

Candle Making Glossary

Α

Additive: A substance added to your wax to change its color, performance or other attributes. Common additives include candle dye and stearic acid. Materials like mica, glitter, botanicals and small gemstones are also considered additives. However, these types of additives are not recommended for container candles. Mica, glitter, botanicals, stones and other materials are suitable for wax melts and certain pillar candle designs.

В

Base Note: A component of a fragrance that determines the scent. Unlike top notes and middle notes, base notes tend to be warmer, fuller scents such as amber, musk, vanilla, sandalwood and other similar scents. Base notes tend to be larger, heavier molecules. As such, they tend to be sensed last when you smell a fragrance. As a fragrance is sensed, the base notes are detected once the top notes and middle notes have begun to dissipate.

Bottom Note: Another term for base note. See above.

Burn Rate: The speed at which a candle consumes wax while burning. This is usually calculated in grams of wax consumed per hour. The burn rate is used to determine the candle's total burn time. The burn rate will vary depending on the type of wax, wick, fragrance, container and other factors. See also: Rate of Consumption (ROC).

Burn Session: The act of burning a candle for up to four hours to determine how the wick, wax and fragrance perform together. This step is an important part of testing candles. Also referred to as a "burn cycle."

Burn Time: The total length of time that a candle will last once lit. This is often listed on the candle label to tell consumers the total number of hours that the candle can be used over its lifespan.

C

Carbon Buildup: When a candle consumes more wax than it can burn, black carbon residue begins to build up on the wick. This results in a mushroom-shaped ball at the end of the wick. Because of its appearance, carbon buildup is also referred to as "mushrooming." This may occur when you use a wick that is too large.

Clogged Wick: A wick becomes "clogged" when debris, impurities or other non-burnable materials get drawn into the wick. Whenever non-burnable materials enter the wick, the flame does not have enough fuel to continue burning properly. The flame will eventually starve and burn itself out. Wicks often become clogged when additives such as mica or crayons are used to color your candle. Excess carbon can also clog a wick. To avoid clogs, only use colorants that are specifically designed for dyeing candles.

Cold Throw: A candle's cold throw refers to what is smells like before it is lit. Having a strong cold throw is important because it's the first impression customers get when they smell a candle.

Container Candle: A candle that is made in a vessel such as a glass, metal or ceramic jar. Container candles are made by pouring wax directly into a container.

Core: A core in candle making refers to the center of a candle wick. Some wicks have zinc cores, while others are made of natural fibers or paper. Wicks with cores tend to be more rigid than coreless wicks.

Coreless: Candle wicks without a fiber or metal core are referred to as "coreless" wicks. These wicks are hollow or tube shaped. Most coreless wicks are designed to bend at the tip while they are burning, which positions the tip of the wick so that it is inside the hottest-burning part of the flame. Many coreless wicks are considered "self-trimming." Examples of coreless wicks include LX wicks, CD wicks and CDN wicks.

Curing: The process of letting a wax melt or candle sit for a period of time after it is poured. Curing a candle allows the wax to fully solidify and it allows the fragrance to fully spready out in the wax. By letting your candles cure, they will have a better scent throw when burned. Not only that, you will get a more accurate idea of how the wick performs if you let your candles cure. If you test your candles when they are freshly poured, the wax may not be hard enough yet to give you an accurate idea of how your candles would burn for a customer.

Cure Time: The amount of time that candles or wax melts are left to sit after being poured. The ideal cure time depends on the wax used. Paraffin wax candles should cure for at least 2 days. Soy wax candles should cure for 1-2 weeks. Coconut wax candles (or candles made from other natural waxes) should be allowed to cure for at least 2 weeks. These guidelines apply to wax melts as well as candles.

D

Double Boiler: A device made by placing a pot (such as a wax melting pot) inside a larger pot or sauce pan filled with water. The double boiler can be heated on a stove top or hotplate. When the water in the sauce pan simmers or boils, it melts the wax. This method is preferable to melting wax over direct heat.

Double Wicking: The process of using two candle wicks in a candle. Double wicking is appropriate when you are making a candle in a large container where a single wick would not be able to achieve a full melt pool. In a double-wick candle, the two wicks are placed an even distance from one another and from the edge of the container. To determine the appropriate wick size, you will divide the diameter of the container in half. Then choose wicks that are appropriate for half of the diameter. For example, in a 4.5" diameter container, you would choose wicks that are appropriate for a 2.25" container. The wicks should be placed in such a way that the flames will not get too close to the edge of the container.

