| Color            | Beige      | Purple     |
| Viscosity        | 45,000 cps | 150 cps    |
| Specific Gravity | 1.16       | 1.03       |

| CATALYZED                |              |
|--------------------------|--------------|
| MIX RATIO 10:1 by weight |              |
| PROPERTY                 | QM CAT 135   |
| Color                    | Light purple |
| Viscosity                | 31,000 cps   |
| Specific Gravity         | 1.11         |
| Work life*               | 40 minutes   |
| Tack-free time           | 4 - 6 hours  |
| Demold time              | 12 -16 hours |

\*Work life is defined as the amount of time required for the material to double in catalyzed viscosity.



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| CURED PROPERTIES   |         |
|--------------------|---------|
| 3 DAYS @ 25C       |         |
| Durometer, Shore A | 35      |
| Tensile Strength   | 500 psi |
| Elongation         | 400%    |
| Tear B             | 150 ppi |
| Linear Shrinkage   | < 0.3%  |

Styrene resistant specialty catalysts are also available. Please see individual catalyst data sheets for more information.

## CURE CHARACTERISTICS

The standard catalyst for QM 135 is QM Cat 135 catalyzed at a 10:1 ratio (base:catalyst) by weight. In order to achieve optimum physical properties and hardness from QM 135 the use of QM Cat 135 is highly recommended. 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.

The curing process begins as soon as the catalyst is mixed with the base. The material will cure as described in the data above under normal temperature (25C) and humidity conditions (50% RH). Because this system is sensitive to heat and humidity, a change in cure speed may be observed if one or both of these variables are altered. A large difference in temperature (+/- 5C) or humidity (> 60-70%) may alter 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.

## MIXING

QSi recommends that the catalyzed material be tested on a small area of the mold prior to use.

QM 135 should be thoroughly mixed with QM Cat 135 using a 10:1 ratio (base:catalyst) by weight. Shake the catalyst well before use. Material should be mixed in a clean, compatible metal or plastic container. 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-aeration.

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.



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### **DE-AERATION**

Air trapped during mixing should be removed by vacuum at 29 inches of mercury. During the process the material will expand and intermittent evacuation may be required. Typically after releasing the vacuum 2-3 times the mass will collapse on itself at which time the vacuum should be left on for an additional 2-4 minutes.

### **STORAGE AND SHELF LIFE**

If QM 135 and QM Cat 135 are stored in their original unopened containers, in an environment that does not exceed 38C (100F) then QSi will warranty the material for a period of 6 months from the date of shipment.

### **DISCLAIMER**

The technical data listed is provided for reference only and is not intended as product specifications. QSi has the capability to customize products as requested. For sales and technical assistance please contact customer service at **(804) 271-9010** or **1-800-852-3147**.

*Visit our website at [www.quantumsilicones.com](http://www.quantumsilicones.com).*