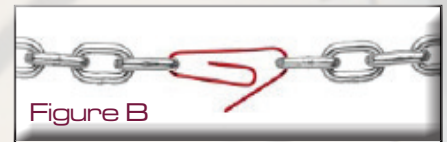


Ionic Hybrid Elastomers™

DiaCom has developed elastomer formulations using Ionic Hybrid Technology in combination with additional compound refinements and enhancements to offer improved flex life. This technology can be utilized in any Diaphragm design and geometry, which include with or without fabric reinforcement, bonded inserts and barrier films. Ionic Hybrid cure technology can also be combined with DiaCom's Fab-Air™ dispersed fiber. Elastomers using this technology do not need any special molding equipment. It is used exclusively in elastomer compounds. Ionic Hybrid Technology can be used in a variety of elastomers, such as HNBR, EPDM, FKMs and FEPMs all to provide enhanced properties.

How it works:

A chain of paper clips can be made by linking them together, See Figure A. However, we can break the chain by sliding them apart. In Elastomers, after repeated flexing cycles, chemically & heat resistant cross-links will irreversibly break, See Figure B. With paper-clips, we can reverse this process by sliding the paper clips back together to reform the chain. The Ionic Hybrid materials allow for the cross-links to reform and thus maintain rubber integrity during flexing. This reforming of cross-links extends the life of an elastomer measurably.



Ionic Hybrid technology vs. Conventional elastomer compounds:

- **Enhances Performance**
- **Improves Flex Life**
- **Improves Mechanical Properties such as Tear Strength**
- **Improves Abrasion Resistance**
- **Improves Adhesion to a Substrate**
- **RoHs and REACH Compliant**

DiaCom's new Ionic Hybrid Technology has been approved in current applications that require homogeneous and fabric reinforced molded diaphragms to operate at a wide range of temperatures and pressures. By utilizing this technology over standard rubber compounding technology, we were able to dramatically increase the cycle life of diaphragms in many applications. The Ionic Hybrid Technology enables DiaCom to manufacture molded diaphragm seals that consistently meet or exceeds the ever more demanding applications that customers require.

Diaphragm Design & Manufacturing Leader

DiaCom Corporation, an ISO 9001 and AS9100 certified company, is a recognized leader in the design, manufacture and application of innovative, high performance molded diaphragm seals. DiaCom serves a variety of markets worldwide including industrial, automotive, aerospace, food processing, water controls, medical instrumentation, appliances and others. DiaCom offers state-of-the-art diaphragms designed for cost effectiveness, ease of installation durability, and high performance characteristics.

 **DIA.COM CORPORATION**
The Diaphragm Company
Online Guidebook: www.diacom.com



5 Howe Drive Amherst, NH 03031 USA
Phone: 800.632.5681 603.880.1900 Fax: 603.880.7616
Internet: www.diacom.com Email: sales@diacom.com

The information shown is based upon information from material suppliers and careful examination of available publications and is believed to be accurate and reliable; however, it is the user's responsibility to determine suitability for use. You should thoroughly test any proposed use of our materials and independently conclude satisfactory performance in your application.