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CHITTENDEN COUNTY

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VTRANS  
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ENGINEERING AND MANUFACTURING STANDARD  
PTFE FACING AND STEEL  
OR PREFORMED FABRIC SUBSTRATE  
SURFACE PREPARATION AND ADHESIVE PROCEDURE

The PTFE facing shall be prepared for bonding to a substrate material by chemically etching the face to be bonded using the sodium ammonia process

The mating surface of the substrate shall be prepared for bonding using a three-step process as follows:

- 1 preliminary degrease using methyl ethyl ketone
- 2 mechanically roughen to approx 125 RMS and thoroughly brush and clean for final degreasing
- 3 final degrease using methyl ethyl ketone

The PTFE and substrate mating surfaces shall be clean and dry with final degreasing performed within 30 minutes of bonding. Adhesive shall consist of a two-part epoxy adhesive system conforming to Military Specification MMMA-134

The adhesive shall be applied to the full area of the contact surface in an even manner so as to establish a glue line not less than .002 inch nor more than .010 inch thick. Surfaces being bonded are to be assembled immediately with open assembly time not to exceed 20 minutes

The PTFE material shall be greater in width and length than the substrate material by at least 1/4 inch when bonded. The PTFE shall be applied with contact starting at one edge and with contact progressing across entire bonded surface to eliminate air entrapment. The PTFE is to be in full contact with the steel or preformed fabric substrate. Curing of the bond shall be done under pressure of approx 2-100 psi for 10-12 hours at approx 70°F or other schedules as established by the manufacturer of the adhesive

The PTFE shall be carefully trimmed to the same size as the substrate after bond curing and all bonds shall be visually inspected for bond retention