

SARLINK® 3160 is a low hardness, multi-purpose thermoplastic elastomer featuring excellent compression set and high temperature performance. SARLINK® 3160 can be processed by injection molding or extrusion for applications such as grips, seals, gaskets, profiles and other articles.

| Typical properties*   | Test method                                  | S.I.  |  | U.S.  |  |
|---|--|---|--|---|--|
|   |  | Typical value   | Units                                      | Typical value   | Units                                      |
| <b>Hardness Shore A</b> (5 sec)<br>Injection molded sample<br>Extruded sample   | ASTM D-2240,<br>5 sec. Delay<br>5 sec. Delay | 66<br>62  | --<br>--                                   | 66<br>62  | --<br>--                                   |
| <b>Specific Gravity</b>   | ASTM D-792                                   | 0.95  | --   | 0.95  | --   |
| <b>Stress/Strain properties</b><br><u>Flow direction</u><br>Tensile strength<br>Modulus at 100%<br>Elongation at break<br><u>Cross direction</u><br>Tensile strength<br>Modulus at 100%<br>Elongation at break  | ASTM D-412,<br>Die C                         | 4.2<br>2.9<br>353<br><br>6.2<br>2.4<br>654            | MPa<br>MPa<br>%<br><br>MPa<br>MPa<br>%     | 609<br>421<br>353<br><br>899<br>348<br>654            | Psi<br>Psi<br>%<br><br>Psi<br>Psi<br>%     |
| <b>Tear Strength</b><br><u>Cross direction</u><br>Unnicked  | ASTM D-624,<br>Die C                         | 32  | kN/m                                       | 182   | Pli  |
| <b>Compression set</b><br>22h/23°C<br>22h/70°C<br>22h/100°C   | ASTM D-395,<br>Method B                      | 23<br>38<br>41  | %<br>%<br>%                                | 23<br>38<br>41  | %<br>%<br>%                                |
| <b>Hot air aging</b><br><u>168h/150°C, Cross Direction</u><br>Change in hardness<br>Retention tensile strength<br>Retention modulus at 100%<br>Retention elongation at break<br><u>1000h/125°C, Cross Direction</u><br>Change in hardness<br>Retention tensile strength<br>Retention modulus at 100%<br>Retention elongation at break | ASTM D-573                                   | 2.7<br>99<br>107<br>89<br><br>3.4<br>102<br>97<br>111 | --<br>%<br>%<br>%<br><br>--<br>%<br>%<br>% | 2.7<br>99<br>107<br>89<br><br>3.4<br>102<br>97<br>111 | --<br>%<br>%<br>%<br><br>--<br>%<br>%<br>% |
| <b>Volume swell</b><br>24h/121°C Oil #3<br>70h/125°C Oil #3   | ASTM D-471                                   | 112<br>135  | %<br>%                                     | 112<br>135  | %<br>%                                     |
| <b>Rheology</b><br><u>Apparent Shear Viscosity</u><br>@ 206 1/s, 200 °C   | ASTM D-3835                                  | 340   | Pa.s                                       | 340   | Pa.s                                       |

\* Tests are conducted on injection molded plaques unless indicated otherwise.



SARLINK® 3160 is a polypropylene based elastomer, which can be processed on conventional thermoplastic equipment for injection molding and extrusion. This product has a wide processing window in most applications. Melt temperatures from 360°F to 430°F can be used. Do not exceed 450°F. Drying is recommended for extrusion and blow molding and any time the material is used from an unsealed package. Dry three (3) hours at 180°F. Drying is best accomplished in a desiccant dryer.

| INJECTION MOULDING CONDITIONS |                                   |  | EXTRUSION CONDITIONS |  |   |
|-------------------------------|-----------------------------------|--|----------------------|--|---|
| Melt temperature              |                                   | 360-430°F  | Melt temperature     |  | 380-420°F   |
| Barrel Temperatures           | Rear<br>Middle<br>Front<br>Nozzle | 350-420°F<br>350-420°F<br>350-420°F<br>370-430°F | Barrel Temperatures  | Rear<br>Transition<br>Metering<br>Front<br>Die | 360-400°F<br>360-400°F<br>370-410°F<br>370-410°F<br>380-420°F |
| Mould temperature             |                                   | 50-150°F   |                      |  |   |
| Screw Speed                   |                                   | 100-200 RPM                                      | Roll Temperature     |  | 70-120°F  |
| Back Pressure                 |                                   | 10-150 psi                                       | Screen Pack          |  | 20 to 60 mesh   |
| Screw                         | General Purpose 20:1 L/D ratio    |  | Screw                | General Purpose 3:1 compression ratio          |   |

#### PURGING

SARLINK® 3160 has excellent melt stability. Empty the barrel for idle periods of thirty (30) minutes or longer. Purge thoroughly before and after use of this product with polyethylene or polypropylene.

#### RECYCLING/REGRIND

This product can be reprocessed. Physical properties are generally not degraded. Dry regrind prior to reprocessing. Drying is best accomplished in a desiccant dryer.

#### COLORING

The use of polyolefin based color concentrates is recommended. Apply back pressure in injection molding to disperse color.

#### BONDING/ASSEMBLY

Thermal bonding techniques can be used to form high strength bonds. Adhesive bonding can be achieved with specialized adhesives. Bond strength is limited due to the polypropylene base of this material.

#### STORAGE & HANDLING

SARLINK® 3160 is available in 55 lb. foil lined bags (up to 2,200 lbs. per pallet) or 1,100 lb. polyethylene lined gaylords. It has a storage life at normal temperatures of several years. Please refer to the Material Safety Data Sheet for this grade prior to first time handling.

