



FRAG3281

RECIPE - FLAT CYLINDER (62X107MM) PILLAR CANDLE CHRISTMAS TREE IN HPM

CANDLE SHACK

WHAT YOU WILL NEED

[1x Flat Cylinder 62x107mm - Pillar Candle Mould](#)

[8.1g of Christmas Tree Fragrance Oil](#)

[261.9g of HPM Wax](#)

[1x LX14 Wick \(250mm\)](#)

[1x 2.5mm Diameter Metal Rod](#)

1x Blu Tack

1x Lolly Stick

THE STEP-BY-STEP PROCESS

STEP 1

Insert the wick rod into the wick hole and seal it at the base of the pillar mould with Blu Tack.

STEP 2

Melt HPM wax at 75°C.

STEP 3

Once the wax is fully melted, add your fragrance and stir it for around 1 minute until the mixture is homogeneous.

STEP 4

Slowly pour it into your mould to your desired height.

STEP 5

Place the wick rod through the wick rod centring tool to keep the rod centred.

STEP 6

Leave your wax to solidify and when it has fully set, usually after around 2.5 hours, remove the wick rod centring tool and top up your candle to fill any dip that may have formed.

STEP 7

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.

STEP 8

Thread the pre-waxed wick through the hole and push the sustainer into the base of the candle.

STEP 9

Melt the bottom of the candle on a hot baking tray to give a flat and level base.

STEP 10

Let the candle cure for 48 hours and trim the wick to 5mm before lighting it.

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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: 04/10/23

Testing Period: 29/09/2023 - 04/10/2023

Sample Ref	PIL0009C	No. of Samples	3
Candle Name	270g Round, Flat Top Pillar Candle, 3% in HPM		
Description	270g Mineral Blend Wax Fragranced Candle		
Fragrance	Christmas Tree	Weight per candle	8.1g
Wax	HPM Wax	Weight per candle	261.9g
Colour	White	Height	105mm
Wick Type	LX14	Width	62mm
Wick Positioning	Centred	Depth	62mm
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±5°C

Wicks were trimmed to 5mm before lighting.

Cycles: 2 x 240 ± 5 min cycles with >60min pause between cycles)

Soot testing was performed in wire mesh cylinder Type 1 (Diameter: 230 ± 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
PIL0009C-1	8.00	0.00	0.02	PASS
PIL0009C-2	8.00	0.03		
PIL0009C-3	8.00	0.03		



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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: 30 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: 5 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)
PIL0009C-1	282.8	197.5	44.0	4.49
PIL0009C-2	256.9	201.3	44.0	4.58
PIL0009C-3	275.9	197.0	44.0	4.48

*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 Burn Front - Sample 1



End of Burn Front - Sample 2



End of Burn Front - Sample 3



End of Burn Top - Sample 1



End of Burn Top - Sample 2



End of Burn Top - Sample 3

END OF REPORT

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