



Technical Data Sheet

QM Cat Blue

Quantum Silicones' Condensation Cure
Moldmaking Catalyst

Product Description

Quantum Silicones' QM Cat Blue is a two component, room temperature condensation cure catalyst for the QM 100 series. The cured rubber has excellent mechanical properties and good shelf-life stability. This catalyst is recommended for applications where long pot-life is essential. For applications that require standard curing times,

QM Cat Purple is available. For applications that require a very quick curing system, QM Cat Red 3 is available.

Key Features

- Long work life
- 24 hour demold time
- Excellent physical properties

Main Application

- Molds for polyurethane and polyester resin castings
- Molds where hand mixing is required
- Glove molding applications

Typical Properties

UNCURED PROPERTIES	
Appearance	Blue
Viscosity, cps	100
Specific Gravity, g/cm ²	1.03
Mix Ratio	10:1 by weight

CATALYZED PROPERTIES-QM CAT BLUE ⁽¹⁾	
Catalyzed Color	Light Blue
Pot Life ⁽²⁾ (minutes)	~45 to 90 minutes
Tack-Free Time(hours)	6 to 8 hours
Demold Time(hours)	16 to 24 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 sheets for QM 100 series

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 slowest catalyst for the QM 100* series is Cat Blue at 10% level **by weight**. QM Cat Purple is the standard catalyst for the QM 100 series and is faster than QM Cat Blue. Faster cure can be obtained using DBT, an increased level of QM Cat Blue, QM Cat Purple or QM Cat Red 3. However, rapid cure of condensation cure moldmaking rubber often results in a small sacrifice of physical properties or an increase in hardness.

*QM 100, QM 135 and QM 140 each require their own specific catalyst. Please see individual data sheets for details.

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 100 series base and 10 parts, **by weight**, of QM Cat Blue 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 100 series base and QM Cat Blue 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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