

EcoSoya® Pillar Blend (PB) Instructions

MELT POINT 130°F (54.4°C)

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Some scents may react poorly causing bleed, objectionable frosting, or poor flame quality. Trying a different scent and/or scent manufacturer may correct this. For best results, test a variety of different fragrances and fragrance manufacturers.

Wicking

PB requires larger wicking than paraffin. Wicks such as paper cored, cotton cored, or metal cored should be avoided as they tend to cause sooting and carbon build-up. PB tends to burn more down rather than out creating a Hurricane Candle effect in pillar candles.

Scent, color, and candle configuration have a great impact on the best wick choice. Too large of a wick may cause sooting, quick burn times, and guttering (wax leaking through the side of the candle).

The following table, *listed in no particular order*, suggests a **starting** point for the type and size of wicks to begin testing with; note that adjustments *may* be needed. Keep wicks trimmed to ¼ inch (0.6 cm). If you experience poor flame quality or stability, try a different type of wick. Test burning should be done after the candle has had a chance to set up and cure for 48 hours after pouring.

Molds

Molds should be clean and at ambient temperature. Conditioning is recommended for new and/or recently washed molds, and molds previously used with paraffin. This simply involves thoroughly wiping the inside walls of the mold with warm soybean/vegetable oil.

Dyes

Most dyes (powder, liquid, chips, blocks, etc.) work with PB. To achieve better color depth, use about 30% more dye. When using powder dyes, heat the wax to 190°F (87.8°C), add the dye, and mix until completely dissolved. Powder dyes may also be dissolved in fragrances and then added to the melted wax (be sure the dye has dissolved completely before adding). **If choosing to add powder dyes dissolved in fragrance, liquid dyes, color blocks, chips or no dye, heat the wax to 155°F (68.3°C).*

Fragrance

Many fragrances work in PB, **especially those designed for soy wax in general.** (Visit www.ngiwax.com for Fragrance Program suggestions.) Recommended maximum scent load is about 12%. To minimize scent loss, add scent prior to pouring but at a wax temperature no less than 145°F (61.1°C). When targeting optimal pour temperature, accommodate for temperature drop due to the addition of the cooler scent.

Wick Suggestions for Beginning Testing			
Pillar Diameter			
Votive Size	Pillar 2-3 inches (5.1-7.6 cm)	Pillar 3-4 inches (7.6-10.2 cm)	4+ inches (10.2 cm)
•Flat Braid: 18 •CD: 4 or 5 •Eco: 1 •RRD: 29 •Square Braid: #5/0	•Flat Braid: 24 •CD: 10 or 12 •Eco: 6 •RRD: 37 •Square Braid: #1/0	•Flat Braid: 60 •CD: 20 •Eco: 14 •RRD: 50 •Square Braid: #3 or 4	<i>Typically requires multiple wicking. Try using 2 or 3 wicks evenly spaced in a triangular pattern.</i>

****Wick sizes and types to try are not limited to those listed****

Melting

Melt PB to a minimum of 155° F (68.3° C) under gentle agitation to promote even heating and thorough mixing. *Temporary* high temperatures such as 190° F (87.8° C) have no adverse effect if cooled quickly. Higher temperatures, in excess of 190° F (87.8° C), may cause the wax to discolor. Allow the wax to cool to the desired pour temperature. ***When using powder dyes, heat wax to 190° F (87.8° C) to ensure dye is completely dissolved.*

Pouring

Pour temperatures will vary according to mold type, size, fragrance(s), essentials oils, dye(s), and the candle effects you desire. PB does not normally produce static electricity or bubbles when poured, therefore tapping the mold(s) is not necessary.

Likewise, different mold configurations result in various cooling rates. Cooling too quickly or too slowly can cause cracking and/or frosting. **A recommended starting temperature is 155° F (68.3° C).** Adjustments up or down may be necessary. Pour temperatures should be checked and confirmed according to seasonal changes.

As the candle is being poured, it is typical for the wax to solidify at first contact with the mold. PB should have a pour temperature high enough so that when the mold is full, the initial solidified wax has remelted. Please note—the temperature should not be so high that the liquid wax sits more than 30 minutes before starting to solidify.

