



May 5, 2015

RE: CERTIFICATE OF COMPLIANCE FOR MTUBE®

To Whom It May Concern,

This letter is to certify that Manufactured Technologies Corporation (MTC) is a wholly owned subsidiary of Insituform Technologies, LLC, and was established as a business in 2005. MTC has been supplying the trenchless rehabilitation industry with CIPP liners since 2006. During this time, MTC has supplied nearly 10 million linear feet of CIPP liner to contractors across North America and beyond.

All of our felt tubes are manufactured and wetout by Insituform Technologies in an ISO: 9001:2008 certified factory in accordance with the guidelines of ASTM F1216 and ASTM F1743. Most commonly, our liners are impregnated with polyester resin, which is produced by industry leading suppliers, including but not limited to: AOC and Interplastic Corporation.

Our resin systems have a successful history in lab conditions and actual field installations of meeting the chemical resistance recommendations of ASTM F1216, ASTM F1743 and ASTM D5813.

The following physical properties are recommended for CIPP design when using a polyester resin system:

Flexural Modulus of Elasticity.....	400,000 psi
Flexural Strength	4,500 psi
*Tensile Strength	2,500 psi
Flexural Modulus Reduction to Account For Long-Term Effects.....	50%

* As stated in ASTM F1216, tensile strength is not a parameter that is used in standard gravity flow design.

The above values were derived from samples tested in accordance with modified ASTM D790. If you should have any additional questions, please do not hesitate to contact me at your convenience. I am available at (636) 530-3355 or mwetzl@mtcmail.com.

Best regards,

Mark Wetzel
General Manager, MTC

DISCLAIMER OF WARRANTY: AS INSTALLATION CONDITIONS (INCLUDING, AMONG OTHERS, PIPE TYPE & CONDITION, GROUNDWATER DEPTH & TEMPERATURE, DEPTH OF COVER & SOIL TYPE, LIVE LOADS, SITE ACCESS AND WEATHER) AND INSTALLER EXPERIENCE, TECHNIQUES AND TYPE OF EQUIPMENT VARY GREATLY, MTC EXCLUDES ANY WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THE GOODS SOLD HEREUNDER AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR USE OR ANY OTHER MATTER WITH RESPECT TO THE GOODS WHETHER USED ALONE OR IN COMBINATION WITH OTHER PRODUCTS. MTC HAS NOT PROVIDED ANY DESIGN SPECIFICATIONS OR COMPUTATIONS, AND ACCORDINGLY, MTC DOES NOT WARRANT THE DESIGN.