LEGOR®

MASTER ALLOY

TECHNICAL SHEET

OR133 585‰

ALL-PURPOSE MASTER ALLOY FOR 585-750‰ (14-18 KT) RED GOLD

GENERAL INFORMATION

General information	
Production process	Universal
Color	Red
Color shade	Pink
Typology	Master alloy for gold
Melting temperatures	
Liquidus [°C]	905.0
Solidus [°C]	865.0
Melting range [°C]	40.0

Commercial composition	
Silver (%)	18,00
Zinc (%)	2,00
Copper (%)	80,00

GOLD line

FULL CHARACTERIZATION DATA

Color coordinates	
L*	84.3
a*	8.2
b*	17.6
c*	19.4
Physical characteristics	
Density [g/cm³]	13.1
General characteristics	
As cast grain size [µm]	20.0

Mechanical characteristics	
As cast hardness [HV 0.2]	165.0
Hardness after annealing [HV 0.2]	175.0
Hardness after 70% area red. [HV 0.2]	285.0
Single step age-hardening hardness [HV 0.2]	190.0
Tensile strength (Rm) [Mpa]	543.0
Yield strength (Rp0.2) [MPa]	360.0
Elongation at rupture (A) [%]	27.0

Product applications
Continuous casting
Casting without stones
Ingot casting
Stamping production
CNC and lathe production
Sheet production
Casting in closed systems

RELATED PRODUCTS LIST

Related Products	
LSR490	Master alloy for soldering of 375-585-750‰ (9-14-18 Kt) red gold
Alternative Products	
OR134	All-purpose master alloy for 375-585-750‰ (9-14-18 Kt) red gold

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CASTING PROCESSING PARAMETERS

Pre-mixing temperature [°C]	1025.0

CASTING TEMPERATURES	Flask from [°C]	Flask to [°C]	Metal from [°C]	Metal to [°C]
< 0.5 mm	650.0	720.0	1010.0	1040.0
0.5 - 1.2 mm	600.0	650.0	990.0	1010.0
> 1.2 mm	560.0	600.0	970.0	990.0

Trees without stones

Remove the flask within 1 minute after pouring, then quench immediately 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]	1025.0

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	1005.0	1085.0	985.0	1025.0

MECHANICAL WORKING ANNEALING	Temp. from [°C]	Temp. to [°C]	Time [min]
<1 mm	620.0	660.0	25.0
1 - 5 mm	620.0	660.0	30.0
>5 mm	620.0	660.0	35.0

Mechanical working quenching

Quench directly in a 50% water/50% alcohol solution or in water

AGE HARDENING PROCESSING PARAMETERS

SINGLE STEP AGE-HARDENING TREATMENT	Temperature [°C]	Time [min]	Quenching
Age-hardening	300.0	90.0	Air or in furnace

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