



Technical Data Sheet

QM 2225

Quantum Silicones' 25 Durometer Condensation Cure
Moldmaking Material

Product Description

Quantum Silicones' QM 2225 is a room temperature condensation cure silicone material. The cured rubber has excellent mechanical properties and good shelf-life stability. This material is an excellent choice for the molding of intricate patterns, skin molding and applications where dimensional stability, higher durometer and extremely tough rubber are required.

Key Features

- Low specific gravity
- High tear strength
- Low viscosity
- Long work-life
- Fast demold time
- Excellent flowability

Main Applications

- Molds for large and small statues
- Molds for polyester, polyurethane and epoxy resin castings
- Molds for technical articles and prototypes
- Molds for furniture and picture frame replication
- Molds for GFRC pre-cast

Typical Properties

UNCATALYZED PROPERTIES		
Mix Ratio	10:1 by weight	
BASE	QM 2225	
Base Appearance	White	
Base Viscosity, cps	57,000	
CATALYST	Moldmaster Purple	Moldmaster Red
Catalyst Appearance	Purple	Red
Catalyst Viscosity, cps	<150	<150

Typical Properties Continued

CATALYZED PROPERTIES-QM 2225		
PROPERTY	Moldmaster Purple	Moldmaster Red
Catalyzed Color	Dark Purple	Light Red
Catalyzed Viscosity, cps	32,700	32,700
Specific Gravity, g/cm ²	1.09	1.09
Pot Life ⁽¹⁾ (minutes)	~90 minutes	~45 minutes
Tack-Free Time	~6-8 hours	~4-6 hours
Demold Time	~10-12 hours	~6-8 hours

TYPICAL CURED PROPERTIES (3 DAYS @ 25C)	
Durometer, Shore A	21 to 25
Tensile Strength, psi	>400
Elongation, %	>400
Tear B, ppi	>120
Linear Shrinkage, %	<0.25

(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.

The standard catalyst for QM 2225 is QM Moldmaster Purple at a 10% level, **by weight**. Faster cure can be obtained by using DBT or an increased level of QM Moldmaster Purple. 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 2225.

Charge 100 parts, **by weight**, of QM 2225 and 10 parts, **by weight**, of QM Moldmaster Purple into a clean, compatible metal or plastic container. 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.

Shelf-life and Storage

QM 2225 and QM Moldmaster Purple 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 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.

Quantum Silicones
8021 Reycan Rd
Richmond, VA 23237
Phone (804) 271-9010 Fax (804) 271-9055
Customer Service (800)852-3147
www.quantumsilicones.com