



Technical Data Sheet

QM 255

*Quantum Silicones' 55 Durometer Addition Cure
Moldmaking Material*

Product Description

Quantum Silicones' QM 255 is a room temperature addition, platinum catalyzed silicone rubber. The cured rubber has excellent mechanical properties and good shelf-life stability. This material is a good choice for moldmaking of furniture, picture frames, and architectural materials. In addition, this material is exceptionally good where high part detail and mold stability is required.

Key Features

- Casting resin resistance
- Fast demold time
- Excellent dimensional stability

Main Applications

- Molds for architectural replication
- Molds for polyester, epoxy resin casting, and rigid or foam polyurethane
- Molds for technical articles and prototypes
- Molds for furniture and picture frame replication

Typical Properties

UNCATALYZED PROPERTIES	
Mix Ratio	10:1 by weight
BASE	QM 255A
Base Appearance	Beige
Base Viscosity, cps	45,000
Base Specific Gravity, g/cm ³	1.33
CATALYST	QM 255B
Catalyst Appearance	Black
Catalyst Viscosity, cps	2,000
Catalyst Specific Gravity, g/cm ³	0.98

Typical Properties Continued

CATALYZED PROPERTIES-QM 255	
PROPERTY	QM 255
Catalyzed Color	Gray
Catalyzed Viscosity, cps	~35,000
Pot Life ⁽¹⁾ (minutes)	90 minutes
Demold Time(hours)	6 to 8 hours

TYPICAL CURED PROPERTIES	
Durometer, Shore A	55
Tensile Strength, psi	~580
Elongation, %	~390
Tear B, ppi	~80
Linear Shrinkage, %	nil
Useful Temperature Range	-60C to 204C

(1)Pot Life is defined as the time at which the catalyzed material gels.

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 255A and QM 255B components of the **same lot number** should be used.

Mixing and De-aeration

The following procedure should be followed for obtaining optimal performance from the QM 255.

Charge 100 parts, **by weight**, of QM 255A and 10 parts, **by weight**, of QM 255B into a clean, compatible metal or plastic container. **When hand mixing; accurate weighing of components on a suitable scale is essential for optimal product performance.** Shake the catalyst well before use. 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 255A and QM 255B 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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