PB Double-Pour: When using EcoSoya® PB two pours are required with candles such as 3 & 4 inch (7.6 cm & 10.2 cm) diameter pillars. The first pour is done at 155°F (68.3°C) by filling the mold to the top and allowing the candle to set up with a warm, yet soft, congealed center. If the top of the mold (bottom of the candle) has “skinned” over and left a void inside, poke two holes into the candle near the wick.

The second pour is done at 140°F (60.0°C) while the candle center is still warm but congealed. Do not pour past the solidified wax of the first pour; in essence “fill” the first pour.

Making Votives with PB: The first pour is done at 155°F (68.3°C) by filling the mold to within 1/8 inch (0.3 cm) from the top. Allow the votive to cool until it's still warm with a congealed center that has no liquid. If the top of the candle has “skinned” over, poke two holes near the wick. Pour a second time at 140°F (60.0°C) to completely fill the votive mold.



General Rule of Thumb

It is typical during pouring for the wax to solidify at first contact with the container. Pour temperatures should be high enough that when the container is full, the initial, solidified wax has re-melted.

Candle Cooling and Mold Release

Cool undisturbed candles at an ambient temperature of 68°-70°F (21.1°-23.8°C). Molds should be at least 1/2 inch (1.3 cm) apart to allow air circulation for even cooling.

EcoSoya® PB is self-releasing. Slower cooling will encourage the candle to adhere to the mold causing it not to release, while quicker cooling will encourage pull away and release. PB is designed to shrink back from the mold for easier release and should be encouraged to do so. Silicone mold release spray may be used in the unusual event of poor release. Candles should be allowed to sit undisturbed for 48 hours before test burning.

Test Burning

Test burn the candle for burn pool diameter and quality after it has setup (cured or dried) for a minimum of 48 hours. Every combination of wax, dye, fragrance, and wick should be tested for burn quality.

Storage

Packaged:

PB flakes should be stored in the original, sealed packaging in a cool dry location away from direct heat, sunlight and moisture. Temporary extremes in temperatures, cold or hot, have no adverse effect. PB may be used frozen, and, if partially melted, allowed to cool and re-solidify before use.

Liquid Bulk:

Instructions entitled “*Bulk Handling of EcoSoya® Soy Waxes*” available from NGI, LLC upon request.

General Trouble Shooting

Test for one variable at a time when trouble shooting to isolate the cause. Variables include (but are not limited to): the mold, wax, dye, fragrance, wick, pour temperature, and environmental conditions such, as cooling temperature, along with manufacturing conditions.

- First, make a candle in the mold with only the wick (no dye or fragrance). If it looks good then the wax is performing normally.
- Then, one at a time, change a variable. Try adding the dye without fragrance to the mold, wax and wick. If it looks good and burns well, the dye is compatible with the wax.
- Try adding the fragrance without dye to the mold, wax, and wick. If it looks good and burns well, the fragrance is compatible with the wax.
- Try the dye and fragrance together with the mold, wax, and wick. If it looks good and burns well the dye/fragrance combination is compatible with the wax.
- If you are experiencing burn problems, try a different type or size of wick.
- Other variables to try are different pouring and cooling temperatures and even different mold material types.
- Ensure all equipment and materials are contaminant free.



Test for one variable at a time when trouble shooting to isolate the cause.

Shelf Life

When stored properly, as per instructions, PB has a minimum shelf life of 3 years.

Helpful Tips

- There is no need to wash molds between uses.
- When pouring votives, be sure to completely fill the mold, almost to the point of overflowing. This will help achieve the classic, votive look.
- You do not need a complete burn pool like you would with a container candle.
- It is *crucial* to have a wick or wick pin placed in every candle, *including test candles*, since it acts as a site for crystallization.
- Seasonal changes may require higher pour temperatures during cold months, and lower pour temperatures during warmer months.
- Faster cooling can be accomplished by: lowering the ambient temperature, increasing air circulation, spacing candles apart, lowering pour temperatures, and changing the cooling surface.
- Although the wax may experience clumping during shipping, this *does not* affect the performance of the wax.
- “Sweating” or “bleeding” may be seen as droplets on the candle surface at room temperature. This may be the result of fragrance incompatibility and may be resolved by changing the scent type and/or manufacturer.
- When testing different components such as scents, dyes, and wicks, a minimum of three (3) candles is recommended for *every* test.

The recommendations above are only suggestions; results may vary. Carefully follow all safety precautions and directions recommended by the manufacturer of any tools, materials, and equipment being used.