

TECHNICAL DATASHEET AND GUIDELINE

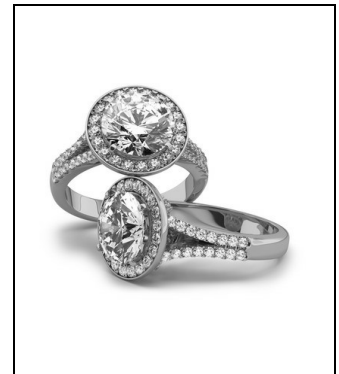
WB140C
Title 14 Kt

Master alloy for casting of 375-585‰ (9-14 Kt) white gold

GENERAL INFORMATION

| | |
|-----------------------------|-----------------------|
| Typology | Master alloy for gold |
| Production process | Casting |
| Color | White |
| Color shade | Standard white |
| Melting temperatures | |
| Solidus [°C] | 800 |
| Liquidus [°C] | 890 |

| | |
|-------------------------------|----|
| Commercial composition | |
| Ag (%) | 15 |
| Cu (%) | 49 |
| Ni (%) | 18 |
| Zn (%) | 18 |
| | |
| | |



FULL CHARACTERIZATION DATA

| | |
|--------------------------------|-------|
| General characteristics | |
| As cast grain size [µm] | 400 |
| Color coordinates | |
| L* | 87.1 |
| a* | 0.7 |
| b* | 11 |
| c* | 11 |
| Yellow index | 22.17 |

| | |
|---|-----|
| Mechanical characteristics | |
| Tensile strength (Rm) [MPa] | 644 |
| Yield strength (Rp0.2) [MPa] | 463 |
| Elongation at rupture (A) [%] | 26 |
| As cast hardness [HV 0.2] | 164 |
| Hardness after 70% area red. [HV 0.2] | 301 |
| Hardness after annealing [HV 0.2] | 195 |
| Single step age-hardening hardness [HV 0.2] | 245 |

PRODUCT APPLICATIONS

| |
|---------------------------|
| Casting in closed systems |
| Stone-in-place casting |
| Age-hardening |

RELATED PRODUCTS

| | |
|--------|---|
| WB142C | Lower silver content, casting with stones in all titles |
| WB143C | Maximum fluidity, higher silver content |
| LSB442 | Medium solder for 375‰ white gold |
| LSB455 | Medium/soft solder for 585‰ white gold |

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CASTING PROCESSING PARAMETERS

| Casting temperatures | Metal - from [°C] | Metal - to [°C] | Flask - from [°C] | Flask - to [°C] |
|-----------------------------|-------------------|-----------------|-------------------|-----------------|
| Thin (below 0.5 mm) | 990 | 1020 | 660 | 720 |
| Medium (from 0.5 to 1.2 mm) | 970 | 990 | 580 | 650 |
| Thick (above 1.2 mm) | 950 | 970 | 460 | 600 |

Stone-in-place casting trees

Let the flask cool down for 45-60 minutes, then quench in water.

Trees without stones

Let the flask cool down for 10-15 minutes, then quench in water.

Pickling

Dip in RADIAL solution (50 g/l conc. at 60°C for 5-10 min.), or in sulphuric acid (10% conc. at 50°C for 10 min.)