

# Elastomer Physical and Analytical Testing

## SUPPORT SERVICES

RubberMill can provide the typical tests commonly required for new product development. Costs vary according to specific customer requirements.

| TEST METHOD                      | DESCRIPTION                               | ASTM #               |
|----------------------------------|---|----------------------|
| <b>PHYSICAL TESTING</b>          |   |                      |
| Abrasion                         | NBS                                       | D-1630               |
| Abrasion                         | Taber                                     | D-3389, D-1044       |
| Adhesion Testing                 |   | D-413, D-429         |
| Bashore Resilience               |   | D-2632               |
| Brittle Point                    | Pass/Fail                                 | D-2137, D-746        |
| Brittle Point                    | Find                                      | D-2137, D-746        |
| Capillary Rheology               |   | D-3835               |
| Coefficient of Friction          |   | D-1894               |
| Coefficient of Thermal Expansion |   | D-696                |
| Compression Deflection           |   | D-575                |
| Compression Set                  | Method A                                  | D-395                |
| Compression Set                  | Method B                                  | D-395                |
| Demattia Flex                    |   | D-813                |
| Density of Specific Gravity      |   | D-297, D-792         |
| Dielectric Strength              | AC/DC                                     | D-149                |
| Environmental Stress Crack       | Per Week                                  | D-1693               |
| Flexural Modulus                 | Strength                                  | D-790                |
| Flexural Modulus                 | Cantilever                                | D-747                |
| Fluid Resistance                 | Per Week                                  | D-471                |
| Gardner Impact                   |   | D-3029               |
| Gehman or Clash-Berg Stiffness   |   | D-1053, D-1043       |
| Goodyear Healy Rebound           |   | D-1054               |
| Heat Aging                       | Per Week                                  | D-573                |
| Heat Deflection                  | Vicat Softening                           | D-648, D-1525        |
| Hot Tear Resistance              |   | D-624                |
| Izod                             | Charpy Impact                             | D-256                |
| Melt Flow Index                  |   | D-1238               |
| Mooney Viscosity                 |   | D-1646               |
| Moisture Vapor Transmission      |   | E-96                 |
| Ozone Resistance                 |   | D-395                |
| Permeability                     | Air, Water, O <sub>2</sub> N <sub>2</sub> | D-1149, D-1171       |
| Ross Flex                        |   | D-1052               |
| Tear Resistance                  | B, C, Trouser                             | D-624, D-1938        |
| Temperature of Retraction        |   | D-1329               |
| Tensile Properties               |   | D-412, D-638, D-1414 |
| Texus Flex                       |   | D-3629               |
| Volume Resistivity               | DC  | D-257, D-991         |
| Young's Modulus                  |   | D-797                |
| <b>TEST METHOD</b>               |   |                      |
| <b>ANALYTICAL TESTING</b>        |   |                      |
| Polymer Identification by FT-IR  |   | D-3677               |
| Rubber Compound Analysis         | Standard Cursory % Chlorine               | E-442                |
| Rubber Compound Analysis         | Complete % Ash                            | D-297                |
| Eternal Ash Analysis by AA       | % Extractables                            | D-297                |
| Solution Viscosity               |   | D-2857               |
| Chlorine Ion                     |   | D-512                |
| Total Sulfur                     |   | D-297                |
| Free Sulfur                      |   | D-297                |
| Plasticizer ID by GC/FT-IR       |   |                      |



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**Disclaimer:** The information contained in this document is to be used as a guide only. RubberMill cannot guarantee the accuracy, or be held responsible for the information's end use.

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