



Technical Data Sheet

QM 100

Quantum Silicones' Clear 30 Durometer Condensation Cure Material

Product Description

Quantum Silicones' QM 100 is a two component, room temperature condensation cure silicone material. The cured rubber is a crystal clear, 10:1 mix ratio, material designed specifically for the special effects market. The materials' clarity allows for its' use as fake ice, fake glass or any application where clarity is required.

Key Features

- Low viscosity
- Clarity
- 10:1 mix ratio
- Fast demold time
- Clear, pigment able

Main Application

- Special Effects
- Fake Ice
- Fake Glass
- Applications where pigmentation is required

Typical Properties

UNCATALYZED PROPERTIES	
Mix Ratio	10:1 by weight
BASE	QM 100
Base Appearance	Clear
Base Viscosity, cps	~700
Base Specific Gravity, g/cm ²	0.97
CATALYST	QM CAT 100
Catalyst Appearance	Clear
Catalyst Viscosity, cps	~20
Catalyst Specific Gravity, g/cm ²	0.92

Typical Properties Continued

CATALYZED PROPERTIES-QM 100	
PROPERTY	QM CAT 100
Catalyzed Color	Clear
Work Time ⁽¹⁾ (minutes)	>35 minutes
Demold Time (hours)	4 to 6 hours

TYPICAL CURED PROPERTIES (3 DAYS @ 25C)	
Durometer, Shore A	30
Linear Shrinkage, %	<0.3

(1)Work Time is defined as the time at which the catalyzed material has gelled.

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

The catalyst for QM 100 is QM Cat 100 at a 10% level **by weight**. Faster cure can be obtained using DBT or a higher level of QM Cat 100. 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 QM 100.

Charge 100 parts, by **weight**, of QM 100 and 10 parts, **by weight**, of QM Cat 100 into 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-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 100 and QM Cat 100 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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