

**Product Compliance Testing for
the LADTECH® Injection Molded
Recycled High Density
Polyethylene Adjusting Rings**

Finite Element Analysis was conducted by Aero/Mechanical Technologies, Inc. during the product development phase. This computer analysis process indicated the LADTECH® adjustment ring design to have the following safety factors under a 25,250 pound load.

	Centered Load	Off-Set Load
1) Static Compressive Stress	6.1	2.9
2) Static Shear Stress (22% Grade)	5.4	5.4
3) Static Elastic Stability (Buckling-Stack of 8)	25	13
4) Shock Impact (.75 Inch Free Fall of Load)	4.2	1.0

Product compliance testing was conducted by American Engineering Testing, Inc. The compressive load carrying capability was confirmed. The rings were successfully loaded up to 60,000 pounds. At that point, with the LADTECH® ring still in serviceable condition, failure of the concrete catch basin and the manhole cover frame assembly halted further testing.

Water penetration tests were also conducted by American Engineering Testing, Inc. under ambient laboratory conditions utilizing the approved sealants. When the sealants were properly applied, this testing showed no significant leakage.

Please refer to American Engineering Testing, Inc. Report#96-2648 dated January 15, 1997.

As of July 27th, 1998, further compressive and impact testing is being conducted.

For more information about testing procedures and existing test results, contact LADTECH, Inc. at testing@ladtech.com