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# PRESS INFORMATION

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**Safe and reliable alternative to plastics containing BPA: Grilamid TR reliably satisfies new EU requirements.**

## Grilamid TR, the BPA-free high-performance solution for food contact

**Polymer materials are used in a wide variety of applications involving direct contact with food, ranging from packaging and kitchen utensils to industrial equipment. At the beginning of 2025, the EU will ban the use of all plastics containing BPA, e.g. polycarbonate and polysulfone, in applications in this sector. With Grilamid TR, EMS-GRIVORY already provides a BPA-free high-performance polymer with impressive transparency, durability, and versatility, and that satisfies all regulatory requirements**

Fig. 1: Grilamid TR, the bisphenol A-free, future-oriented solution for household and industrial food processing applications

The EU directive 2024/3190 of December 19, 2024, which came into force on January 20, 2025, comprehensively restricts the use of bisphenol A (BPA), other bisphenols, and bisphenol derivatives in direct contact with food due to some of their properties which may be injurious to health. This particularly affects plastics such as polycarbonate (PC) and polysulfone (PSU). Previous regulations already prohibited BPA in baby milk bottles (EU 321/2011) and in drinking cups and bottles for infants and young children (EU 2018/213). The new regulation now introduces a broad ban on plastics containing BPA in direct contact with food, with only very few exceptions.

**Grilamid TR: Free of bisphenols, strong in applications**

Grilamid TR is not affected by the new EU restrictions as it is completely BPA-free. The high-performance polymer has convincing long-term resistance to dishwasher use and is very resistant to aggressive cleaning agents, hot oils and fats. Compared to other transparent polymers, it also shows significantly lower discoloration from foods such as carrots, curry, or tomato sauce. This makes Grilamid TR ideal for use in household appliances, commercial kitchens, and industrial applications such as milking equipment or food processing machines. Its performance remains completely reliable, even after use in industrial dishwashers at temperatures up to 95 °C.

**Grilamid TR – extremely versatile**

Grilamid TR is transparent and crystal clear. The product family includes a variety of grades for different requirements:

- **Grilamid TR 55** as an all-rounder, for example for baby milk bottles, water level indicators in kettles, or lighting covers in dishwashers.
- **Grilamid TR 90** for applications with high requirements for break resistance and ductility, such as water filters or assistive cutlery for sick or elderly people with special needs.
- **Grilamid TR XE 11292** for high-temperature applications with a glass transition temperature of 200 °C. This is the only transparent polyamide resistant to repeatedly sterilization with heated steam at 135 °C, making it ideal for use in the medical sector.

| Property | Grilamid TR | PC | PSU |
|---|---|---|---|
| Free of bisphenol-A | ✓ | ✗ | ✗ |
| Free of bisphenol-S | ✓ | ✓ | ✓ |

| Approvals for use in direct contact with food | Grilamid TR 55 | Grilamid TR 90 | Grilamid TR XE 11292 |
|---|---|---|---|
| EU | ✓ | ✓ | ✓ |
| FDA | ✓ | ✓ | ✓ |
| C-FDA | ✓ | ✓ | Approvals pending |

Chocolate molds in serial production are exposed to mechanical impact and cleaning processes. The new EU regulation 2024/3190 also applies here. Grilamid TR 90 LS is an ideal substitute for BPA-containing polycarbonate, not only due to its excellent ductility but also thanks to its superior resistance to detergents used in cleaning. The shrinkage behavior of Grilamid TR 90 LS is similar to that of polycarbonate, meaning that in most cases, no new tools are required for the production of chocolate molds. Unlike polycarbonate, Grilamid TR 90 LS allows chocolate to be monitored online by measuring density differences. This creates excellent conditions for safe and efficient large-scale food production.

The new **Grilamid TR XE 11292** is suitable for replacement of both polysulfone (PSU) and

polyethersulfone (PESU). Compared to PESU, it provides significant material savings with 30% lower density in combination with considerably higher notched impact strength. In addition, processing requires significantly less energy as the material melting point is around 60°C lower and the mold temperature around 30°C lower. Close cooperation between EMS application technology and customer development teams also ensures quicker and more efficient project implementation.

**Conclusion**

EU Regulation 2024/3190 largely bans bisphenol A (BPA) in food contact applications and, therefore, use of polycarbonate (PC) and polysulfone (PSU). **Grilamid TR** is completely BPA-free and combines maximum resistance to chemicals, fats and high temperatures with dishwasher safety and high transparency. In this way, it provides customers with a safe, versatile and sustainable solution for use in applications from household to industrial food processing.

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