

How to find the right wick for your candles

Burn Testing

First select a wick from one of the Wedo wick application recommendation sheets - put the wick in your candle and burn-test according to RAL specifications (see box below).

Result	Description	Solution	Additional Information
A perfect flame	The tip of the wick has curved into the hottest and most oxygen-rich part of the flame. This allows self-trimming.	Use this wick	<p>The „yield“ figure, expressed in metres/kg, is used to describe the size of a wick. The higher the yield, the thinner/smaller the wick. The lower the yield, the thicker/larger the wick. Example: FW 3x10 SU - Yield 1.000 m/kg FW 3x 8 SU - Yield 1.300 m/kg (thinner/smaller) FW 3x12 SU - Yield 830 m/kg (thicker/larger)</p> <p>Wedo has a variety of different wick chemical treatments for different candle materials - see the illustration below.</p> <p>Please also note that wicks with STP or NST2 treatments also provide good alternatives for paraffin wax candles containing strong colours and/or fragrances.</p> <p>One of the possible causes of carbon deposits or wicks „falling over“ is the wrong positioning of the wick in the candle. Each wick has a natural tendency to curve in a certain direction. If the wick is not inserted vertically and with sufficient tension to keep it straight, the wick will either be forced against the natural curve or will be pushed over too far. This is true for poured and pressed candles.</p>
The flame smokes	This is an indication that the wick is too large/thick for the candle.	Test the next smaller/thinner wick in the same series.	
The candle drips	This is an indication that the wick is too small/thin for the candle.	Test the next larger/thicker wick in the same series.	
The flame becomes smaller and smaller as the candle burns	This is an indication that the wicks chemical treatment is too „weak“ for the candle material (e.g. stearic acid or paraffin wax with dark colours and/or heavy fragrances).	Test a wick with a stronger chemical treatment - such as STP or NST2.	
The wick does not self-trim	This is an indication that the wicks chemical treatment is too „strong“ for the candle material.	Test a wick with a different chemical treatment.	
A carbon deposit forms at the tip of the wick	Combustion is incomplete. Often caused by impurities in the candle material which block the wick. The wick may also stand too straight if incorrectly positioned.	Check candle material for impurities and also check the stance of the wick. Is the wick centered and is tension correct?	
The wick bends too far, or „falls over“.	This is usually due to the wick being overstretched during candle manufacture. It can also be an indication of wrong wick stance.	Check wick tension on the candle machine and ensure that wick stance is correct.	

QUALITY MARK RAL Candles All Wedo-wicks conform to RAL Quality Assurance specifications. According to RAL, most candles should be burn-tested in cycles as follows:

Burn time in hours (e.g. 2 hours) Cooling time in hours (at least 1 hour)

- 1) Candle weighing up to 40g Sustained burning down to about 20 mm from the base of the candle
- 2) Candles above 40g diameter up to 30 mm
- 3) Candles with diameter between 31 - 60 mm
- 4) Candles with diameter above 60 mm

(The above cycles can be repeated as necessary, they are examples only - please refer to RAL for further information)

Wedo has over 1.000 wicks in its product range. In general, flatwicks are used in candles up to a diameter of approximately 25 mm (mostly taper or dinner candles). In votives, pillars and jars, wicks reinforced with extra stability threads of cotton or paper, or so-called "Roundwicks" provide the best results. Certain candle products have their own special wicks. Tealights for example are normally made with "TL" wicks.

The main candle factors influencing wick selection are:

- Type of candle material (paraffin wax, stearic acid, palm wax, blends etc.)
- Colour and/or fragrance
- Diameter of candle
- Method of candle production
- Free standing or in container

As a starting point for wick selection, please refer to the wick application recommendation sheets available from Wedo or our partners and representatives. We can then provide the appropriate wick samples for you to test.