



Technical Data Sheet

QM 230

Quantum Silicones' 30 Durometer Addition Cure
Moldmaking Material

Product Description

Quantum Silicones' QM 230 is a two component, room temperature addition cure silicone material. The cured rubber has excellent mechanical properties and good shelf-life stability. This material is a good choice for the molding of furniture, picture frames and architectural materials. In addition, this QM 230 is exceptionally good where highly detailed parts and mold flexibility are required.

Key Features

- Low viscosity
- Fast demold time
- Casting resin resistance
- Excellent flexibility
- Complies with FDA indirect food contact regulation CFR 177.2600

Main Applications

- Molds for architectural replication
- Molds for polyester, epoxy, and rigid or foam polyurethane resin casting
- Molds for technical articles and prototypes
- Molds for furniture and picture frame replication
- Candy and other food molds
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Typical Properties

| UNCATALYZED PROPERTIES | |
|--|-----------------------|
| Mix Ratio | 10:1 by weight |
| BASE | |
| Base Appearance | Beige |
| Base Viscosity, cps | 20,000 |
| Base Specific Gravity, g/cm ² | 1.32 |
| CATALYST | |
| Catalyst Appearance | Dark Blue |
| Catalyst Viscosity, cps | 2,000 |
| Catalyst Specific Gravity, g/cm ² | 0.97 |

Typical Properties Continued

| CATALYZED PROPERTIES-QM 230 | |
|------------------------------------|---------------|
| PROPERTY | QM 230 |
| Catalyzed Color | Dark Blue |
| Catalyzed Viscosity, cps | ~10,000 |
| Pot Life ⁽¹⁾ (minutes) | 35 minutes |
| Demold Time(hours) | 6 to 8 hours |

| TYPICAL CURED PROPERTIES (3 DAYS @ 25C) | |
|--|--------------|
| Durometer, Shore A | 30 |
| Tensile Strength, psi | 570 |
| Elongation, % | 710 |
| Linear Shrinkage, % | <0.1 |
| Useful Temperature Range | -60C to 204C |

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

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 resins, it is recommended that the rubber be allowed to cure for 48 hours. For best results, QM 230A and QM 230B components of the **same lot number** should be used.

Mixing and De-aeration

The following procedure should be followed for obtaining optimal performance.

Charge 100 parts, **by weight**, of QM 230A and 10 parts, **by weight**, of QM 230B into a clean, compatible metal or plastic container. Shake the catalyst well before use.

When hand mixing; accurate weighing of components on a suitable scale is essential for optimal product performance. 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.

* Machine mixed material does not normally need to be de-aired.

Shelf-life and Storage

QM 230A and QM 230B should be stored in their original, sealed containers in an environment that does not exceed 90F. Under these conditions the expected shelf-life of the material is 12 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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