

PtRh5 DPH

Pt-5%Rh DPH

PtRh5 DPH is an oxide dispersion hardened grade of PtRh5.

It is commonly used for applications in the glass industry, e. g. the manufacture of feeder systems and in linings for refractory components. It is characterized by significantly high resistance to oxidation and corrosion combined with excellent forming properties and a high degree of ductility under service conditions.

PtRh5 DPH was originally developed as a reaction to high level Rhodium prices. It is widely used as an alternative to PtRh20, PtRh10 and even to PtRh10 DPH maintaining it's advantageous properties.

The hardening which results from the oxide particles, represents the most effective strengthening mechanism of the material. Due to the modified microstructure, DPH is considerably less sensitive to corrosion processes along the grain boundaries than comparable materials. These characteristics allow for extended life and results in the precious metal to be used more economically. An example would be reduced wall thicknesses of PtRh5 DPH compared to PtRh5 or increased lifetime.

General information

Applications	glass manufacturing, drain bushings, glass fibre bushings, semi-finished products
Product Forms	wire, tube, sheet
Density, g/cm ³	20.59
Melting Range, °C	1810 - 1820

Forming Processes

Material Behaviour	ductile
Forming Process	formable, machinable

Mechanical Properties

Young's Modulus, GPa	190
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Contact

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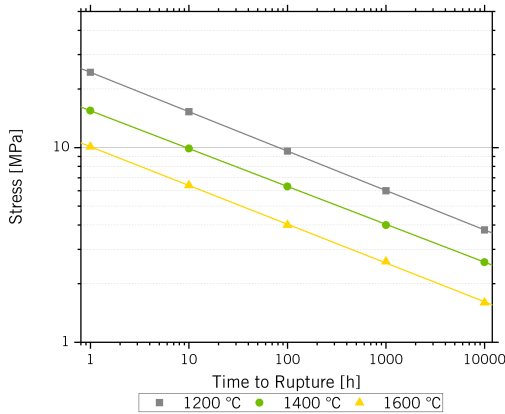
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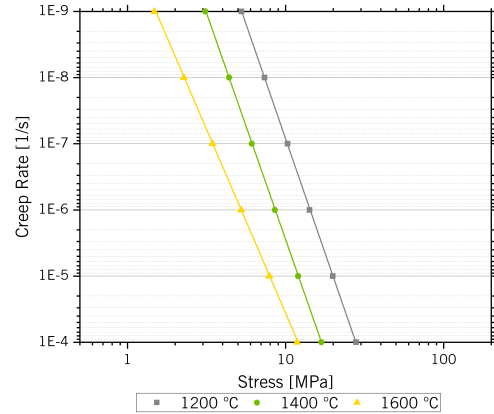
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Creep Rupture



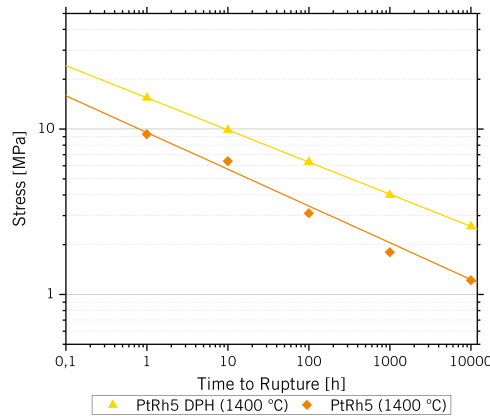
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Norton



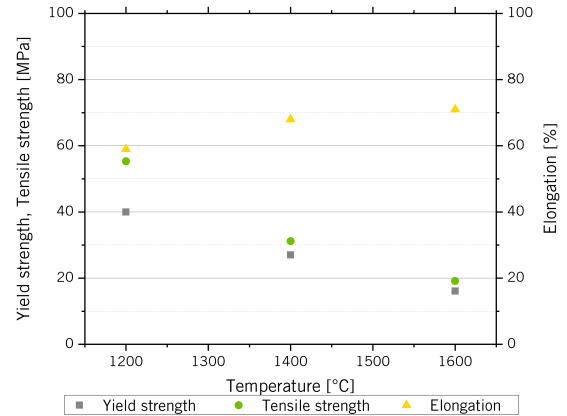
source: measured and extrapolated

Creep Rupture – Comparison



source: measured and extrapolated

High Temperature Tensile Test



source: measured

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