



Technical Data Sheet

QM Cat 140

Quantum Silicones' Condensation Cure
Moldmaking Catalyst for QM 140

Product Description

Quantum Silicones' QM Cat 140 is a two component, room temperature condensation cure catalyst for QM 140. This catalyst is our standard catalyst for QM 140.

The cured rubber has excellent mechanical properties and good shelf-life stability. For applications requiring slower cure, QM Cat Blue is available. However, Quantum Silicones recommends the utilization of QM Cat 140 for the best possible product performance.

Key Features

- Long work life
- Fast demold time
- Excellent physical properties and dimensional stability

Main Application

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

Typical Properties

UNCURED PROPERTIES	
Appearance	Purple
Viscosity, cps	250
Specific Gravity, g/cm ²	1.03
Mix Ratio	10:1 by weight

CATALYZED PROPERTIES-QM CAT 140 ⁽¹⁾	
Catalyzed Color	Light Purple
Pot Life ⁽²⁾ (minutes)	~45 minutes
Tack-Free Time(hours)	4 to 6 hours
Demold Time(hours)	12 to 16 hours

(1) Thixotropic and styrene resistant specialty catalysts are available. Please see individual data sheets for more information.

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

Final Properties

See individual data sheet for QM 140

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 resin, it is recommended that the rubber be allowed to cure for 48 hours.

The standard catalyst for QM 140 is QM Cat 140 at a 10% level **by weight**. In order to achieve optimum physical properties and hardness from QM 140 the use of QM Cat 140 is highly recommended. QM Cat Blue is available for those needing a longer working time or those hand mixing larger quantities of QM 140. Faster cure can be obtained using DBT or a higher level of QM Cat 140. However, rapid cure of condensation cure moldmaking rubber often results 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 the QM 140 and 10 parts, **by weight**, of QM Cat 140 into a clean, compatible metal or plastic container. Shake the catalyst well before use. The volume of the container should be 3 to 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 to 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 to 3 times the mass will collapse on itself at which time the vacuum should be left on only 2 to 4 minutes longer. For best results, machine mixing is recommended.

Shelf-life and Storage

The QM 140 and QM Cat 140 should be stored in their original, sealed containers in an environment that does not exceed 90° F. 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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