TECHNICAL DATA SHEET



12 mths

QM 118 2 part moldmaking material

Description	Property	Test Method	Value
QM 118 is a two-component, room temperature, condensation	Uncured Product		
cure, silicone material. The cured rubber is very soft, has excellent mechanical properties and good shelf-life stability. This	Cure Profile		3 days, 25°C, 50% humidity
material is an excellent choice for the molding of intricate patterns, skin molding or for applications which demand a tough	Cure Type		Condensation
rubber. The hardness of QM 118 is the midpoint of the QM100 series and therefore offers excellent physical properties. A variety	De-mould Time / Full Cure at 23°C/73°F		16 - 24 hrs
of catalysts are offered with this material.	Density A	BS ISO 2781	1.28
Key Features	Density B	BS ISO 2781	1.00
Low viscosity	Mix Ratio By Weight		10:1
Excellent physical properties	Rheology		Liquid
Fast de-mold time Application	Tack Free Time / Skin Formation at 23°C/73°F		6 - 8 hr
Molds of statues, prototypes, polyester, PU and epoxy	Viscosity A	Brookfield	20000 cP
Use and Cure Information	Viscosity B	Brookfield	100 cP
CURE CHARACTERISTICS	Viscosity Mixed	Brookfield	13500 cP
The standard catalyst for the QM 100* series is QM Cat Purple catalyzed 10:1 (base:catalyst) by weight. QM Cat Blue is	Cured Product		
recommended for those needing a longer working time or those	Color		Blue
hand mixing larger quantities of QM 118. Faster cure can be obtained using DBT, a higher level of QM Cat Purple, or QM Cat	Density	BS ISO 2781	1.24 g/cm3
Red 3. However, rapid cure of condensation cure moldmaking	Elongation at Break	ISO 37	500 %
rubber often results in a small sacrifice of physical properties or an increase in hardness. The curing process begins as soon as	Hardness Shore A	ASTM D 2240- 95	18
the catalyst is mixed with the base. The material will cure as described in the data above under normal temperature (25°C)	Linear Shrinkage (%)		<0.3 %
and humidity conditions (50% RH). Because this system is sensitive to heat and humidity, a change in cure speed may be	Tear Resistance (N/mm) Tensile Strength	BS ISO 34-1 ISO 37	20 N/mm / 114 ppi 2.9 N/mm2 / 421 psi
observed if one or both of these variables are altered. A large	3		•
difference in temperature (+/- 5°C) or humidity (> 60% - 70%)	Storage		
may alter the cure profile of the material. In addition, if the product	Max Storage Temperature		38 °C / 100 °F

is to be used with aggressive resins such as high styrene Shelf Life Shelf Life

cure for 48 hours. *QM 100, QM 135 and QM 140 each require their own specific catalyst. Please see individual data sheets for details. 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 118 should be thoroughly mixed with the chosen catalyst using a 10:1 (base:catalyst) ratio 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. 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.

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		UNCATALYZED)	
TEST	QM 118	QM CAT PURPLE	QM CAT BLUE	QM CAT RED 3
Color	Beige	Purple	Blue	Red
Viscosity	20,000 cps	100 cps	100 cps	100 cps
Specific Gravity	1.28	1.00	1.00	1.00

CATALYZED					
0.0000000000000000000000000000000000000	MIX RATIO 10:1 by weight				
PROPERTY	QM CAT PURPLE	QM CAT BLUE	QM CAT RED 3		
Color	Light Purple	Light Blue	Light Red		
Viscosity	13,500 cps	13,500 cps	13,500 cps		
Specific Gravity	1.24	1.24	1.24		
Work life at 25°C *	25 minutes	45 minutes	7 minutes		
Durometer shore A, 24 hours	15	15	15		
Tack-free time	4 - 6 hours	6 - 8 hours	45 - 60 minutes		
Demold time	12 - 16 hours	16 - 24 hours	4 - 6 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	18	
Tensile Strength	420 psi	
Elongation	500%	
Tear B	115 ppi	
Linear Shrinkage	< 0.3%	

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

Storage

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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