



FRAG4451

RECIPE - 30CL

SOLARIS NOIR IN 464

CANDLE SHACK

DESCRIPTION



INGREDIENTS FOR EACH CANDLE

| |
|---|
| 1x 30cl Glass Jar |
| 22.0g of Solaris Noir Fragrance Oil |
| 198.0g of Golden Wax 464 |
| 1x Stabilo 16 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 Lotti 30cl glass is manufactured in Italy and meets the highest standards of clarity and tolerance.
Height: 90mm
Diameter: 78mm
Internal height: 75mm

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.

CANDLE SHACK

Candle Shack 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: 06/07/23

Testing Period: 20/06/2023 - 06/07/2023

| | | | |
|------------------|--------------------------------------|--------------------|------|
| Sample Ref | RCP0121E-1 | No. of Samples | 3 |
| Candle Name | 30cl Solaris Noir Candle, 10% in 464 | | |
| Description | 220g Soy Wax fragranced candle | | |
| Fragrance | Solaris Noir | Weight per candle | 22g |
| Wax | Golden Wax 464 | Weight per candle | 198g |
| Colour | Off White | Height | 92mm |
| Wick Type | Stabilo 16 | Top Diameter (ext) | 82mm |
| Wick Positioning | Centred | Top Diameter (int) | 76mm |
| Surface Defects | None | Base Diameter | 76mm |

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: 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_m (h) | Hourly soot index Si_h | Average soot index per hour Si_h | Result |
|--------------|------------------------------|-----------------------------|---------------------------------------|--------|
| RCP0121E-1.1 | 12.00 | 0.16 | 0.12 | PASS |
| RCP0121E-1.2 | 12.00 | 0.08 | | |
| RCP0121E-1.3 | 12.00 | 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 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: 9 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) |
|--------------|------------------|------------------------|-------------------------|----------------------------|
| RCP0121E-1.1 | 547.8 | 210.2 | 49.3 | 4.26 |
| RCP0121E-1.2 | 541.3 | 195.3 | 44.1 | 4.43 |
| RCP0121E-1.3 | 543.8 | 208.1 | 48.1 | 4.33 |

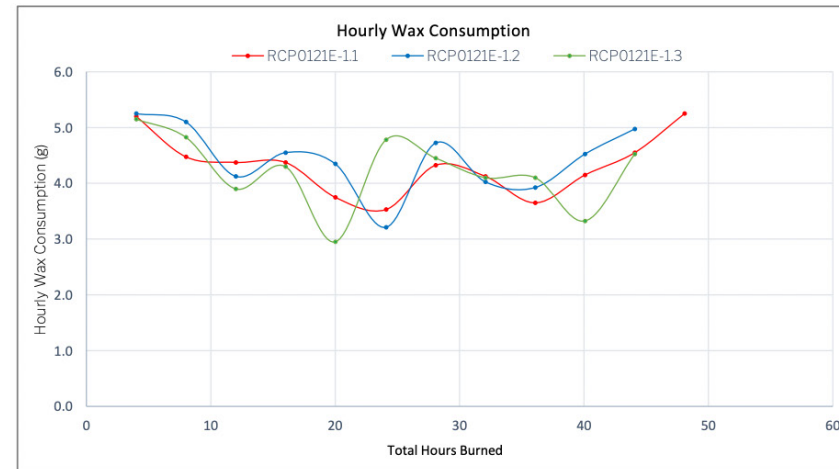
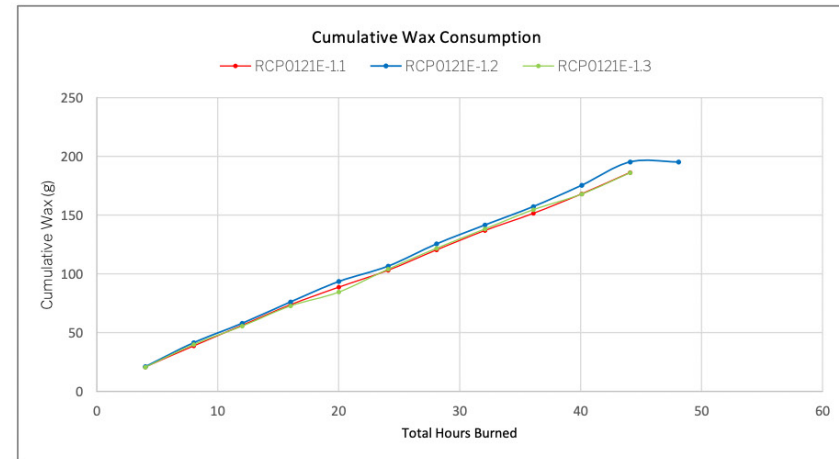
*If a candle self-extinguishes during the final burn cycle, the time of self-extinguishing is estimated.

Notes and Discussion:



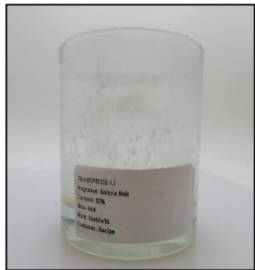
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CHARTS



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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

Zoe Campbell

Zoe Campbell
Laboratory Manager

