

## The magic of beads – with Friedrich Farbglasshütte GmbH colored glass sticks!

BEADMAKING 104®

FRIEDRICH  
FARBGLASHÜTTE



### Use of BEADMAKING 104® glass sticks in bead making

- By artists and bead makers who make collectors' items, in particular
  - Design of jewellery such as chains, bracelets, pendants, rings etc.
  - Figurative designing of individual beads, such as animals, flowers etc.
  - Designing "marbles"

### Effect

- **BEADMAKING 104®** glass sticks are especially effective when combined with crystal glass, as the process increases luminosity and shows off the build-up of color to better advantage. A "magnifying-glass effect" is created.

### Working

- Very suitable for designing overlays and unique effects, because the shades of the colors can develop in many different ways.

### Product features of BEADMAKING 104® colored and crystal glass sticks

- Approx. dimensions of the sticks:
  - Diameter (Ø): 2-4 mm and 5-10 mm
  - Length: 400 mm
- Range of **BEADMAKING 104®** colors available: 25 colors; in addition, crystal glass and black reflector

### Typical values of features\*)

- |  |                               |                     |
|--|-------------------------------|---------------------|
| • Linear thermal coefficient of expansion (COE): | 104+/-2 x 10 <sup>-7</sup> /K |                     |
| • Upper annealing temperature approx.:           | 520 °C                        | 968 °F              |
| • Lower annealing temperature approx.:           | 420 °C                        | 788 °F              |
| • Softening point (Tg) approx.:                  | 500 °C                        | 932 °F              |
| • Working range approx.:                         | > 900 °C – 1100 °C            | > 1652 °F – 2012 °F |

\*) Standard values of **BEADMAKING 104®** glass sticks; they can act as reference points and do not represent guaranteed product features. In individual cases, testing for suitability before use is recommended.

### Methods for achieving striking and reducing effects:

- Working with a neutral flame
- Making use of color nuances by striking
- Working with a reducing flame with virtually no oxygen
- Working with a slightly reducing flame

### Plus points that make Friedrich Farbglasshütte GmbH BEADMAKING 104® stand out:

- excellent glass quality
- intensely colored glass sticks with high luminosity
- lots of reflectively reducing colors
- development of iridescent plays of color, depending on working method and heat treatment
- multiple effects through working method and flames
- **BEADMAKING 104®** glass sticks produce outstanding results because of their high color density, even when used in small quantities.

- Limited success with **KUGLER COLORS®** Aventurin Brown K999, Blue K888 and Aventurine green K059, to be tested by the user!
- Limited compatibility with colored glass sticks from **KUGLER COLORS®** overlay glass sticks with  $93 \pm 2 \times 10^{-7}/K$  expansion, to be tested by the user!
- Limited compatibility with colored glass sticks with 104 expansion from other manufacturers such as Effetre, Vetrofond etc., to be tested by the user!
- largely compatible with silver foil, silver leaf and gold leaf, to be tested by the user!



**Summary of advantages of Friedrich Farblashütte GmbH BEADMAKING 104® glass sticks:**

- very suitable for making jewellery and in particular unique copies for bead collectors
- even small quantities of **BEADMAKING 104®** produce impressive effects
- high brilliance and great luminosity
- grits which can themselves easily be made from **BEADMAKING 104®** sticks produce lovely accents
- high color stability, because **BEADMAKING 104®** glass sticks are
  - uniformly colored
  - non-fading, practically no solarisation
  - colorfast, non-fading even when exposed to UV rays
- very effective in reflected light
- virtually no dimming of colors

In cases of doubt, we recommend application-technology tests. We are happy to provide you with advice and support.

For further information: Phone	+49 8341 62040 or 62049
Fax	+49 8341 61625
E-mail	<a href="mailto:info@kuglercolors.de">info@kuglercolors.de</a>
Web-site	<a href="http://www.kuglercolors.de">www.kuglercolors.de</a>

Best regards,  
**Friedrich Farblashütte GmbH**