Drowning Out: When a wick gets submerged in the pool of melted wax. Drowning out often occurs when the wick is too small for the container. In this situation, the wick is unable to consume enough of the melted wax to remain lit, which results in the wick getting covered by melted wax and extinguishing itself.

${f E}$

Essential Oil: An aromatic compound extracted from the leaves, flowers, seeds, bark, roots or rind of a plant. Essential oils are highly concentrated oils that are obtained through distilling or mechanically pressing plant materials. Essential oils are best used in bath and body products. They tend to be unsuitable for candles and wax melts, as they are not formulated with solvents that help them smell strong when burned.

F

Flame Height: The height of the flame when a candle is lit. An ideal flame height is ½" to 2" in length. For smaller candles, the ideal flame height may be smaller – usually around ½" to 1". If a flame is too large, it is unsafe to burn the candle.

Flash Point: The temperature at which the vapor from a substance (such as a fragrance oil) will ignite if exposed to a source of ignition in an enclosed vessel.

Flickering: When a candle does not burn at a consistent rate, the flame may dance, jump or flicker. This occurs when anything disrupts the flow of oxygen or melted wax from being consumed by the wick. Gusts of wind or other changes in airflow often cause candles to flicker, but flames can also flicker when there are impurities in the melt pool that prevent wax or oxygen from being consumed by the flame. To prevent flickering, avoid additives that may clog the wick (see "clogging" above).

Fragrance Load: The fragrance-to-wax ratio. A candle's fragrance load is usually expressed as a percentage. For example, a candle may have an 8% fragrance load, meaning that fragrance accounts for 8% of the total weight of the ingredients. Most waxes can handle a fragrance load of 8-12 percent.

Fragrance Notes: The components of a fragrance that determine what it smells like. Fragrances have top, middle and bottom notes. Top notes are lighter, meaning they are sensed first and dissipate more quickly. Middle notes are sensed as the top notes disappear. Base notes are sensed last, and linger the longest. Many complex notes are used in each fragrance. Many different types of notes are used together to create unique scents.

Fragrance Oil: A scented oil made of synthetic and natural ingredients. Fragrance oils may also be blended with a combination of essential oils to create more complexity. Depending on the ingredients used, fragrance oils may be skin-safe, meaning they are approved for bath and body products. Fragrance oils are formulated with solvents and other ingredients that offer a high level of scent throw in candles, wax melts, soap and other products.

Frosting: A natural type of crystallization that forms in vegetable waxes, particularly soy wax. Frosting occurs due to temperature fluctuations that happen when melting and cooling wax to make candles. Frosting is purely cosmetic and will not affect how your candle performs. It is almost impossible to prevent frosting in soy candles. Frosting is often more apparent when you use candle dye, but it may appear in un-colored candles too. Candle frosting tends to become more visible over time as the wax naturally continues to harden and crystalize.

G

Glass Adhesion: This refers to the ability of wax to stick to the inside of a candle container. Wax with good glass adhesion will cling to the walls of a container very well. If wax does not adhere completely to the walls of a container, it may create wet spots. These are cosmetic, and do not affect the performance of a candle. See more under "wet spots."

\mathbf{H}

Hang Up: A rim of wax that remains along the edges of the container when the candle is burned. Some hang-up wax is normal on your first few burns. However, if the melt pool does not extend to the edges of the jar by the third burn, you may end up having a candle that tunnels (see definition below). If the wax hang up does not get resolved by around the third burn, you may need a larger wick size to remedy the situation.

Hot Throw: The scent of a candle that is released while it burns. A strong hot throw means that the candle has a strong smell while it is lit. To accurately evaluate your candle's hot throw, let it burn for at least 2 hours (avoid burning for more than 4 hours at a time).

T

Jump Lines: Also called chatter lines or stuttering. These are visible lines that appear along the sides of a candle container or along the outside of a pillar candle. Jump lines are usually horizontal. These lines occur when wax begins to set up too quickly after pouring. You can avoid jump lines by pouring your wax at a warmer temperature or warming the container with a heat gun prior to pouring.

М

Melt Point: The temperature at which wax begins to liquefy when it is heated.

