

## Kerax Ltd – Technical Data Sheet

Date Prepared: 28FEB17

Date Revised: 26AUG20

Version: 5.0

# TDS - KeraSoy Pillar 4120

Information

#### **Product Description**

KeraSoy Pillar is a blend specifically developed for the production of Pillar candles. It is suitable for further blending with fragrances and oil soluble dyestuffs. Kerasoy Pillar blend is biodegradable and vegan friendly. No animal products are used, and no animal testing has been carried out in its manufacture.

Due to the prevalence of genetically modified soybean crop in the market we are unable to guarantee entirely non-GMO sources, but we aim to source non-GMO wherever possible.

#### **Physical Properties**

Test	Method	Specification	Typical
Congealing Point °C	ASTM D938	43-52	47.0
Melting Point °C	IP371	57-63	60.0
Viscosity @ 100°C	ASTM D445	7-10	8.4cSt
Penetration @ 25°C	ASTM D1321	25-40	32 dmm
Colour	ASTM D1500	1 Max	0.7

# **Manufacturers Notes**

KeraSoy Pillar does not require additives, other than fragrance and colour required by the Candle maker. Old or partial candles may be remelted and the wax reused but it is advisable not to heat the wax above 85°C or heating for extended lengths of time. Waxes should be stored in a cool, dry location away from direct heat, sunlight and moisture.

#### Moulds

Moulds should be clean and free of contaminants. They should be at least at room temperature, although pre-heating to approx. 45 - 50°C can be beneficial.

The information and recommendations in this publication are, to the best of our knowledge, reliable. Users must make their own tests to determine the suitability of these products for their own particular purposes. The company makes no warranty of any kind, expressed or implied, including those of merchantability or fitness for a particular purpose, other than that the material conforms to its applicable current Standard Specifications.



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#### Colour

Most dyes work with KeraSoy Pillar; powder, liquid, chips, blocks, etc. When using powder dyes, heat the wax to approx. 75°C, add the dye and mix until dissolved. Powder dyes may also be dissolved in fragrance and then added to the melted wax, be sure that the dye has dissolved completely before adding. When using powder dyes dissolved in fragrance, liquid dyes, or colour blocks heat the wax to 70°C. If you wish to make your candle darker or "richer", add a little black dye to the colour you are using.

#### **Fragrance**

KeraSoy Pillar has been designed for fragrance at levels between 5 - 10%. Fragrance which is specifically developed for use with natural waxes is highly recommended. Burn pool size and depth greatly affect fragrance throw so correct wicking is paramount. Some fragrances may react poorly with the wax causing bleeding, objectionable surface finishes or poor flame quality. This has been found to be exaggerated when using fragrances specifically designed for use in Paraffin wax candles.

#### Wicking

Natural waxes tend to require larger wick sizes than traditional paraffin waxes. Fragrance, colour and candle configuration have a great impact on the best wick choice. Too large of a wick may cause sooting, accelerated burn times and guttering (wax leaking through the side of the candle). Too small a wick will cause tunneling and produce a smaller flame. Keep wicks trimmed to ¼ inch. 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 sit for 48 hours after pouring.

#### **Melting**

Temporary high temperatures (up to 90°C) have no adverse effect as long as the wax is cooled back down quickly. Higher temperatures may cause the wax to discolour. Allow the wax to cool to your desired pour temperature, add the fragrance and mix well. Be sure to stir/mix the wax while melting. Avoid using Pillars containing copper and zinc as this may accelerate discolouration. Stainless Steel is the material of choice although mild steel is acceptable. Digital temperature probes are readily available and are a safer choice than the traditional Mercury in glass type.

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#### **Pouring**

Pour temperatures may vary according to mould type & size, fragrance & dye used and the effects the candle maker wishes to achieve. Greater release from the moulds may be achieved by pouring at temperature of around 55 - 65°C, although this will be dependent upon the size and shape of the candle being produced. Fragrance should be added and mixed immediately prior to pouring where practical. If you experience difficulties with your pour temperature, try a lower or higher temperature in increments of 5 - 10°C. Consider pouring into pre heated moulds for enhanced release properties

#### **Double-Pour**

KeraSoy Pillar is formulated to require only a single pour, however for some large Pillars; a top-up is required to achieve the best candle surface. A small amount of wax at a slightly warmer temperature than the candle was poured at can be used to top-up the candle before the candle is fully cool (pouring the top-up once the candle is completely cool may result in a reduction of adhesion to the Pillar).

#### **Candle Cooling**

Cool undisturbed candles at room temperature (about 25°C). Candles should be allowed to sit undisturbed for 48 hours before test burning.

#### Test Burn:

Check wicking. Test burn the candle for burn pool diameter and "mushrooming" after it has cooled for 48 hours. Mushrooming is when carbon and/or other substances build up on the end of the wick interfering with combustion. Mushrooming can cause sooting and poor odours. Try different wicks until you have your desired burn pool diameter and a good clean flame.

Every combination of size, wax, dye, fragrance and wick must be tested for burn quality

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