



FRAG0681

RECIPE - SPHERE PILLAR CANDLE ENCHANTED FOREST IN HPM

CANDLE SHACK

WHAT YOU WILL NEED

1x Sphere - Pillar Candle Mould
6.9g of Enchanted Forest Fragrance Oil
223.1g of HPM Wax
1x LX14 Wick (250mm)
1x 2.5mm Diameter Metal Rod
1x Blu Tack
1x Lolly Stick (this will become your rod centring tool)

THE STEP-BY-STEP PROCESS

<p>STEP 1 Using a ratchet punch or similar tool, pierce a 2.5mm hole in the centre of your lolly stick to turn it into a rod centring tool.</p>	<p>STEP 8 Leave your wax to solidify and when it has fully set, usually after around 2 hours, remove the wick centring tool and top up your candle with more of the fragranced wax.</p>
<p>STEP 2 Assemble the mould by joining both halves together, ensuring that you use the rubber seal provided. Then secure the mould using the clips provided.</p>	<p>STEP 9 When the wax has set, about 2 hours later, top up any dip that may have formed with the last of the fragranced wax.</p>
<p>STEP 3 Insert the wick rod into the wick hole and seal it at the base of the pillar mould with Blu Tack.</p>	<p>STEP 10 When the candle has fully set, around 5 hours after the initial pour, carefully remove the wicking rod and pop the candle out of the mould.</p>
<p>STEP 4 Melt your HPM wax at 75°C.</p>	<p>STEP 11 Thread the pre-waxed wick through the hole and push the sustainer into the base of the candle.</p>
<p>STEP 5 When the wax is fully melted, add your fragrance and stir it for around 1 minute until the mixture is homogeneous.</p>	<p>STEP 12 Melt the bottom of the candle on a hot baking tray to give a flat and level base.</p>
<p>STEP 6 Slowly pour the mixture into your mould until it is roughly half full.</p>	<p>STEP 13 Leave the candle to cure for 48 hours and trim the wick to 5mm before lighting your it.</p>
<p>STEP 7 Use your wick rod centring tool to keep the rod nice and centred.</p>	

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Technical report on a test set of candles made in Candle Shack R&D department for
sooting behaviour testing and fire safety testing

Date of Report: 12/10/23

Testing Period: 29/09/2023 - 12/10/2023

Sample Ref	PIL0009E	No. of Samples	3
Candle Name	230g, Sphere Pillar Candle, 3% in HPM		
Description	230g Mineral Blend Wax Fragranced Candle		
Fragrance	Enchanted Forest	Weight per candle	6.9g
Wax	HPM Wax	Weight per candle	223.1g
Colour	White	Height	80mm
Wick Type	LX14	Width	80mm
Wick Positioning	Centred	Depth	80mm
Surface Defects	None		

TECHNICAL REPORT

Part 1: SPECIFICATION FOR SOOTING BEHAVIOUR

To evaluate the performance of a test set of candles in a controlled environment against the requirements of BS EN 15426:2018 (Candles. Specification for sooting behaviour)

Part 2: SPECIFICATION FOR FIRE SAFETY

To evaluate the performance of a test set of candles in a controlled environment against the requirements of BS EN 15493:2019 (Candles. Specification for fire safety)

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Part 1: SPECIFICATION FOR SOOTING BEHAVIOUR

Requirement

When tested in accordance with clause 9 of EN 15426:2018, the average soot index per hour from three tests (samples) shall be less than 1.0/h

The room temperature during testing was $20 \pm 5^\circ\text{C}$

Wicks were trimmed to 5mm before lighting.

Cycles: 3 x 240 ± 5 min cycles with >60 min pause between cycles

Soot testing was performed in wire mesh cylinder Type 2 (Diameter: 300 ± 10 mm)

Sample Ref.	Total burn time t_m (h)	Hourly soot index S_{i_h}	Average soot index per hour S_{i_h}	Result
PIL0009E-1	12.00	0.10	0.04	PASS
PIL0009E-2	12.00	0.00		
PIL0009E-3	12.00	0.02		

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Part 2: SPECIFICATION FOR FIRE SAFETY

Test Property	Test Method	Test Requirements	Result
Stability	EN 15493:2019 4.1 (Visual Check)	Candle should not tip over when placed on a 10° incline plane	PASS
Secondary Ignition	EN 15493:2019 4.2 (Visual Check)	No secondary ignition shall occur for more than 10 s	PASS
Flame Height	EN 15493:2019 4.3 (Measurement)	The flame height for all candle types, except for tea lights, shall not exceed 75mm. The flame height for tea lights shall not exceed 30mm	PASS Maximum: 25 mm
Behaviour after extinguishing	EN 15493:2019 4.5.1 (Visual Check)	After extinguishing the candle shall not spontaneously re-light	PASS
	EN 15493:2019 4.5.2 (Measurement)	The wick shall not continue to glow or smoke for an average time of more than 30 s after extinguishing	PASS Average: 6 s

The room temperature during testing was 20±5°C
Wicks were trimmed to 5mm before lighting.

Candle Performance (240 ± 5 min cycles with >60min pause between cycles)

Sample Ref.	Gross Weight (g)	Total Wax Consumed (g)	*Total Burning Time (h)	Wax Consumption Rate (g/h)
PIL0009E-1	237.6	147.3	32.0	4.60
PIL0009E-2	238.8	154.3	32.0	4.82
PIL0009E-3	241.5	146.8	32.0	4.59

*If a candle self-extinguishes during the final burn cycle, the time of self-extinguishing is estimated.

Notes and Discussion:

Candles were burned to a residual height of 15-25mm.

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IMAGE GALLERY



END OF REPORT

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