Melt Pool: The layer of liquid wax that forms around the wick when the candle is lit. The size of the melt pool is helpful for determining if a candle is properly wicked. In a properly wicked candle, the melt pool may not extend all the way to the sides of the container until the second or third burn session you complete. If you never achieve a full melt pool (i.e. the melt pool never extends to the edges of the container), the wick may be too small. Conversely, if the melt pool does extend to the edges of the container on your first burn, the wick may burn too hot on subsequent burns.

Middle Note: A component of a fragrance that determines the scent. Middle notes are sensed after the top notes burn off. Middle notes tend to have a softer, warmer scent. Fruity, floral, herbal and spicy sensations are often considered middle notes.

Mix Temperature: The temperature of your melted candle wax when you add fragrance, colorants or other additives. The ideal mix temp will vary depending on your wax. For 100% soy wax, 185 degrees F is ideal. For coconut blends, you generally want your wax to reach 200 degrees F (up to 220 degrees F) before you add fragrance.

Mushrooming: This occurs when carbon builds up on the end of a burning wick and creates a ball that looks like a mushroom. Mushrooming can indicate that you have used the wrong wick size. However, using too much fragrance or other additives may also result in mushrooming. To prevent mushrooming, try using a smaller wick or lowering your fragrance load slightly.

N

Neck: The tube-shaped part of a wick sustainer tab that holds the wick in place. Most necks are about 6mm in length. Once the wick is inserted into the neck the neck is usually crimped to hold the wick securely in place.

\mathbf{O}

Out Of Bottle: What a fragrance smells like as soon as you open the bottle. The out-of-bottle scent is useful for determining if you like a fragrance. However, fragrance often smells different when it is added to wax. Therefore, you shouldn't rely on the out-of-the-bottle scent entirely. The cold throw and hot throw of a fragrance may also smell different. Making a small batch of wax melts is a good way to determine if you like how the fragrance will smell in wax.

Ρ

Pillar Candle: A freestanding candle that can be used without a container. Pillar candles are made from harder waxes, often 100% paraffin. Most pillar candles are cylindrical in shape, but molds can be used to make essentially any shape of pillar candle.

Pour Temp: The temperature at which you pour melted wax from your melt pot into your candle containers/candle mold. The pour temp is an important factor to note when you are producing candles. In order to get the same results from one batch of candles to the next, it helps to know what pour temperature was successful for you in the past. The ideal pour temperature will vary depending on the temperature in your workspace. We recommend starting at 145 degrees F. You may try increasing or decreasing the temp by 5-10 degrees to find an ideal temp for your process.

Power Burn: The act of burning a candle for more than 4 hours at a time. This can be dangerous, as containers may potentially become too hot during a 4+ hour burn. However, candle makers sometimes like to do power burns to mimic how their customers might use their candles. If a candle burns safely for sessions of 4+ hours during testing, candlemakers can feel more confident about customers who may leave their candle burning for a long period of time.

Primed: A wick is considered "primed" if it is coated in wax prior to being used for candle making. Most high-quality wicks will already be primed for you, making it unnecessary to prime your wicks yourself. Primed wicks tend to burn better than raw, uncoated wicks. If you were to purchase a roll of raw wick material, you may wish to prime it by dipping the wick in a hard wax such as paraffin. This should improve the burn.

\mathbf{R}

Rate of Consumption (ROC): An equation you can do to determine how quickly your candle will burn / the total number of hours that your candle can be burned before it is no longer usable.

To calculate the rate of consumption, you will need to weigh the finished, unburned candle on a scale so that you know its original weight. Next, light the candle and let it burn for 2-4 hours, or desired amount of time (avoid burning for more than 4 hours at a time). Extinguish the candle and let it cool. Then weigh the candle again.

To calculate the ROC, do this equation: (original weight – post-burn weight) ÷ hours burned = hourly burn rate. You can use a single ROC calculation to estimate how long the candle will burn. You simply need to know how many ounces or grams of wax total you used for the candle. Alternatively, you can do additional burning sessions to determine the total number of hours the candle will burn. This takes more time, but may be more accurate.

Relief Holes: Holes that are purposefully poked into the surface of a candle to prevent air pockets from forming as a candle begins to cool after being poured. These are typically not required for "single-pour" waxes. Relief holes can be poked into the surface of your candle as soon as the wax starts to harden or form a skin on top. Once the wax sets up, you can do a second pour. The relief holes will then be filled in.

Repour: Also referred to as a "second pour." A repour is when you pour additional melted wax into a container candle to fix issues such as wax shrinkage or sink holes. Repouring a candle smooths out imperfections.

