

Technical sheet - Alloy 551

Color - Rose Pink **Purpose** - Casting **Karat** - 14K - 18K

Physical & Mechanical Properties

Composition	
Cu	93.50%
Ag	3.5%
Zn	3.0%
Ni	0.0%

Color Coordinates			
Karat	L*	a*	b*
14K 551	87.13	11.82	18.59
18K 551	87.75	11.88	20.00

Density	(g/cc)
14K 551	13.00
18K 551	14.92

As cast Hardness (HV	')
14K 551	130
18K 551	223

Melting & Casting Instructions

Temperatures			
	Karat	°C	°F
Pre alloying	14K - 18K	1050° - 1060° C	1922° - 1940° F
Casting	14K - 18K	980° - 1010° C	1796° - 1850° F
Flask	14K - 18K	510° - 650° C	950° - 1202° F

Quench Time	14K - 15 minutes	
	18K - 2-3 min, button first	

Remelting	50% Fresh Mix

General Instructions

- Very little <u>boric acid</u> flux is recommended. Do not use carbon flux such as soda ash, saltpeter etc. No flux needed in bottom pour automatic casting unit.
- <u>Fluoric based</u> investment removers are the best for silicon oxide invisible coating. Use of aggressive acid causes corrosion and surface damage. <u>United's Brite cast</u> investment remover works effectively.
- To calculate the weight of the metal needed (in grams), <u>multiply density (gm/cc) with weight of wax</u> (grams). Add 10% of the total weight for button.
- Gypsum bonded investment is recommended. Follow manufacturer's instruction for burnout cycle.

Note: There are proprietary metals in the formulation which are not included in the composition section.

Technical Assistance: Available... Call 1-800-999-3463 / 1-800-999-FINE E-mail / techteam@unitedpmr.com Web-Site / www.unitedpmr.com