

# BAKESIL™

FEB 2011  
TECHNICAL DATA SHEET

BakeSil™ is designed for mold making where FDA approval for food contact is desired or required. It is approved for repeated food contact, but is not approved for medicinal purposes or for use inside the human body. BakeSil is a platinum-catalyzed, addition reaction, flexible silicone with excellent tear resistance and tensile strength.

## TYPICAL APPLICATIONS

- Candy molds
- Baking Molds
- Ice Cream molds
- Applications requiring FDA food safe mold material

## TYPICAL PROPERTIES – AS SUPPLIED

### Part A Base-Component

- Color White

### Part B Catalyst

Color Clear

## TECHNICAL SPECIFICATIONS

Mixing Ratio: 10 Parts A to 1 Part B

Hardness: 37±4 Shore A

Mixed Color: White

Specific gravity 1.12%

Viscosity, mixed: 75,000 ± 15,000 cps

%Shrinkage: <0.15

Working time: 1.5 to 2.5 hours

Cure Time: 16 to 18 hours

Tensile strength: 850±50 psi

Elongation 350 ±25

Tear strength: 110±15 ppi

## GENERAL USE

**Safety of Use:** BAKESIL is safe for repeated food contact. Do not use this product for inside the body. As a caution, we strongly advise that you apply a small sample to the inside of the wrist of your to determine if there will be a negative reaction such as a redness or rash. Discontinue use should you observe such a reaction.

**Proper Application and Setting:** BAKESIL is a platinum-catalyst silicone and is therefore inhibited by latex such as rubber gloves and sulfurs such that you can find in certain clays. Masters containing sulfur, amines or tin compounds (including parts that have come in contact with tin catalyzed silicone rubbers such as MoldRite™ and SkinRite™ may show cure inhibition at the face of the mold. This can usually be prevented by thoroughly cleaning the model with naphtha or methylene chloride, releasing and checking the area by brushing on a small amount of catalyzed BakeSil rubber. After 24 hours this film must be cured and non-tacky. In the event that the contamination still exists, the model should be cleaned again and a thin film of acrylic or nitrocellulose lacquer base coat should be applied. This should serve as a barrier coat and allow a completely cured mold to be prepared. A test should always be run as outlined above to confirm compatibility.

**Temperature:** Store and use BAKESIL at room temperature (72°F / 23°C). Colder temperature will reduce setting time and warmer temperature will increase set time and shelf life. To increase set time you may place BAKESIL in the refrigerator overnight.

**Release:** Though normally is release is not needed you may find that by applying a light coat of PAM cooking spray will ease mold removal from the model. Thoroughly cover all parts of the model with a light coat.

## **MIXING GUIDELINES FOR BAKESIL TWO COMPONENT PLATINUM CURE MOLDMAKING SYSTEMS**

1. Stir the base (Part A) well before use (except when machine dispensing).
2. Shake the catalyst container (Part B) well before use.
3. Weigh the desired amount of base into a clean mixing container. Tip the container and roll the base all the way around the sidewall up to two inches from the top. This will prevent the catalyst from becoming absorbed into the container. It is recommended that the container be filled to not more than 1/3 the container depth to allow sufficient room for expansion if you intend to use a deaeration procedure.
4. Using a gram scale, weigh the proper amount of catalyst into the container. Mix the base and catalyst together by stirring with a stiff, flat-ended metal spatula until a uniform white color is obtained. Scrape the container walls and bottom well to insure a thorough mix.

The Next Steps will eliminate all air bubbles, but is not necessary as BAKESIL will set with minimum of air bubbles since both Parts A & B have been de-aired at the plant.

5. For a complete bubble-free mold, if available, place the container into a vacuum chamber and evacuate the entrapped air from the mixture using a vacuum pump capable of achieving 29 inches of mercury (at sea level) vacuum. The mixture will rise, crest and then collapse in the container. Interruption (bumping) of the vacuum may be necessary to prevent overflowing the container. Keep the mixture under full vacuum for 2-3 minutes after the material has receded in the container.
6. Bleed air slowly into the vacuum chamber. When the chamber is at atmospheric equilibrium, remove the cover plate and take out the container.
7. Apply the material by pouring into the mold using a high narrow stream and pouring into one spot to allow the silicone to envelope the model.
8. Allow the rubber to cure for at least 12 hours minimum before demolding

### **PROCESSING INFORMATION**

#### **CATALYZED PROCESSING PROPERTIES ARE AFFECTED BY TEMPERATURE AND HUMIDITY VARIATION**

1. For best results, mix and cure the material at 72°F (23°C) and 50% relative humidity.
2. Higher temperature and humidity will decrease the working life and pot life of the material. The faster cure will also affect the flow properties. Refrigeration of the base prior to use in hot environments has shown to improve the handling properties of this material.
3. Lower temperatures and humidity will increase the working life and pot life of the material. The slower cure will increase the flow time. Cure temperatures below 68°F (20°C) are not recommended and have been found to cause a reduction in final cure hardness and properties.
4. It is important that the catalyst containers are tightly closed after use. Catalyst exposed to air for extended periods of time will hydrolyze (cure). An indication of hydrolysis is a film or crust formation on the surface of the catalyst. The use of hydrolyzed catalyst is not recommended and may cause incomplete cure.

### **SAFETY PRECAUTIONS**

#### **USE MATERIAL IN ACCORDANCE WITH MATERIAL SAFETY DATA SHEET**

This rubber system uses a platinum catalyst. Though the material is deemed as skin-safe, testing prior to use is recommended. If any irritation, flushing with water for at least fifteen minutes should relieve discomfort. If irritation persists, obtain medical attention.

**KEEP PRODUCT AWAY FROM CHILDREN.**