

TECHNICAL SPECIFICATIONS

Heraeus

Alloy Code: H-802 **Colour: White**

Suitable Karatage: 8/10/14/18K
Content : **Nickel:** 0.0% **Palladium:** 0.0%
 Silver: 66.8% **Platinum:** 0.0%
Applications: Suitable for loss wax casting, hand-making

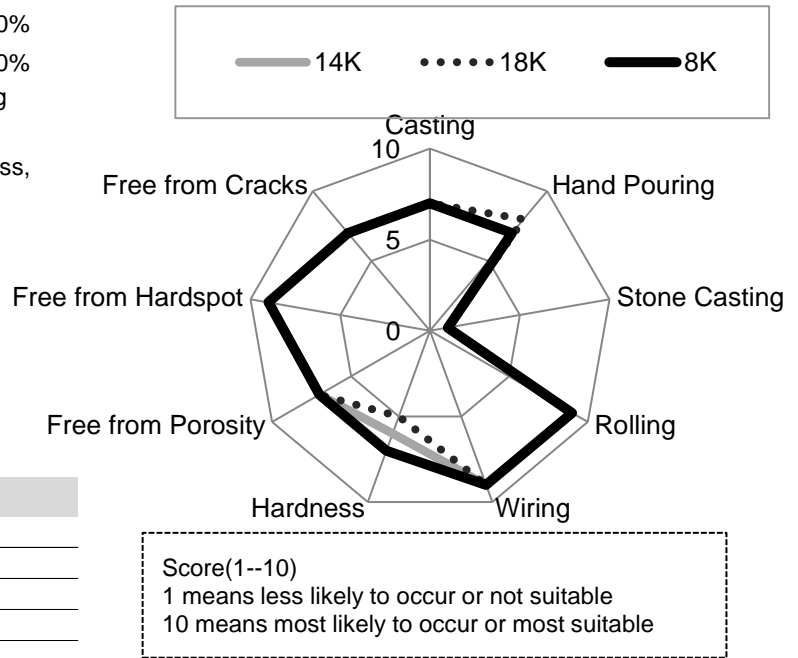
Advantages: Able to adjust the Pd content, high hardness, higher oxidation resistance

Melting Range (°C):

| | |
|--------------|------------|
| 8K (10%Pd) | 950 - 1000 |
| 14K (15% Pd) | 935-980 |
| 18K (32% Pd) | 960-1015 |

CIELAB Value :

| Karat | YI:D1925 | L* | a* | b* |
|--------------|----------|------|------|------|
| 8K (10%Pd) | 25.2 | 81.9 | -0.6 | 12.5 |
| 14K (15% Pd) | 25.1 | 81.5 | 0.2 | 12.7 |
| 18K (32% Pd) | 23.7 | 82.1 | 1.0 | 10.8 |



Mechanical Properties :

| Karat | Annealed Hardness (HV) | As Casted Hardness (HV) | Max. Strength (MPa) | Yield Strength (MPa) | Elongation (%) |
|--------------|------------------------|-------------------------|---------------------|----------------------|----------------|
| 8K (10%Pd) | 153 | 160 | NA | NA | NA |
| 14K (15% Pd) | 140 | 145 | NA | NA | NA |
| 18K (32% Pd) | 106 | 108 | 241 | 89 | 24 |

Recommended Casting Parameters : (Quenching Time: 15 - 25 Minutes)

| Karat | Metal Casting Temperature (°C) | Vacuum-assisted Casting Investment Temperature (°C) | | |
|--------------|--------------------------------|---|------------------|--------------|
| | | Thickness of work piece (mm) | | |
| | | Thin (<0.5) | Medium (0.5~1.1) | Thick (>1.1) |
| 8K (10%Pd) | 1150-1170 | 700-720 | 680-700 | 600-680 |
| 14K (15% Pd) | 1140-1160 | 700-720 | 680-700 | 600-680 |
| 18K (32% Pd) | 1195-1215 | 700-720 | 680-700 | 600-680 |

Recommended Mechanical Working Parameters:

| Recommended Annealing Temperature (°C) | Annealing Time for thickness (min) | < 1 mm | 1 - 5 mm | > 5 mm |
|--|------------------------------------|--------|----------|--------|
| H-802 | 650 - 700 | 30 | 35 | 40 |

| Process | Casting Temperature (°C) | Recommended Reductions |
|--------------------|--------------------------|------------------------|
| Ingot | 1180 - 1240 | Sheet Thickness % 70 |
| Continuous Casting | 1220 - 1280 | Wire Diameter % 45 |

Technical Advice:

- To avoid oxidation, the alloys must be covered with inert gas or yellow flame during casting.
- Not more than 50 % of old material should be used for recasting.
- The old material must be tumbled to remove the investment powder residue and oxides.
The material is then pickled in dilute sulfuric acid (15 %) for 15 - 20 minutes to remove the rest of oxides.
- The sprue should be placed at the thickest position. Additional sprue must be applied if necessary.
Fluted sprue is preferred to avoid any turbulence.

Remarks: The information is for your reference only. The parameters should be adjusted according to the particular casting conditions.
 If you have any technical questions, please do not hesitate to contact us.