



Technical Data Sheet

QM 255

55 Shore A, Addition Cure Moldmaking Material

PRODUCT DESCRIPTION

QM 255 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. QM 255 is exceptionally good where highly detailed parts and mold flexibility are 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		
TEST	QM 255 A	QM 255 B
Appearance	Beige	Black
Viscosity	45,000 cps	2,000 cps
Specific Gravity	1.35	0.98

CATALYZED	
MIX RATIO 10:1 by weight	
PROPERTY	RESULT
Catalyzed color	Gray
Catalyzed viscosity	35,000 cps
Work life at 25°C *	20 minutes
Demold time	6 - 8 hours

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



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CURED PROPERTIES	
3 days at 25°C	
PROPERTY	RESULT
Durometer, Shore A	55
Tensile	~ 450 psi
Elongation	~ 400 %
Tear	~ 80 ppi
Linear Shrinkage	< 0.1 %
Useful temperature range	- 55°C - 204°C

CURE CHARACTERISTICS

QM 255 A is catalyzed with QM 255 B at a 10:1 ratio (base:catalyst) by weight. In order to achieve optimum performance the same lot number of QM 255 A and QM 255 B **must 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.

QM 255 B should be thoroughly mixed prior to catalyzation.

Combine ten parts of QM 255 A with one part of QM 255 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.

The mix ratio is critical for this grade. Physical properties may be compromised if mixing outside of 100:9.75 (base:catalyst) to 100:10.25 (base:catalyst).

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.



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STORAGE AND SHELF LIFE

If QM 255 A and QM 255 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.

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