



## Ixef® PARA

Gamma-Stabilized Colors for Healthcare

**SPECIALTY POLYMERS** 



# The Look You Want. The Performance You Need.

Set yourself apart with Ixef® polyarylamide (PARA) gamma-stabilized colors. Their high strength, stiffness and smooth surface appearance make them a cost-effective alternative to metal in single-use instruments and devices.

Replacing metal with Ixef® PARA helps hospitals and healthcare networks minimize the transfer of infection and reduce central service costs associated with the sterilization of reusable instruments.

#### **Customize Your Look with Color**

Ixef® 1022 gamma-stabilized (GS) colors are based on an FDA Master Access File (MAF) supported color palette that includes white, dark gray, medium gray, light gray, blue, brown, green and black. They can be used to provide a quick visual reference for differentiating instrument sizes and to create a fresh, exciting look for new products.

#### Sterilization compatibility

| Method                              | Ixef® PARA |  |  |
|-------------------------------------|------------|--|--|
| Steam, 10 cycles (18 min at 134 °C) | $\sqrt{}$  |  |  |
| Ethylene oxide gas                  | √          |  |  |
| Vaporized hydrogen peroxide         | $\sqrt{}$  |  |  |
| High-energy gamma radiation         |            |  |  |

#### **Performance You Can Trust**

Unlike lower performing plastics, lxef® GS-1022 colored resins show no significant change in appearance or loss of mechanical properties after exposure to gamma radiation. They demonstrate no evidence of cytotoxicity, sensitization, intracutaneous reactivity or acute systemic toxicity, based on biocompatibility testing as defined by ISO 10993:1<sup>(1)</sup>

<sup>(1)</sup>Customers are advised to conduct their own investigation and testing on the suitability of these materials for the intended application.

### Ixef® GS-1022 Color Palette

| <br>Grade/Color      | PMS           | ΔΕ  | RAL  | ΔΕ  | RGB         |
|----------------------|---------------|-----|------|-----|-------------|
| Ixef® GS-1022/WH01   | Cool Gray 1 C | 7.5 | 9010 | 3   | 241 241 241 |
| lxef® GS-1022/GY51   | 7546 C        | 5   | 7024 | 2   | 57 74 88    |
| lxef® GS-1022/GY01   | Cool Gray 6 C | 4   | 7004 | 3   | 165 172 175 |
| lxef® GS-1022/GY02   | 5305 C        | 5   | 7035 | 4.5 | 210 211 219 |
| lxef® GS-1022/BU01   | 299 C         | 10  | 5012 | 6.5 | 0 152 219   |
| lxef® GS-1022/BN01   | 476 C         | 5   | 8017 | 3.5 | 76 51 39    |
| lxef® GS-1022/GN01   | 3285 C        | 7.5 | 6016 | 13  | 0 133 102   |
| Ixef® HC 1022 BK000* | Black C       | 3   | 9004 | 2   | 73 44 38    |

<sup>\*</sup>Inherently stable color that does not require gamma stabilization

The colors and values shown above should only be used as a guide. They are a representation of the color after exposure to 40kGy gamma radiation. A slight shift in color can be expected between the resin and the final molded part that has been sterilized by gamma radiation. Delta E values listed represent the difference between lxef GS colors and standard PMS and RAL color guides.

#### Pantone Matching System (PMS)

Color chips molded from typical production lots were matched to the Pantone® formula guide on solid coated stock using the Pantone® Color Cue™ color identifier. It is important to note that these color references apply only to the coated formula guide and not the uncoated, matte or plastic guides.

#### **RGB Color Values**

The Color Cue<sup>™</sup> also provided the respective RGB numbers used to create the color swatches. As monitor resolution and print quality varies, it is important to note that these RGB colors are only a guide. An exact color reference can be obtained by requesting a color chip.

#### **RAL Color Standards**

Color chips molded from typical production lots were matched visually to the Classic RAL Color Collection 840-HR, which has a matte finish.

#### Delta E ( $\Delta$ E)

Delta E provides a way to quantitatively describe color differences based on a composite of how light or dark, red or green, or yellow or blue a given sample may appear. Solvay uses an X-Rite spectrophotometer to measure the color differences between lxef® GS-1022 color chips and common color standards. Although each person may see color differently, a  $\Delta E$  less than 2 can be considered an excellent match; 2–5 is a good match and 5–10 is similar in color.



Ixef® PARA GS-1022 colors (Patent Pending)





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