



## Technical Data Sheet

### QM Cat Clear FG

Quantum Silicones' Condensation Cure  
Moldmaking Catalyst

#### **Product Description**

Quantum Silicones' QM Cat Clear FG is a two component, room temperature condensation cure catalyst for QM 107, QM 113, QM 122, QM 128, and QM 140\*. QM Cat Clear FG is compliant with CFR 177.2600 when used as directed. The cured rubber has excellent mechanical properties and good shelf-life stability.

*\*Test data available upon request.*

#### **Key Features**

- CFR 177.2600 compliant when used with base listed above.
- Quick tack-free time
- Relatively fast demold time
- Minimal impact on cured physical properties

#### **Main Applications**

- Molds for polyurethane and polyester resin castings
- Indirect food contact applications governed by CFR 177.2600
- Molds where hand mixing is required
- Glove molding applications

#### **Typical Properties**

UNCURED PROPERTIES	
Appearance	Translucent
Viscosity, cps	300
Specific Gravity, g/cm <sup>3</sup>	1.01
Mix Ratio	10:1 <b>by weight</b>

CATALYZED PROPERTIES-QM CAT Clear FG <sup>(1)</sup>	
Catalyzed Color	Beige
Pot Life <sup>(1)</sup> (minutes)	~35 minutes
Tack-Free Time(hours)	4 to 6 hours
Demold Time(hours)	12 to 16 hours

(1)Pot lives will vary within the QM 100 series depending on base used. The pot life increases from 25-30 minutes for QM 140 to 40-45 minutes for QM 107

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

## **Final Properties**

See individual product data sheets.

## **CFR 177.2600**

Compliance with CFR 177.2600 is dependant on mixing at a 10:1 ratio, QM 107, 113, 122, 128, 140 series base to QM Cat Clear FG. Any compositional deviation will result in the material being non-compliant, due to lack of extraction testing on that particular composition. This applies to off ratio mixing as well as the use of any additives.

Suitability for any application is to be determined by the end-user. This material has not been subjected to tests appropriate for medical device or pharmaceutical applications. QUANTUM SILICONES MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MECHANABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE WITH RESPECT TO THE PRODUCT TO WHICH THE ABOVE INFORMATION REFERS.

## **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 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.

## **Mixing and De-aeration**

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

Charge 100 parts, **by weight**, of the QM series base and 10 parts, **by weight**, of QM Cat Clear FG 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 series base and QM Cat Clear FG 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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