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LANXESS
Energizing Chemistry

Brilliant coloration with **Macrolex® Orange HT** for technically demanding, high-temperature plastics applications

Macrolex® Orange HT is an organic high-performance solvent dye perfect for the coloration of PA and other technically very demanding plastics in terms of high-temperature processing or application.

Properties

The bright and brilliant orange color of **Macrolex® Orange HT** meets RAL 2003. In terms of heat stability in PA or in terms of sublimation resistance, **Macrolex® Orange HT** exhibits advantageous properties. In general, **Macrolex® Orange HT** unites high fastness and fine coloristics.

- Very brilliant orange + high color strength
- Heat stability: 310°C in PA6, 300°C in PA6.6 (for PC, PET, BPT, PPS, see table below)
- Very high sublimation temperature (510°C)
- High migration stability
- High lightfastness

Applications

Macrolex® Orange HT can be used where many orange colorants fail due to thermal stress or unsuitability to PA.

E-vehicles are operated with up to 400V direct voltage in the battery circuit and up to 1,000 V alternating voltage in the motor circuit. Since this is considered to be potentially life-threatening, orange color is used as an identifying and safety feature for high-voltage cables and connection components in hybrid and electric cars. These high-voltage components need to be recognizable over the entire lifetime of a vehicle. Other possible applications are power tool housings or gears. For such demanding applications, **Macrolex® Orange HT** is the perfect choice.

Furthermore, the dye can of course be used for coloration of all other high-quality plastic products, such as beverage bottles, electronic devices, car taillights, engineering plastics, and children's toys.

X Macrolex®

Benefits

While most traditional colorants are not suitable for PA, **Macrolex® Orange HT** is a robust dye exhibiting excellent thermal stability, migration fastness, lightfastness, and not only in PA but also in, e.g., PC or PPS. Furthermore, the color orange is especially sensitive to quality fluctuations. **Macrolex® Orange HT** exhibits the following key benefits:

- Particularly suitable for PA applications
- Expanded product life cycle
- Outstandingly consistent and exact coloristics (dE ≤ 0.7)
- Cost efficient due to high color strength
- Halogen-free



Performance

Figure: Thermogravimetric analyses of **Macrolex® Orange HT**, tailor-made for high-temperature applications, vs. SO60, a similarly shaded orange dye for more common use. Sublimation point is defined as temperature with 5% loss of weight.

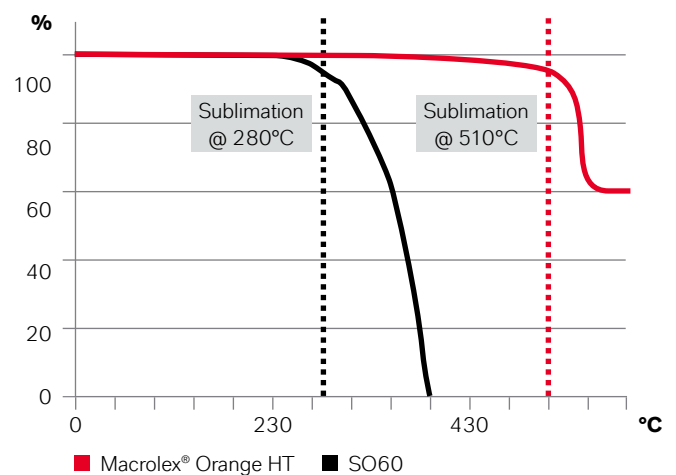


Table: Heat stability in °C at 1/3 standard depth with 1% TiO₂ (DIN EN 12877)

	PC	PA		PET	PBT	PPS
		6	6.6			
Orange HT	360	310	300	320	300	340
SO60	350	300	300	320	280	340

Get in touch with our experts to discuss the tailored coloration of plastics according to your individual needs (e.g., color matching, technical, and HSEQ support).

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