



A CHT GROUP  
COMPANY

**CHT**

## Technical Data Sheet

### Flex 25

28 Shore A, Condensation Cure Moldmaking Material

#### PRODUCT DESCRIPTION

Flex 25 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. Flex Cat 25 is the catalyst of choice with this material.

#### KEY FEATURES

- Low specific gravity
- High tear strength
- Low viscosity
- Long work-life
- Fast demold time
- Excellent dimensional stability

#### 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	Flex 25	Flex Cat 25
Color	Beige	Green
Viscosity	35,000 cps	150 cps
Specific Gravity	1.16	1.00



## Technical Data Sheet

<b>CATALYZED</b>	
<b>MIX RATIO 10:1 by weight</b>	
<b>PROPERTY</b>	<b>Flex Cat 25</b>
Color	Light Green
Viscosity	35,000 cps
Specific Gravity	1.13
Work life at 25°C *	60 minutes
Tack-free time	4 - 6 hours
Demold time	8 -10 hours

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

<b>CURED PROPERTIES</b>	
<b>3 DAYS @ 25°C</b>	
Durometer, Shore A	28
Tensile Strength	600 psi
Elongation	500 %
Tear B	160 ppi
Linear Shrinkage	< 0.25 %

### CURE CHARACTERISTICS

Flex 25 is catalyzed with Flex Cat 25 at a 10:1 (base: catalyst) ratio by weight. Faster cure can be obtained using DBT or a higher level of Flex Cat 25. 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.



## Technical Data Sheet

### **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.

Flex 25 should be thoroughly mixed with Flex Cat 25 catalyst using a 10:1(base: catalyst) ratio by weight. Shake the catalyst well before use. The 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**

This product is best when used within 24 months from the date of manufacture. See product label and/or CoA for specific "Use By Date".

The product should be stored in its original, unopened container in an environment that does not exceed 38°C (100°F).

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.



A CHT GROUP  
COMPANY

**CHT**

## Technical Data Sheet

### **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.

*Please be sure to visit our website daily for our complete product portfolio,  
new product introductions and more! [www.quantumsilicones.com](http://www.quantumsilicones.com)*

### **Quantum Silicones Headquarters**

*7820 Whitepine Road  
Richmond, VA 23237*

### **Manufacturing, Research and Development Facility**

*8021 Reycan Road  
Richmond, VA 23237*

**Phone: 804-271-9010**

**Fax: 804-271-9055**

**Toll Free: 800-852-3147**