

Bonding & Sealing Solutions for Medical Tube Sets

Opportunity

A medical device company in Mexico assembling tube sets for IV fluids was experiencing low bond strengths on PVC components using a solvent welding process. A product is needed that will increase bond strengths, improve gap fill, and eliminate environmental issues.

Substrates: PVC (Polyvinylchloride) || PVC (Polyvinylchloride)

Challenges

- Solvent welding does not fill gaps when parts were out of tolerance
- Parts failing quality pull tests create scrap increasing product manufacturing costs
- Health and Safety concerns for operators including solvent fumes and ventilation system required

Solutions

Product(s) used: [Loctite 3341 Med](#)



Components

PVC fittings, adapters, and tubing are first cleaned with IPA by hand wiping with cloth.



Dispense

The PVC tubing receives a light coating of Loctite 3341 to the tube OD when inserted into the Loctite Tubeset Dispenser.



Cure

Fittings are then pressed onto the tubing and then exposed to LED lights for curing.

Benefits

- Henkel adhesive solution achieves goal of one piece flow in production
- [Loctite 3341](#) improves tension and torque yields on PVC versus solvent bonding which reduced scrap and allowed for wider tolerance on parts
- Process line speed increased with near instant UV cure versus solvent dwell times