

QM Skin 30 2 part moldmaking material

Description

QM Skin 30 is a two-component, room temperature, condensation cure, silicone material. The cured rubber is very soft, has excellent mechanical properties and very low bleed in addition to good shelf-life stability. This material is an excellent choice for the molding of intricate patterns, skin molding and applications where low durometer, translucent material is required

Key Features

- Low viscosity
- High elongation (>1000%)
- Excellent retention of additional fluid
- Fast de-mold time, translucent and pigmentable

Key Applications

- Complies with FDA indirect food contact regulation CFR 177.2600, when used with QM Cat Clear FG. Refer to QM Cat Clear FG data sheet for typical properties.

Application

Special effects, skin replication, pigmentable

Use and Cure Information

CURE CHARACTERISTICS

The standard catalyst for QM Skin 30 is QM Cat Skin 30 catalyzed at a 10:1 ratio (base:catalyst) by weight. Faster cure can be obtained using DBT or a higher level of QM Cat Skin 30. 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.

MIXING

CHT recommends that the catalyzed material be tested on a small area of the mold prior to use. QM Skin 30 should be thoroughly mixed with QM Cat Skin 30 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.

Property	Test Method	Value
Uncured Product		
Cure Type		Condensation
De-mould Time / Full Cure at 23°C/73°F		16 - 24 hrs
Density A	BS ISO 2781	1.12
Density B	BS ISO 2781	1.00 g/cm³
Drying / Fixing Conditions		3 days, 25°C, 50% humidity
Mix Ratio By Weight		10:1
Rheology		Liquid
Viscosity A-Part mPas	Brookfield	50000 mPas
Viscosity B-Part mPas	Brookfield	100 mPas
Viscosity Mixed mPas	Brookfield	30000 mPas
Cured Product		
Colour		Translucent
Density	BS ISO 2781	1.12 g/cm³
Elongation at Break (%)	ISO 37	1000 %
Hardness Shore A	ASTM D 2240-95	5
Linear Shrinkage (%)		<0.3 %
Tear Resistance (N/mm)	BS ISO 34-1	16.5 N/mm / 95 ppi
Tensile Strength (N/mm ²)	ISO 37	2.41 N/mm² / 349 psi
Storage		
Max Storage Temperature		38 °C / 100 °F
Shelf Life (mths)		12

The content set out in the technical data sheet does not contain information upon which you should rely. It is provided for general information purposes only and does not constitute a product specification. You must obtain professional or specialist advice before taking any action based on the information provided in the technical data sheet.

CHT make reasonable efforts to ensure that information set out in the technical data sheet is complete, accurate, and up-to-date. CHT do not, however, make any representations, warranties or guarantees (whether express or implied) that information set out in the technical data sheet is complete, accurate, or up-to-date or that the product will be suitable for your requirements. You should carry out your own testing to determine the applicability of such information and whether the product will be suitable. CHT reserve the right to modify the technical data sheet at any time.

The CHT technical service department is available to offer further information and advice and should it be needed to look at modifying current products or custom formulate a new one to meet your specific requirements. Please contact the technical service department.

CHT Germany GmbH: Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com / www.cht-silicones.com

UNCATALYZED		
PROPERTY	QM Skin 30	QM Cat Skin 30
Color	Translucent	Translucent
Viscosity	50,000 cps	100 cps
Specific Gravity	1.12	1.00

CATALYZED	
MIX RATIO 10:1 by weight	
PROPERTY	QM Cat Skin 30
Color	Translucent
Viscosity	30,000 cps
Specific Gravity	1.12
Work Life at 25 °C *	42 minutes
Tack-Free Time	8 – 12 hours
Demold Time	16 – 24 hours

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

CURED PROPERTIES	
3 DAYS at 25 °C	
Durometer, Shore A	5
Tensile Strength	350 psi
Elongation	1,000%
Tear B	95 ppi
Linear Shrinkage	< 0.30%

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.

Revision Date 29 Apr 2021
Revision No 1
Download Date 06 May 2021

The content set out in the technical data sheet does not contain information upon which you should rely. It is provided for general information purposes only and does not constitute a product specification. You must obtain professional or specialist advice before taking any action based on the information provided in the technical data sheet.

CHT make reasonable efforts to ensure that information set out in the technical data sheet is complete, accurate, and up-to-date. CHT do not, however, make any representations, warranties or guarantees (whether express or implied) that information set out in the technical data sheet is complete, accurate, or up-to-date or that the product will be suitable for your requirements. You should carry out your own testing to determine the applicability of such information and whether the product will be suitable. CHT reserve the right to modify the technical data sheet at any time.

The CHT technical service department is available to offer further information and advice and should it be needed to look at modifying current products or custom formulate a new one to meet your specific requirements. Please contact the technical service department.

CHT Germany GmbH: Postfach 12 80, 72002 Tübingen, Bismarckstraße 102, 72072 Tübingen, Germany
Telephone: 07071/154-0, Fax: 07071/154-290, Email: info@cht.com, Homepage: www.cht.com / www.cht-silicones.com