SINDLHAUSER MATERIALS ®

Productinformation

PeroLaB® – nano NIR-Absorber

Many plastics are transparent to light in the near infrared range (NIR, 800 – 1200 nm) and therefore do not generate sufficient energy by light absorption for active or reactive applications.

PeroLaB® converts the absorbed light into heat in the near infrared range and also partially in the UV / VIS range. The heat causes many plastics to melt. This process can be repeated as often as required without impairing reactivity.

Upgrade now.

PeroLaB® – nano NIR-Absorber

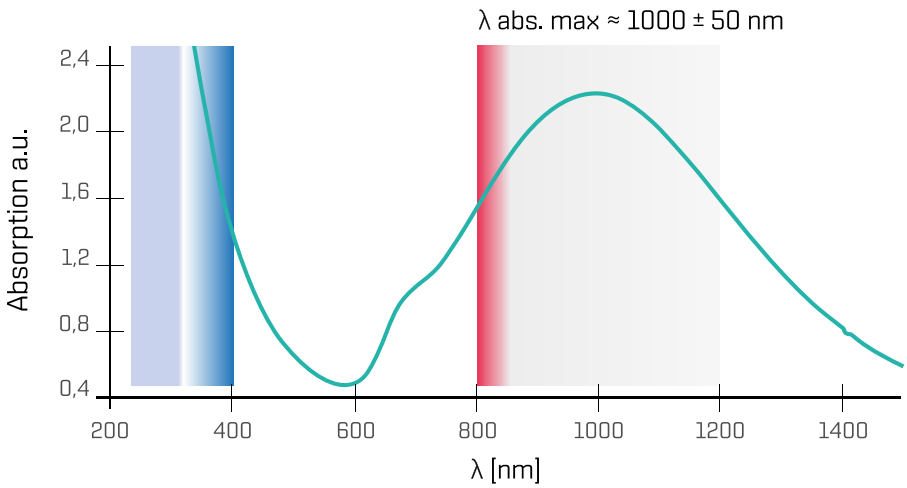

Fig. 1: Absorption spectrum

Product Properties

- Absorber: lanthanum hexaboride (LaB6) nanoparticles (< 120 nm)
- Absorption maximum: 1000 +/- 60 nm
- Abs.- range: 800 – 1200 nm and 280 – 400 nm
- Local heat generation up to 1500 °C
- Power for heat generation remains constant (even with several radiation cycles)
- Recyclable
- Biocompatibility
- Suitable for (almost) all thermoplastics: TPU, PA, PBT, PC, PMMA, PET, PP, PEEK, etc.

Areas of application

- Suitable for transmission, contour, simultaneous and quasi-simultaneous welding
- Compatible with fiber, Nd:YAG, diode (800 – 1100 nm) and UV lasers (300 – 380 nm)
- Transparent weld seams (depending on process and material)
- As absorber material for 3D printing applications
- Light-colored components - especially for 3D printing applications
- Mechanically highly resilient connections
- Suitable as a light filter and for radiation protection or safety pigments
- Residue-free and reproducible

Application- and delivery form

- Dispersion (ink), e.g.: in alcohol or oil
- Compound, e.g.: as granules, powder, film or filament
- Masterbatch, e.g.: as granules or powder

Reference: Safety data sheet for LaB6 (lanthanum hexaboride)

Disclaimer

The information in this document is based on our general experience and experience and knowledge at the time of publication. It is intended to provide the technically experienced reader with information on possible applications. However, the information does not constitute a guarantee of properties and no guarantee of the suitability of the product for the individual case. They do not release the user from testing the selected product in the application beforehand. All specifications are guide values based on the absorption behavior, the intended use and the application technology. NIR absorbers change their technical values over time depending on the degree of purity, type of particle size distribution and chemical exposure. These changes can have an influence on the function of components. We always recommend an individual consultation and, on request and where possible, we are happy to provide samples for testing on request. Our products are continuously further developed. We therefore reserve the right to change all technical data in this document at any time and without prior notification.

Sindlhauser Materials GmbH
Daimlerstraße 68
D-87437 Kempten

Tel. +49 (0) 831 - 960 458 0
info@perolab.eu