

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

STEP1

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.



Candleshack Ltd, Unit A, West Carron Works, Stenhouse Road, Carron, Stirlingshire, FK2 8DR

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		W eight per candle	8.1g	
Wax	HPM Wax		W eight per candle	261.9g	
Colour	White	Height	105mm		
Wick Type	LX14	Width	62mm		
Wick Positioning	Centred	Depth	62mm		
Surface Defects	None				

TECHNICAL REPORT

Part1: 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)



Part1: 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 Si _h	Average soot index per hour Si _h	Result
PIL0009C-1	8.00	0.00		
PIL0009C-2	8.00	0.03	0.02	PASS
PIL0009C-3	8.00	0.03		

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Part 2: SPECIFICATION FOR FIRE SAFETY

TestProperty	Test Method	T est R equirements	Result	
S tability	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	PASS Maximum: 30 mm	
	EN 15493:2019 4.5.1 (Visual Check)	not exceed 30mm After extinguishing the candle shall not spontaneously re-light	PASS	
Behaviour after extinguishing	EN 15493:2019 4.5.2 (Measurement)	The wick shall not continue to glow or smoke for an average time of more than	PASS	
		30 s after extinguishing	Average: 5 s	

I he 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 W ax 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.

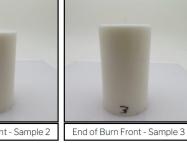
Notes and Discussion:

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



End of Burn Front - Sample 1 End of Burn Front - Sample 2 End o

IMAGE GALLERY





END OF REPORT

Tatnygatajewska

Patrycja Krajewska Development Technologist

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