

RECIPE - 9CL FIRESIDE IN 464

# CANDLE

# **DESCRIPTION**



# **INGREDIENTS FOR EACH CANDLE**

1x 9cl Candle Jar
6g of Fireside Fragrance Oil
69g of Golden Wax 464
1x Stabilo 4 Wick
1x 15mm Adhesive Wick Pad
1x Three Jar Wick Centering Tool

# WAX

Made by global wax giant AAK under the Golden Wax brand, GW464 remains the most popular soy container wax on the market. It offers a good hot and cold scent throw as well as excellent glass adhesion and is produced under rigorous ethical and environmental standards.

# VESSEL

Our Lauren 9cl Votive glass is manufactured in Italy and meets the highest standards of clarity and tolerance.

Height: 67mm Diameter: 56mm

Internal height: 57mm

# **WICK**

Stabilo candle wicks are one of the best and brightest wicks for home and professional scented candles alike. They are coreless, non-directional flat-braided wicks with a special paper filament woven around them. With their unique configuration, they enable consistent capillary action while ensuring a wick-trimming flame posture. All wicks are 110mm long with a thin paraffin coating for stability.

# **USAGE RECOMMENDATIONS**

- We recommend working at an ambient temperature of 18 to 25°C.
- We recommend heating 464 to 70-75°C to melt.
- Add the fragrance at 60°C and stir for 60 seconds.
- The mixture is ready to pour at 55-60°C into glasses at room temperature (18-20°C).
- If the top is uneven once set, you can flash the surface with a heat gun.
- Leave the candle to cure for at least 2 days at 20°C for the best results.

# **DISCLAIMER**

Each report shows test results for a set of candles made by Candle Shack's R&D team for that particular recipe. The test reports are not a guarantee that all candles made to the recipe will burn in exactly the same way. Variables such as ambient temperature, air flow, or the manufacturing process can affect the burning profile of a candle, so it is recommended that candle makers conduct their own testing to ensure that they are satisfied with the performance of their product.

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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: 09/10/23 Testing Period: 29/09/2023 - 09/10/2023

Sample Ref	RCP0018I-2	No. of Samples	3		
Candle Name	9cl Fireside Candle, 8% in 464				
Description	75g Soy Wax Fragranced Candle				
Fragrance	Fireside Fragrance Oil	Weight per candle	6g		
Wax	Golden Wax 464		Weight per candle	69g	
Colour	Off White	Height	67mm		
Wick Type	Stabilo4	Top Diameter (ext)	56mm		
Wick Positioning	Centred	Top Diameter (int)	51mm		
Surface Defects	None	Base Diameter	50mm		

#### 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)



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

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

Sample Ref.	Total burn time $t_{\rm m}$ (h)	Hourly soot index Si <sub>h</sub>	Average soot index per hour Si <sub>h</sub>	Result
RCP0018I-2.1	8.00	0.09		
RCP0018I-2.2	8.00	0.12	0.11	PASS
RCP0018I-2.3	8.00	0.12		





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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	PASS
		not exceed 30mm	Maximum: 15 mm
	EN 15493:2019 4.5.1 (Visual Check)	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: 7 s
Container Candles	EN 15493:2019 4.6 (Visual Check)	The container shall not crack or break at any time throughout the burning test	PASS

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)
RCP0018I-2.1	196.4	65.1	24.0	2.71
RCP0018I-2.2	193.8	66.7	24.0	2.78
RCP0018I-2.3	195.9	67.1	24.0	2.80

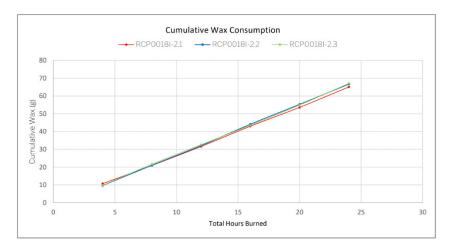
\*If a candle self-extinguishes during the final burn cycle, the time of self-extinguishing is estimated.

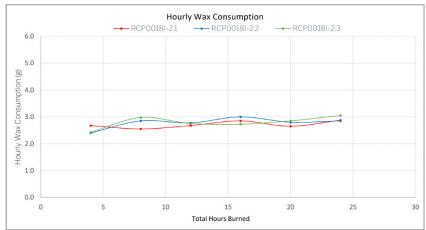
# Notes and Discussion:



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#### **CHARTS**







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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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