

TECHNICAL SPECIFICATIONS

Heraeus

Alloy Code: **H-555** **Colour:** **White**

Alloy Type: Master Alloy for Sterling Silver

Content : **Nickel:** 0.00% **Palladium:** 0.00%
 Silver: 0.00% **Platinum:** 0.00%

Applications: Suitable for loss wax casting, stone casting, hand-making

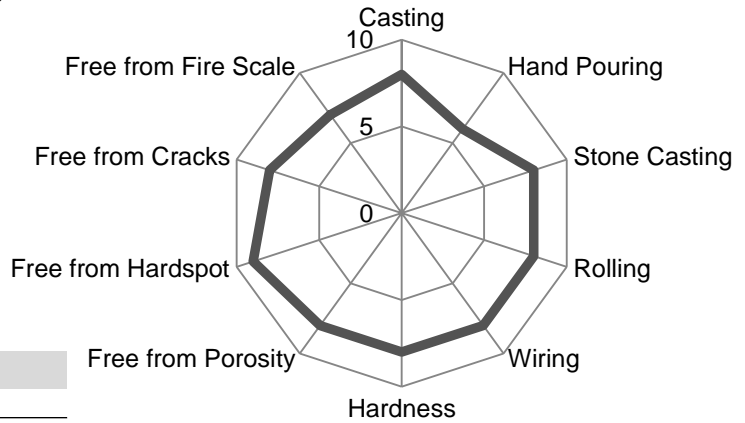
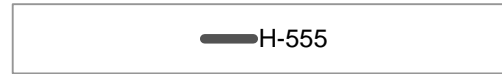
Advantages: Anti-tarnishing, heat treatable

Melting Range (°C):

Sterling Silver	887 - 889
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CIELAB Value :

Title	YI:D1925	L*	a*	b*
Sterling Silver	8.1	93.5	-1.0	4.5



Score(1--10)
 1 means less likely to occur or not suitable
 10 means most likely to occur or most suitable

Mechanical Properties :

Title	Annealed Hardness (HV)	As Casted Hardness (HV)	Max. Strength (MPa)	Yield Strength (MPa)	Elongation (%)
Sterling Silver	61	65	219	91	28

Recommended Casting Parameters :

(Quenching Time: 15 - 25 Minutes)

Title	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)
Sterling Silver	1000-1020	660-700	560-640	440-560

Recommended Mechanical Working Parameters:

Recommended Annealing Temperature (°C)	Annealing Time for thickness (min)	< 1 mm	1 - 5 mm	> 5 mm
Sterling Silver	600 - 650	30	35	40

Process	Casting Temperature (°C)	Recommended Reductions
Ingot	940 - 1000	Sheet Thickness % 70
Continuous Casting	980 - 1060	Wire Diameter % 45

Age Hardening Parameters:

Process	Temperature (°C)	Time (min)	Quenching	Hardness after Age Hardening (HV)
Age Hardening	300	60	Air or in furnace	110

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.