

**MASTER
ALLOY**
SCA5 375‰

MASTER ALLOY FOR CASTING OF 375-585‰ (9-14 Kt) YELLOW GOLD

GENERAL INFORMATION
General information

Color	Yellow
Typology	Master alloy for gold
Color shade	Green yellow
Production process	Casting

Melting temperatures

Liquidus [°C]	875.0
Solidus [°C]	810.0
Melting range [°C]	65.0

Commercial composition

Zinc (%)	18,00
Silver (%)	18,00
Copper (%)	64,00



GOLD line

FULL CHARACTERIZATION DATA
Color coordinates

L*	87.9
a*	0.6
b*	18.0
c*	18.0

Physical characteristics

Density [g/cm ³]	11.0
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General characteristics

As cast grain size [μm]	680.0
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Product applications

Casting in closed systems
Casting without stones
Casting in open systems
Age-hardening
Stone-in-place casting

Mechanical characteristics

As cast hardness [HV 0.2]	110.0
Hardness after annealing [HV 0.2]	120.0
Hardness after 70% area red. [HV 0.2]	250.0
Single step age-hardening hardness [HV 0.2]	170.0
Tensile strength (Rm) [Mpa]	516.0
Yield strength (Rp0.2) [MPa]	287.0
Elongation at rupture (A) [%]	30.0

RELATED PRODUCTS LIST
Related Products

LSG409	Master alloy for soldering of 585‰ (14 Kt) yellow gold
LSG409D	Master alloy for soldering of 585‰ (14 Kt) yellow gold
LSG417F	Master alloy for soldering of 375-585‰ (9-14 Kt) yellow gold
LSG419	Master alloy for soldering of 375‰ (9Kt) yellow gold

Alternative Products

C141US	Master alloy for casting of 375-585‰ (9-14 Kt) yellow gold
C14GR	Master alloy for casting of 375-585‰ (9-14 Kt) yellow gold

CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C] 995.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	660.0	720.0	975.0	1005.0
0.5 - 1.2 mm	580.0	650.0	955.0	975.0
> 1.2 mm	460.0	600.0	935.0	955.0

Trees without stones

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

Stone-in-place casting trees

Remove the flask from the chamber immediately (< 1 min) after pouring. Let it cool for 25 minutes in air, 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.)

AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP AGE-HARDENING TREATMENT	Temperature [°C]	Time [min]	Quenching
Age-hardening	250.0	90.0	Air or in furnace