TECHNICAL DATA SHEET



QM 140 2 part moldmaking material

Description	Property	Test Method	Value
QM 140 is a two-component, room temperature, condensation	Uncured Product		
cure, silicone material. The cured rubber has excellent mechanical properties and good shelf-life stability. This material	Cure Profile		3 days, 25°C, 50% humidity
is an excellent choice for the molding of intricate patterns, skin molding and applications where high durometer, dimensional	Cure Type		Condensation
stability and extremely tough rubber are required. Key Features	De-mould Time / Full Cure at 23°C/73°F		4 - 6 hrs
High tear strength	Density A	BS ISO 2781	1.16
 Low viscosity 	Density B	BS ISO 2781	1.01
Fast de-mold time	Mix Ratio By Weight		10:1
Excellent dimensional stability	Rheology		Liquid
 Key Applications Complies with FDA indirect food contact regulation CFR 	Tack Free Time / Skin Formation at 23°C/73°F		4 - 6 hr
177.2600, when used with QM Cat Clear FG. Refer to QM Cat Clear FG data sheet for typical properties.	Viscosity A	Brookfield	50000 cP
Application	Viscosity Mixed	Brookfield	37000 cP
Technical articles, prototypes, furniture, picture frames, PU,	Cured Product		
epoxy and polyester casting resins	Color		Purple
Use and Cure Information	Density	BS ISO 2781	1.14 g/cm3
CURE CHARACTERISTICS	Elongation at Break	ISO 37	300 %
The standard catalyst for QM 140 is QM Cat 140 catalyzed at a 10:1 (base:catalyst) ratio by weight. In order to achieve optimum	Hardness Shore A	ASTM D 2240-	
physical properties and hardness from QM 140 the use of QM		95	0.0.0/
Cat 140 is highly recommended. Faster cure can be obtained	Linear Shrinkage (%)		<0.3 %
using DBT or a higher level of QM Cat 140. However, rapid cure	Tear Resistance (N/mm)	BS ISO 34-1	27.8 N/mm / 159 ppi
of QM 140 can often result in a small sacrifice of physical properties or an increase in hardness. The curing process begins	Tensile Strength	ISO 37	4.48 N/mm2 / 650 psi
as soon as the catalyst is mixed with the base. The material will	Storage		
cure as described in the data above under normal temperature	Max Storage Temperature		38 °C / 100 °F
(25°C) and humidity conditions (50% RH). Because this system is	Shelf Life		12 mthe

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

difference in temperature (+/- 5° C) or humidity (> $60\% - 70^{\circ}$) 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. MIXING

All condensation cure catalysts should be thoroughly mixed prior to catalyzation. CHT recommends that the catalyzed material be tested on a small area of the mold prior to use. QM 140 should be thoroughly mixed with QM Cat 140 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.

See product label and/or CoA for specific "Use By Date". Product should be stored in its original, unopened container. Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case, the properties required for the intended use should be checked for quality assurance reasons.

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UNCATALYZED					
TEST	QM 140	QM Cat 140	QM Cat Clear FG		
Color	Beige	Purple	Translucent		
Viscosity	50,000 cps	250 cps	300 cps		
Specific Gravity	1.16	1.01	1.01		

CATALYZED					
MIX RATIO 10:1 by weight					
PROPERTY	RESULT w/ QM Cat 140	RESULTS w/ QM Cat Clear FG			
Color	Light Purple	Beige			
Viscosity	37,000 cps	37,000 cps			
Specific Gravity	1.14	1.14			
Work life at 25°C *	45 minutes	45 minutes			
Tack-free time	4 - 6 hours	4 - 6 hours			
Demold time	12 - 16 hours	12 - 16 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				
PROPERTY	RESULT w/ QM Cat 140	RESULTS w/ QM Cat Clear FG		
Durometer, Shore A	40	30		
Tensile Strength	650 psi	650 psi		
Elongation	300%	530%		
Tear B	160 ppi	160 ppi		
Linear Shrinkage	< 0.3%	< 0.3%		

Thixotropic and styrene resistant specialty catalysts are also available. Please see individual catalyst data sheets for more information.

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