



Technical Data Sheet

QM 2223

23 Shore A, Condensation Cure Moldmaking Material

PRODUCT DESCRIPTION

QM 2223 is a two-component, 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 high durometer, dimensional stability and extremely tough rubber are required. A variety of catalysts are offered with this material.

KEY FEATURES

- Low specific gravity
- 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					
PROPERTY	QM2223	MM PURPLE	MM GREEN	MM BLUE	MM RED
Color	White	Purple	Green	Blue	Red
Viscosity	50,000 cps	150 cps	150 cps	150 cps	150 cps
Specific Gravity	1.16	1.00	1.00	1.00	1.00



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CATALYZED				
MIX RATIO 10:1 by weight				
PROPERTY	MM PURPLE	MM GREEN	MM BLUE	MM RED
Color	Light Purple	Light Green	Light Blue	Light Red
Viscosity	32,000 cps	32,000 cps	32,000 cps	32,000 cps
Specific Gravity	1.05	1.05	1.02	1.09
Work life at 25°C *	60 minutes	60 minutes	30 minutes	30 minutes
Tack-free time	4 - 6 hours	4 - 6 hours	3 - 5 hours	4 - 6 hours
Demold time	8 - 10 hours	8 - 10 hours	6 - 8 hours	6 - 8 hours

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

CURED PROPERTIES	
3 DAYS @ 25°C	
Durometer, Shore A	23
Tensile Strength	400 psi
Elongation	350 %
Tear B	30 ppi
Linear Shrinkage	< 0.25 %

CURE CHARACTERISTICS

The standard catalyst for QM 2223 is Moldmaster Blue catalyzed at a 10:1 ratio (base:catalyst) by weight. Faster cure can be obtained using DBT, Moldmaster Red, Moldmaster Blue or a higher level of Moldmaster Purple. However, rapid cure of condensation cure moldmaking materials can often result in a small sacrifice of physical properties or an increase in hardness.

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. 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.



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MIXING

All condensation cure catalysts should be thoroughly mixed prior to catalyzation.

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

QM 2223 should be thoroughly mixed with the catalyst of choice using a 10:1 ratio (base:catalyst) by weight. Shake the catalyst well before use. Material should be mixed in 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 during de-aeration.

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.

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.

STORAGE AND SHELF LIFE

If QM 2223 and the catalyst of choice 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 6 months from the date of shipment.



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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**.

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