# Vegetable Oil Wax Terminology
# Including Soy Wax

- **Vegetable Oil –** Oil extracted from any vegetable source that is used in a wide variety of applications. Sources may include soybean, corn, palm, rapeseed, canola, cotton, etc. and are composed primarily of triglycerides low in fatty acid saturation. These oils are generally referred to as a type of "vegetable or cooking oil."

- **Hydrogenation –** The process of breaking carbon-carbon double bonds in a fatty acid, and replacing them with hydrogen. Hydrogenation is the mechanism used to produce partially to fully saturated fats. Through hydrogenation, liquid oils are transformed to solid shortenings by becoming more saturated and increasing their melt point. Both partially and fully hydrogenated fats are commodity products and are commonly used in the food industry. The term "hydrogenated" is commonly used in place of "saturated" and vice versa.

- **Saturated Fat –** A fat that has no carbon-carbon double bonds and is therefore completely saturated with hydrogen. A fat can be naturally saturated, or it can become saturated through the process of hydrogenation. Because a saturated fat can be made via full hydrogenation, the two terms saturated and hydrogenated are sometimes used interchangeably. Since a saturated fat lacks carbon double bonds, saturated fats have a higher melt point and are typically solid at room temperature.

- **Shortening –** Any plant or vegetable oil that has been solidified via hydrogenation (saturated). Any oil that has been partially to fully hydrogenated is considered a shortening. Shortening with a higher melt point is typically more saturated than a shortening with a lower melt point.

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# Including Soy Wax

- **Soy Wax –** A renewable and sustainable wax that is primarily or wholly derived from soybean oil; which does not contain any petroleum, insect, animal, mineral or paraffin products.

- **Commodity Soy Wax –** Partially to fully hydrogenated (saturated) food product, also known as shortening. Commodity soy wax is not a stand-alone product and is typically blended with paraffin at about 45% soy wax to paraffin.

- **Partially Engineered Soy Wax –** A soy wax that is more complex than a commodity soy wax and typically contains emulsifiers and/or other plant oils. It is also primarily used as a food product and may also be known as shortening. Although this wax is not a stand-alone product, a higher percentage of this wax can be blended with paraffin. Partially engineered soy wax can make up to about 60% soy wax to paraffin.

- **Engineered Soy Wax –** Designed for the candle industry, engineered soy waxes can come in two forms, those that begin with commodity shortening and then blended with other soybean or vegetable oil-based products, such as emulsifiers and those that are chemically formed straight from soybean oil, not requiring blending. They result in a more stable crystal structure, which is more ideal for candle making. Engineered waxes can be used alone and require no blending with paraffin or other additives.