

**MASTER  
ALLOY**
**A183N1 875‰**

ALL-PURPOSE MASTER ALLOY FOR 750-917‰ (18-22 KT) YELLOW GOLD

**GENERAL INFORMATION**
**General information**

|                    |                       |
|--------------------|-----------------------|
| Color              | Yellow                |
| Production process | Universal             |
| Color shade        | Rich yellow           |
| Typology           | Master alloy for gold |

**Melting temperatures**

|                    |       |
|--------------------|-------|
| Liquidus [°C]      | 960.0 |
| Solidus [°C]       | 930.0 |
| Melting range [°C] | 30.0  |

**Commercial composition**

|            |       |
|------------|-------|
| Silver (%) | 49,00 |
| Copper (%) | 51,00 |



GOLD line

**FULL CHARACTERIZATION DATA**
**Color coordinates**

|    |      |
|----|------|
| L* | 85.0 |
| a* | 5.5  |
| b* | 27.0 |

**Physical characteristics**

|                              |      |
|------------------------------|------|
| Density [g/cm <sup>3</sup> ] | 16.7 |
|------------------------------|------|

**Mechanical characteristics**

|                           |      |
|---------------------------|------|
| As cast hardness [HV 0.2] | 75.0 |
|---------------------------|------|

**CASTING PROCESSING PARAMETERS**

Pre-mixing temperature [°C] 1080.0

| CASTING TEMPERATURES | Flask from [°C] | Flask to [°C] | Metal from [°C] | Metal to [°C] |
|----------------------|-----------------|---------------|-----------------|---------------|
| < 0.5 mm             | 660.0           | 720.0         | 1060.0          | 1090.0        |
| 0.5 - 1.2 mm         | 620.0           | 660.0         | 1040.0          | 1060.0        |
| > 1.2 mm             | 560.0           | 620.0         | 1020.0          | 1040.0        |

**Trees without stones**

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

**Stone-in-place casting trees**

Let the flask cool down for 30-45 minutes, then quench in water.

**Pickling**

Dip in RADIAL solution (50 g/l conc. at 60°C for 2 min.), or in sulphuric acid (10% conc. at 50°C for 5 min.)

**MECHANICAL WORKING PARAMETERS**

Pre-mixing temperature [°C] 1080.0

**Reductions**

|                               |      |
|-------------------------------|------|
| Sheet - area or thickness (%) | 70.0 |
| Wire - diameter (%)           | 45.0 |

| POURING TEMPERATURES | Countinous from [°C] | Countinous to [°C] | Ingot from [°C] | Ingot to [°C] |
|----------------------|----------------------|--------------------|-----------------|---------------|
| Temperatures         | 1060.0               | 1140.0             | 1040.0          | 1080.0        |

| MECHANICAL WORKING ANNEALING | Temp. from [°C] | Temp. to [°C] | Time [min] |
|------------------------------|-----------------|---------------|------------|
| <1 mm                        | 650.0           | 680.0         | 25.0       |
| 1 - 5 mm                     | 650.0           | 680.0         | 30.0       |
| >5 mm                        | 650.0           | 680.0         | 35.0       |

**Mechanical working quenching**

Quench directly in water