Low Temperature, Self-Fluxing, Tin-Silver Soldering Paste

# StainTin® 157PA




## BRAZING

- Free-flowing eutectic alloy with good capillary action
- Controlled Viscosity for easy, precise application
- Excellent choice for automated brazing and soldering
- Ideal for 300 Stainless steels in Food, medical and delicate applications

Castolin Eutectic®
Eutectic Castolin

## DESCRIPTION:

Eutectic StainTin 157PA is a paste soldering alloy particularly suited to stainless steels, **thoroughly** compatible with most copper, aluminum and carbon steel alloys.

The corrosion resistance of deposits in service ensure they remain bright and tarnish-free for a reliable, clean joint.

## TECHNICAL DATA:

Typical Tensile Strength: 15,000 psi (105 N/mm$^2$)
Yield Strength: 3,600 psi
Shear Strength: 10,000 psi
Electrical Conductivity - IACS: 16.5%
Thermal Expansion Coef.: 12 x 10-$^6$ in/ °F (20-212°F)
Solidus Temperature[1]: 430°F (220°C)
Liquidus Temperature[2]: 430°F (220°C)
Maximum Brazing Temp: 450°F (230°C)
Heating Methods: Oxy-fuel torch, induction, resistance heating and furnace soldering

[1] The solidus temperature is the highest temperature at which the part remains solid i.e. the start of melting.

[2] The liquidus temperature is the lowest temperature at which the part is molten i.e. complete melting.

## TYPICAL APPLICATIONS:

For soldering dairy utensils, food-handling equipment, plumbing fixtures and potable water containers and piping. Also useful for joining electrical connectors*.

## WELDING PARAMETERS:

**Preparation:** Clean joint area with RotoClean® OS or use a proprietary VOC-free solvent. Thoroughly mix the 157PA so that the flux and metal particles are well amalgamated and show a smooth consistency. Use a fine brush or spatula to apply the paste.

**Note 1**: *It is important not to allow any movement while the solder alloy cools and solidifies.*

**Note 2:** *For best results maintain joint clearances between 0.001" and 0.005".*

**Technique:** Heat insert parts slowly indirectly to reduce thermal shock so to promote uniform flow.

**Note:** *During the melting phase it is important that the parts being soldered to not move. Observe flow indications so that all contact surfaces are seen to be soldered.*

**Post-brazing:** Allow parts to cool naturally. Parts can be quenched to help with flux residue removal.

YOUR RESOURCE FOR PROTECTION, REPAIR AND JOINING SOLUTIONS

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