

Our Company

Action Products, Inc. has been manufacturing its proprietary Akton[®] viscoelastic polymer since the company's inception in 1970. This ultrasoft elastomer was originally engineered by its founder, Dr. W.R. McElroy for the



Dr. W.R. McElroy, Inventor

treatment and prevention of decubitus ulcers within the medical industry. After establishing itself as a pioneer in product development for both the Durable Medical Equipment and Surgical markets, the company began to explore additional product applications for this unique and versatile elastomer. Today the company designs and manufactures products and component parts for a wide variety of applications in the medical, military, sporting and construction industries. The Action[®] brand of medical products is currently sold in over 65 countries worldwide and has earned a sterling reputation for high performance, high quality products.

Located in Hagerstown, MD (1.5 hours NW of Washington, DC and Baltimore, MD) Action's two facilities encompass 60,000sf. Operations and Administrative offices are housed in the recently expanded 40,000sf facility while R&D, Engineering and Shipping / Warehousing are located in its 20,000sf building. The company is currently completing its Stage 3 plans for further expansion and consolidation of all functions onto its 8-acre campus.

Our Polymer

Akton[®] Polymer is an ultrasoft elastomer, also called a dry viscoelastic polymer. It is a vulcanized, cross-linked rubber material with unique physical properties. It is available in multiple durometers, dependent upon the required application. Most commonly produced in the range 15 (000) to 45 (00), the material is most often encased in either a polyether or polyester film. Our film thickness typically range 3 - 12 mil and are available in a variety of colors.

- Elastic memory
- Pliable from -65°F to 285°F
- Evenly distributes heat
- Evenly distributes weight
- Does not leak or flow
- Shock Absorbing
- Vibration damping
- No latex, silicone, plasticizers
- Self-extinguishing fire rating
- Non-allergenic
- Non-conductive*
- X-ray and MRI compatible
- Durable
- Easily repaired
- Does not support bacterial growth

Our Capabilities

Action Products is staffed and equipped to handle simple to complex design, prototype and manufacture of virtually any item. We have long-standing partnerships with several world class manufacturing companies and pride ourselves on our innovative approach to projects. We offer:

- Fully staffed Engineering and R&D departments
- 3-D CAD modeling
- SLA and CNC machining
- Pressure Mapping Laboratory
- Mold making expertise
- Regulatory Compliance Department w. FDA experience
- Lean manufacturing facility

Physical Testing

The following test results demonstrate why Akton® polymer is so unique. Its ability to maintain its shape, stretch, deflect an applied load and absorb shock make it an ideal material for many applications. Action Products also has a wide selection of independent and in-house studies pertaining to its clinical effectiveness, appropriateness for vibration damping, response to heat and humidity, use as a bolus material, toxicity and fire ratings. These are available upon request.

ASTM D 412-98a Rubber Properties in Tension						
Sample No.	100% Modulus (PSI)	200% Modulus (PSI)	300% Modulus (PSI)	Peak Tensile (PSI)	Ultimate Elongation (%)	Shore A Hardness (pts)
1	2.6	3.2	4.8	16.9	959.1	N/A
2	3.1	4.0	5.3	22.7	1060.3	
3	2.6	3.9	5.6	18.4	1030.0	
Median	2.6	3.9	5.3	18.4	1030.0	

ASTM D 575-91(96) Compression Deflection, Method A 25% Deflection	
Sample No.	Lbs. per Square Inch
1	0.66
2	0.63
3	0.63
Median	0.63

ASTM D 575-91(96) Compression Deflection, Method A 50% Deflection	
Sample No.	Lbs. per Square Inch
1	3.45
2	3.10
3	3.47
Median	3.45

ASTM D 395-97 Compression Set, 22 hrs @ 25% Compression Room Temperature	
Sample No.	Lbs. per Square Inch
1	0
2	0
3	0
Median	0

ASTM D 395-97 Compression Set, 22 hrs @ 50% Compression Room Temperature	
Sample No.	Lbs. per Square Inch
1	0
2	0
3	0
Median	0

ASTM D 1054-91 Resilience Using a Rebound Pendulum					
Sample No.	Rebound Resistance, R, %			Median	Average
1	7.2	6.6	6.2	6.6	6.7
2	9.4	9.0	8.2	9.0	8.9

ASTM D 624-98 Die C Tear	
Sample No.	Tear Strength, Lbs/ In.
1	3.4
2	3.5
3	2.7
Median	3.4

In a test conducted by the nation's leading independent ballistics lab, H.P. White Laboratory, Inc. of Aberdeen, MD, an Action Products KICK KILLER Recoil Pad reduced the mean peak recoil more than twice as effectively as the leading competitive pad. The test was a Winchester ranger pump action shotgun chambered for 12 gauge 3" magnum load.



AKTON pads also reduce time of peak impact to shoulder