S

Scent Throw: A term that describes how strong a candle or wax tart smells. This term can refer to how the candle smells when it's unlit (cold throw) as well as the candle's scent when it is lit (hot throw).

Second Pour: The act of pouring a second layer of wax into a container candle after the original wax in the container has set up. Second pours are usually only required if the candle has developed sink holes or the wax has shrunk. If the wax is smooth on top, a second pour is not required.

Single Pour: A term used to describe candle waxes that do not require a second pour or repour. Single pour waxes are desirable because they tend to deliver good results on the first pouring attempt, and do not usually require extra steps to make your candles visually appealing.

Sink Hole: A depression that forms on the surface of the wax after a candle is poured and begins to set up. Sink holes tend to form around the wick. A sink hole is usually a sign that the wax cooled too quickly, or that there is an air pocket trapped beneath the surface of the hard wax. You can fix sink holes by poking relief holes and doing a second pour (see definitions above).

Smooth Tops: A term used to describe candles that have a smooth, glass-like appearance on the surface of the wax. Achieving smooth tops is a goal for most candlemakers because it makes candles look more visually appealing.

Snuffer: A tool used to extinguish a candle neatly without having to blow it out. Candle snuffers are often better to use because they do not disturb the wax in the melt pool. If you sell your candles, bell snuffers are a good accessory to include with your products.

Sooting: Black smoke that is emitted from a candle wick when incomplete combustion occurs. Soot can cause black stains on the edges of your candle container. Depending on where a candle is placed, soot can also be deposited on walls. Soot may occur when a candle is burned in a drafty area. It can also be a sign that the candle is not properly wicked, or that the candle has too many additives (i.e. too much fragrance, dye or other additives).

Stabilizing Bar: A tool used to center a wick and hold it in place when a candle is poured. Stabilizing bars are typically made from metal and are completely reusable. Some candle makers use popsicle sticks or other similar devices for centering wicks, but metal stabilizing bars are easier to use and more effective.

Stearic Acid: An additive that is used to make wax harder. Stearic acid can help pillar candles hold their shape, but it can also be effective for improving the texture of wax in container candles. Some candle makers claim that stearic acid helps candles burn longer, while also producing flames that burn more evenly and produce less smoke. Also referred to as Stearine.

Sweating: Small wet droplets that form on the surface of a candle after it is poured. Sweat can indicate that the candle underwent temperature changes too quickly – such as moving a candle from a very cold room to a very warm one without letting the wax adjust to the change slowly. Sweat on a candle can also mean that too much fragrance oil was used. If you used more fragrance than a wax is able to hold, the excess fragrance may "sweat" out of the surface of the candle.

т

Tart: Wickless, scented wax that can fill a room with a fragrance when it is warmed. Tarts can be made in clamshell containers or small molds.

Tart Warmer: A device used to heat wax melts. Tart warmers are usually glass, ceramic or metal. Electric tart warmers use a lightbulb to create the heat that melts the wax. Other tart warmers use a tealight candle to heat the wax.

Testing Phase: The act of burning a candle to evaluate how it performs before selling or gifting your candles. During testing, you will want to determine if the candle is properly wicked. Testing will also help you determine the total number of hours a candle will burn (see Rate of Consumption above).

Throw: A term used to describe the distance a candle can deliver its scent. A candle with "good throw" can fill an entire room or even a house with its fragrance. A candle with a poor throw will not deliver fragrance very effectively. Throw can refer to the scent a candle has when it is lit and unlit (see definitions for cold throw and hot throw).

Top Note: A component of a fragrance that determines the scent. Top notes are the lightest, and therefore are sensed first. Top notes give you the first impression of what a fragrance will smell like. Because they are made of lighter molecules, top notes dissipate more quickly than middle and bottom notes.

Top Pour: The act of pouring additional wax into a container candle after the wax has set up. Also referred to as a "second pour." Top pouring can be effective in smoothing out any imperfections that may appear on the surface of the wax after it begins to harden.

Tunneling: This is what happens when a candle does not ever achieve a full melt pool. Instead of melting the wax evenly across the surface of a candle, the wick will create a small melt pool that only gets deeper and deeper into the candle. Eventually, this will leave thick walls of un-melted wax along the edges of the candle. Wicks that tunnel may burn less effectively the longer the candle is used. Such candles also will not appear to burn as brightly, as the flame will be hidden in the tunnel of wax. It is very difficult to fix tunneling once it begins. If your candle doesn't achieve a full melt pool on the second or third burn, it may end up tunneling later on. Consider using a larger wick.

