



# Technical Data Sheet

## QM 231

30 Shore A, Translucent, Addition Cure Moldmaking Material

### PRODUCT DESCRIPTION

QM 231 is a two-component, room temperature, addition cure, silicone material. The cured rubber has excellent mechanical properties and good shelf-life stability. This material has been designed for the prototyping industry. However, it is also a good choice for the molding of furniture, picture frames and architectural materials.

### KEY FEATURES

- Translucent
- Fast demold time
- Excellent physical properties
- Excellent dimensional stability
- Casting resin resistance

### MAIN APPLICATIONS

- Molds for rapid prototyping
- 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

### TYPICAL PROPERTIES

UNCATALYZED		
TEST	QM 231 A	QM 231 B
Appearance	Translucent	Clear
Viscosity	70,000	800
Specific Gravity	1.10	0.98

CATALYZED	
MIX RATIO 10:1 by weight	
PROPERTY	RESULT
Catalyzed color	Translucent
Catalyzed viscosity	50,000 cps
Work life at 25°C *	5 hours
Demold time	18 - 24 hours

\* Work life is defined as the time required for the material to double in catalyzed viscosity.



## Technical Data Sheet

CURED PROPERTIES	
3 days at 25°C	
PROPERTY	RESULT
Durometer, Shore A	30
Tensile	700 psi
Elongation	511 %
Tear	91 ppi
Linear Shrinkage	< 0.1 %
Useful temperature range	- 55°C - 204°C

### CURE CHARACTERISTICS

QM 231 A is catalyzed with QM 231 B at a 10:1 ratio (base:catalyst) by weight. In order to achieve optimum performance the same lot number of QM 231 A and QM 231 B should be used.

The curing process begins as soon as the catalyst is mixed with the base. The material will cure as described in the data above under normal temperature (25°C) and humidity conditions (50% RH). Because this system is sensitive to heat and humidity, a change in cure speed may be observed if one or both of these variables are altered. A large difference in temperature (+/- 5°C) or humidity (> 60% – 70%) may alter the cure profile of the material.

### MIXING

QSi recommends that the catalyzed material be tested on a small area of the mold prior to use.

Combine ten parts of QM 231 A with one part of QM 231 B by weight into a clean, compatible container and mix by hand or with mixing equipment until a uniform consistency is observed. Accurate weighing of components on a suitable scale is essential for optimal product performance. The material should have a uniform color with no visible striations.

### DE-AERATION

Air trapped during mixing should be removed by vacuum at 29 inches of mercury. During the process, the material will expand and intermittent evacuation may be required. Typically after releasing the vacuum 2 - 3 times, the mass will collapse on itself at which time the vacuum should be left on for an additional 2 - 4 minutes.

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



## Technical Data Sheet

### STORAGE AND SHELF LIFE

If QM 231 A and QM 231 B are stored in their original unopened containers, in an environment that does not exceed 38°C (100°F) then QSi will warranty the material for a period of 12 months from the date of shipment.

### DISCLAIMER

The technical data listed is provided for reference only and is not intended as product specifications. QSi has the capability to customize products as requested. For sales and technical assistance please contact customer service at **(804) 271-9010** or **1-800-852-3147**.

*Please be sure to visit our website daily for our complete product portfolio, new product introductions and more! [www.quantumsilicones.com](http://www.quantumsilicones.com)*

### **Quantum Silicones Headquarters**

*7820 Whitepine Road  
Richmond, VA 23237*

### **Manufacturing, Research and Development Facility**

*8021 Reycan Road  
Richmond, VA 23237*

**Phone: 804-271-9010**

**Fax: 804-271-9055**

**Toll Free: 800-852-3147**