



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

# **StainTin<sup>®</sup>**

## **157PA**

- 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

# StainTin® 157PA

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 Values

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

<sup>1</sup> The solidus temperature is the highest temperature at which the part remains solid i.e. the start of melting.

<sup>2</sup> The liquidus temperature is the lowest temperature at which the part is molten i.e. complete melting.

## PROCEDURE FOR USE

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

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

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

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

**POST WELDING:** Allow parts to cool naturally. Parts can be quenched to help with flux residue removal.

## TYPICAL APPLICATIONS

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