TT

UV Stabilizer: An additive that helps slow down the color changes or discoloration that may happen to your wax when the candle is exposed to UV light.

V

Vessel: Another term for a candle container. Vessels may include glass, ceramic or tin containers.

Votive: A small, short candle that is typically burned in a decorative container. Unlike tealights, votives are not usually self-contained in their own cup. Votives are generally free-standing candles that are made with a mold. The candle may be burned on its own, but most people prefer to put them in colorful glass containers.

Vybar: An additive that can help with fragrance oil retention in candles. This additive may allow you to use higher fragrance loads without impacting the performance of your candles. Vybar can also increase the opacity of wax.

W

Wax Melt: Also referred to as a wax tart. Wax melts are made of scented wax that is melted to release fragrance into a room. A wax warmer is needed to heat wax melts.

Wet Spots: Thin pockets of air that may form between the wax and the wall of a container candle. These air pockets appear "wet," but are not actually liquid. Wet spots are purely cosmetic, and do not affect how candles burn. Wet spots are essentially unavoidable. Even major candle brands end up with wet spots in their candles. Wet spots are more apparent if you use clear containers. The only way to completely avoid them is to use solid or opaque containers.

Wick Assembly: The process of creating a candle wick that is ready to use. Wick assembly includes coating a spool of raw wick material in wax (priming the wick), then cutting the wicks to size and attaching wick tabs. This term is also used as a noun to describe a wick product that is ready to use for candle making.

Wick Bar: A bar used to hold a wick in place when the wax is poured. See "Stabilizing Bar" above.

Wick Clip: A metal piece that holds a wick in place and aids in attaching the wick to the bottom of a container. The term "wick clip" usually refers to pieces used for wooden wicks. A wood wick is inserted into a wick clip, which pinches it securely and holds it in place. The wick clip can then be attached to the bottom of a candle container with a glue dot. Clips may also be referred to as sustainer tabs.

Wick Down: Choosing a wick that is smaller in size. Wicking down is required when you have made a candle with a wick that burns too hot or produces a flame that is too large.

Wick Pin: A metal component used to create perfectly centered wicks in pillar candles. A wick pin is part of a pillar mold that creates a hollow cavity where the wick will go. The wax is poured into the mold, and once hard, the wax is removed. A wick can then be inserted into the hole created by the wick pin.

Wick Tab: A metal piece that holds a wick in place. Wick sustainer tabs are usually round and have a short, hollow "neck" that holds the wick securely in place. Wick tabs aid in attaching the wick to the bottom of a candle container. This term is often used interchangeably with the term "wick clip."

Wick Trimmer: A specialized pair of scissors designed to cut wicks to an appropriate length. Wick trimmers have a flat surface that helps catch the cut piece of wick so it doesn't fall into the candle.

Wick Up: Choosing a wick that is larger in size. Wicking up is required when you make a candle with a wick that doesn't burn hot enough, or produces a flame that is too small.

Wicking: The process of choosing an appropriate wick for your candle based on factors such as the type of wax, container size and fragrance load etc.

Wickless: Any scented wax that does not have a wick may be referred to as a wickless candle or a wickless product. Wax melts are an example of a wickless product. Some candlemakers also make wickless candles, which look exactly like container candles, but don't have a wick. Such candles are heated using a special candle warming plate or a heat lamp.

Candle Making Abbreviations

FO: Fragrance Oil

EO: Essential Oil

CT: Cold Throw

HT: Hot Throw

ROC: Rate of Consumption. See definition above.

OOTB: Out-of-the-bottle. This refers to what a fragrance smells like straight from the bottle before it is added to wax. OOB may also be used.

IFRA: International Fragrance Association. A self-regulated, global organization that governs the fragrance industry. It sets safety standards for the ingredients used in fragrances, as well as the applications in which fragrances can be used.

SDS: Safety Data Sheet. A document that outlines the properties of each chemical used in a substance, as well as the physical, health and environmental concerns associated with any chemicals in the product. In the world of fragrance, many chemical compounds are considered "trade secrets," and may not be listed in their entirety on an SDS. However, any associated safety concerns and protective measures will still be noted.

MSDS: Manufacturer's Safety Data Sheet. This is the same as an SDS document. The terms are often used interchangeably.



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