What melts? | What doesn’t melt?
---|---
Ice Cream | Broccoli
Chocolate | Wood
Ice | Gases
Plastic | Paper
Laser powder metal | Ultrasonic additive metal
3D printing | 3D printing

**Solid state** welding produces coalescence at temperatures below the melting point of the base materials being joined, without the additional filler metal. Again, no melting occurs.

**How Fabrisonic’s Solid-State Welding Works**

As the US textured ‘horn’ rolls over the metal foil, a scrubbing action is induced by using force and a back and forth motion via the transducers. The oxide layer is broken off so the metals can naturally bond.

**What’s Happening...**

1) Ultrasonic motion causes oxides to breakup
2) Localized asperities yield and collapse
3) Heat and pressure create high strength solid state bonding