

# HANDLING INSTRUCTIONS



## Handling and Application Instructions for Confectionery Coatings

### **Storage & Handling**

All confectionery coatings should be handled and applied with great care in order to achieve a desirable appearance and flavor. Confectionery coating should be stored in a cool, dry environment that is free of odors. It is recommended that all customers use a storage facility with a temperature of 55-65°F and less than 50% humidity for both ingredients and finished products. Any moisture, including free or atmospheric, will have a significant impact on the flow property of the coating and must be avoided.

### **Melting & Cooling**

Confectionery coatings should be melted with indirect heat, continuous agitation, and under controlled conditions. To achieve maximum efficiency and gloss, confectionery coating should be melted to approximately 120°F and then maintained at a temperature 5-10 degrees above the melt point of the coating. This is necessary to ensure all fat crystals are completely melted.

It is critical to not overheat confectionery coatings since burning of the sugar may occur creating off flavors and thickening the product. A browning reaction may also occur when maintaining a melted temperature over a long period of time, most notably in white coatings, due to reducing sugar and protein interactions.

Once applied, the coating should be exposed to forced cold air (40-45°F or cooler, depending on the amount of coating to be cooled) until the coating is completely set. In a cooling tunnel, it is recommended that the entrance and exit of the tunnel be about 50-55°F and the middle of the tunnel be 40-45°F.

### **Shelf Life**

When stored under proper conditions, our stock list of confectionery coatings has the following shelf life:

Bulk -	Formula dependent - max 120°F, lowest temperature is ideal
Wafers -	12 months from date of manufacture
Drops/Chunks -	12 months from date of manufacture

Shelf life above guarantees functionality as stated on the product specification. Sensory and analytical evaluations are recommended at the shelf life limits to determine quality and functionality of the confectionery coating.



## Confectionery Coating Checklist - Compound Coatings

**Is the coating properly stored?** Storing coating is recommended at 55-65°F with less than 50% humidity. Since moisture has such an adverse effect on the functionality of the coating (becomes viscous and thick), it is critical to maintain proper storage.

**Does the coating look good in its raw material form?** If the coating looks fine in the raw material form, it should look fine in the finished product form. You may see some scuffing of the chocolate products due to movement and contact in the case. Melt the coating and see how it looks after it sets up.

**Is the coating used with another food item and are they compatible?** Confectionery coating is a fat-based product and should not be used with foods high in moisture content (exposed) or with foods which adversely affect the functionality of the coating.

**Is the coating properly melted?** Coating is usually melted in large water-jacketed melting tanks (commercial) or microwaves in 20-30 second intervals (residential) until the coating is approximately 120°F and then maintained at a temperature 5-10 degrees above the melting point of the coating. Extreme over-heating will cause the sugar crystals to burn and result in discoloration. Double boilers are not recommended since the coating may absorb some of the escaped moisture. Avoid water at all times. Coating should also be thoroughly agitated before application since fat migration to the surface may take place during the melting process.

**Is the coating properly applied?** Are the molds dirty? Is the temperature of the food close to the temperature of the applied coating? Drastic changes in temperature between the applied coating and the matrix receiving the application may promote bloom under certain conditions. Keeping those temperatures similar will prevent moisture from forming.

**Is the coating properly cooled?** Are your cooling temperatures cold enough? The general rule for palm kernel oil is 'the colder the better'. The faster the fat starts to crystallize, the best shine you will experience. We recommend 40-45°F. If your ambient temperature is unusually warm, raise your exit temperatures (cooling) so condensation will not form on the finished product.

**Is the end product properly packaged?** Air and light can affect the flavor profile due to lipid oxidation. Keeping coating in a cool, dark, and dry place will ensure a long shelf life.



## Handling and Application Instructions for Real Chocolate

### **Molding**

Tempered chocolate is pumped into a hopper. It is necessary to control and maintain temperature as well as balance the level of usage and replenishment. Molds must be clean and dry, and free of residue, water spots, oils, old chocolate, and foreign material. It is recommended that molds be periodically cleaned to ensure the best appearance of the molded product.

