Easy access:
Our Material Database

Suitable precious metals and alloys are listed in the Heraeus Material Database which offers highest efficiency in material choice:

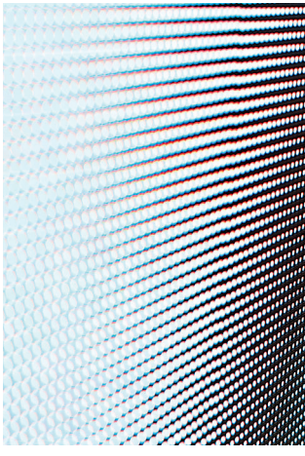
- **Quick and easy access:**
  no registration required, browse materials right away
- **Transparency:**
  find the right material by setting filters, e. g. applications
- **Comparability:**
  compare up to 4 materials and find out how they perform, e. g. electric resistivity, Young's Modulus, thermal conductivity
- **Experts:**
  discuss your chosen product with our experts

Simply scan the QR code and get to know our products.

How to reach out:
Our glass specialists at Heraeus

www.heraeus-precious-metals.com
precious.metals@heraeus.com

Simply scan the QR code and get in touch with our sales team.



Heraeus

Precious Metals

We make your glass precious
Discover Heraeus glass products and solutions

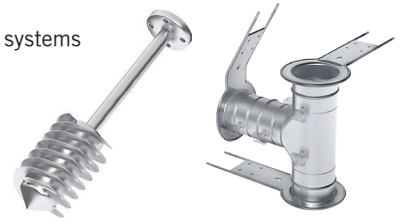
What makes Heraeus special:
Our core competencies at a glance

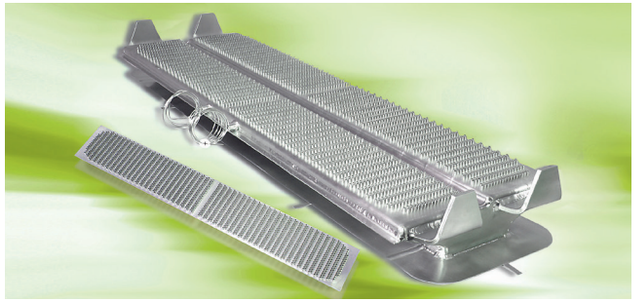
- Processing of precious metals and their alloys
- Semi-finished products, solid components for glass production
- DPH (Dispersion Hardened) alloys with reduced rhodium content
- Extending expertise throughout the precious metal cycle including recycling

What we produce at Heraeus:
Our products for the glass industry

There is a wide choice of precious metals and their alloys.
The success in glass production is determined by the right material. Heraeus produces several types of equipment for the glass industry, such as:

- Electrically heated feeder systems
- Stirrers & Plungers
- Gobbing stirrers
- Glass fiber bushings
- Cladding glass tools





Get to know:
Our DPH Material Portfolio

DPH Alloys

PtRh10 & PtRh20 Alloys
- Widely used in glass industries
- High Rhodium price significantly impacts financing costs, higher capital commitment and profitability

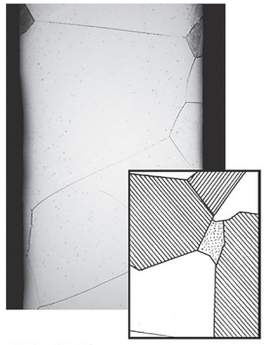
Dispersion Hardened Alloys
- Low Rhodium (Pt and PtRh5) **full-value substitute for PtRh10 and PtRh20** alloys
- Typical high corrosion resistance of DPH materials
- Featuring high resistance against grain growth
- Highest ductility – well-suited for temperature fluctuation, heat up and cool down phases
- Largely maintaining its properties after welding

DPH Strong Alloys

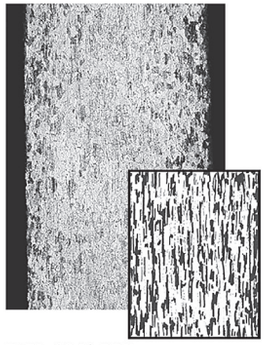
DPH–A
- Proven in glass industries
- Great mechanical properties
- Suitable for active parts in glass production and highest operating temperatures

DPH Strong
- Next generation of DPH–A
- Key applications: hollow stirrer in display applications
- Increased **rupture strength by 100 %**
- Typical corrosion resistance of DPH materials
- Featuring high resistance against grain growth

Stable Fine Grain Structure (1600 °C, 30 h)

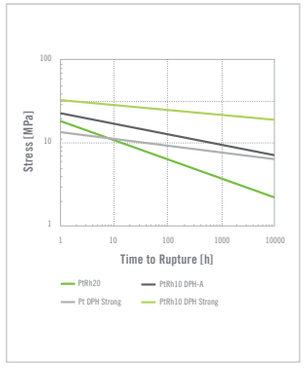


PtRh 10 %



PtRh 10 % DPH

Rupture 1400 °C



Norton 1400 °C