

TECHNICAL DATA SHEET

PREMIUM CANDLE GEL

Product name	Premium Candle Gel
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Product Description

Premium Candle Gel is an advanced blend specifically developed for the production of clear container candles. It is suitable for further blending with fragrances and oil-soluble dyestuffs. Premium Candle Gel is biodegradable and vegan friendly. No animal products are used and no animal testing has been carried out in its manufacture.

Physical Properties

Test	Method	Specification	Typical
Drop Melt Point	ASTM D127	65-75°C	70.0°C
Viscosity at 100°C	ASTM D445	250-350 cSt	300 cSt
Odour	In House	Minimal	Odour Free
Colour	ASTM D156	25 Min	30

Manufacturer's Notes

Premium Candle Gel 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 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 approximately 45-50°C can be beneficial.

Colour

Most dyes work with Premium Candle Gel, although powder and liquid dyes are less likely to interfere with the clarity of the gel. When using powder dyes, heat the wax to approximately 95°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 mica, heat the wax to 95°C. If you wish to make your candle darker or "richer", add a little black dye to the colour you are using. The quantity of mica used should also be limited, as this may detract from the burn quality of the candle due to wick clogging.

Fragrance

Premium Candle Gel has been designed for NON-POLAR fragrances at levels between 5-8%. The flash point of the fragrance is also critical when making an informed choice, as the melt pool of Premium Candle Gel is higher

than that of a traditional wax-based alternative. It is recommended that fragrances with flash points below 77°C are avoided. Burn pool size and depth greatly affect fragrance throw, so correct wicking is paramount. Some fragrances may react poorly with the gel, causing bleeding, objectionable surface finishes or poor flame quality. This has been found to be exaggerated when using fragrances which are POLAR.

Wicking

Premium Candle Gel tends to require larger wick sizes than traditional waxes. Fragrance, colour and candle configuration have a great impact on the best wick choice. Too large a wick may cause sooting, accelerated burn times and guttering (wax leaking through the side of the candle). Too small a wick will cause tunnelling and produce a smaller flame. Keep wicks trimmed to 1/4 inch. If you experience poor flame quality or stability, try a different type of wick. Test burning should be carried out after the candle has been allowed to sit for 48 hours after pouring.

Melting

Temporary high temperatures, up to 120°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 gel while melting. Avoid using equipment 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 traditional mercury-in-glass types.

Pouring

Pour temperatures may vary according to mould shape and size, fragrance and dye used, and the effects the candle maker wishes to achieve. Greater clarity may be achieved by pouring at a temperature of around 105-110°C, although this may release air bubbles around the wick. Pouring at lower temperatures may reduce this, but will also increase the viscosity significantly, which could entrap bubbles during pouring. 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 visual properties.

Candle Cooling

Cool undisturbed candles at room temperature, approximately 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, dye, fragrance and wick must be tested for burn quality.

Disclaimer

The information and recommendations in this document are, to the best of our knowledge, reliable. Users must carry out their own tests to determine the suitability of the product for their particular purposes. No warranty of any kind, expressed or implied, including merchantability or fitness for a particular purpose, is given other than that the material conforms to its applicable current specifications. This document has been prepared on the basis of the manufacturer’s technical documentation.