### **Cooling**

Proper cooling is as important as the tempering process itself. Proper cooling ensures the chocolate does not lose temper and results in a final product that is free of fat bloom, has good gloss and snap, and has the correct crystal size and type. When properly cooled, chocolate will release easily from a mold or surface. Ideally, the cooling tunnel will have good air flow and circulation, with individual zone control. Cooling tunnels typically have at least 3 cooling zones and use air that has a low relative humidity. Recommended zone temperatures are as follows:

Zone 1: 60 – 65°F

Zone 2: 45 – 50°F

Zone 3: 60 – 65°F

The increase in temperature at the exit zone prevents condensation from forming on the chocolate, which will lead to sugar bloom. Residence time in the tunnel must be adequate for proper cooling. This is achieved by having the appropriate tunnel length and belt speed.

### **Shelf Life**

When stored under proper conditions, chocolate has the following shelf life:

Bulk -	Formula dependent - max 120°F, lowest temperature is ideal
Wafers/Pails -	12 months from date of manufacture
Drops/Chunks -	12 months from date of manufacture

Shelf life above guarantees functionality as stated on the product specification. Sensory and analytical evaluations are recommended at the shelf life limits to determine quality and functionality of the confectionery coating.



## Handling and Application Instructions for Real Chocolate

### ***Storage & Handling***

All chocolate should be handled and applied with great care in order to achieve a desirable appearance. Chocolate should be stored in a cool, dry environment that is free from odors. It is recommended that all customers use a storage facility with a temperature of 55-65F and less than 50% humidity for both ingredients and finished products. Any moisture, including free or atmospheric, will have a significant impact on the flow property of the chocolate and must be avoided. Transportation should also be controlled to not exceed 60 – 70°F and 60% humidity. Chocolate should not be frozen, as the product has a high likelihood of exhibiting bloom after returning to room temperature.

### ***Melting***

Chocolate should be warmed to 115 – 120° F with indirect heat, continuous agitation, and under controlled conditions. This is necessary to ensure all fat crystals are completely melted. Not completely melting the chocolate can result in tempering issues. It is critical not to overheat chocolate. Burning of the sugar may occur, creating off flavors and thickening of the product.

### ***Chocolate Tempering***

After complete melting, the chocolate must be cooled to the proper seeding temperature. The seeding temperature is 84-86F for dark chocolate and 82-84F for milk chocolate. To complete tempering, dark chocolate must be warmed to 88 – 90° F, milk chocolate warmed to 86 – 88° F. Temperatures are approximate and can vary based on formulation. Exact tempering parameters will depend on the type of tempering equipment used.

### ***Enrobing***

Tempered chocolate is pumped into the enrober hopper. It is necessary to control and maintain temperature as well as balance the level of usage and replenishment. Product to be enrobed should be approximately 70° F at the time of enrobing. If too hot or too cold, it will de-temper the chocolate resulting in fat bloom or a dull appearance, respectively. Adjustment of blowers is recommended to increase or decrease chocolate pickup, rather than adjustment of temperature, which can de-temper the chocolate. The temperature of the blower air should closely match that of the tempered chocolate.



## Handling and Application Instructions for Satin Crème Fillings

### ***Storage & Handling***

All fillings should be handled and applied with great care in order to achieve a desirable appearance and flavor. Satin Crème fillings should be stored in a cool, dry environment that is free of odors. It is recommended that all customers use a storage facility with a temperature of 55-65°F and less than 50% humidity for both ingredients and finished products. Any moisture, including free or atmospheric, will have a significant impact on the flow property of the filling and must be avoided.

### ***Melting & Mixing***

Satin Crème fillings do not need to be heated before use. However, the filling may be heated to achieve desired flowability. If the filling is heated, use indirect heat and continuous agitation. Satin Crème fillings need not be heated to temperatures higher than 100°F.

It is critical to not overheat fillings since burning of the sugar may occur creating off flavors and thickening the product. A browning reaction may also occur when maintaining a high temperature over a long period of time, most notably in white fillings, due to reducing sugar and protein interactions.

Before use, pails or barrels of fillings must be thoroughly mixed to ensure a uniform distribution of fat in the product.

### ***Shelf Life***

When stored under proper conditions, Satin Crème fillings have the following shelf life:

Pails/Barrels -           6 months from date of manufacture

Shelf life above guarantees functionality as stated on the product specification. When stored properly, actual shelf life of fillings may exceed the recommended 6 month period. Sensory and analytical evaluations are recommended at the shelf life limits to determine quality and functionality of the filling.