

## Technical Data Sheet

### *Alcryn* 2070NC INJ NAT



Melt Processable Rubber

#### Product Description

*Alcryn* 2070NC INJ NAT is a Melt Processable Rubber material and is typically used in Blow Molding, Extrusion, Injection Molding, Vacuum Forming applications. Features include: Fast Molding Cycle, High Flow, High Heat Resistance, Noise Damping, Oil Resistant, Ozone Resistant, Recyclable Material, and Vibration Damping.

|                          |                                                                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Processing Method</b> | Blow Molding; Extrusion; Injection Molding; Vacuum Forming                                                                                                                            |
| <b>Attribute</b>         | Fast Molding Cycle; High Flow; High Heat Resistance; Noise Damping; Oil Resistant; Ozone Resistant; Recyclable Material; Vibration Damping                                            |
| <b>Forms</b>             | Pellets                                                                                                                                                                               |
| <b>Appearance</b>        | Natural Color                                                                                                                                                                         |
| <b>Application</b>       | Cable Jacketing; Coating Applications; Fabric Coatings; Flexible Grips; Gaskets; General Purpose; Handles; Hose; Overmolding; Profiles; Seals; Tubing; Weatherstripping; Wire & Cable |

| Typical Properties                               | Nominal Value | Units             | Test Method |
|--------------------------------------------------|---------------|-------------------|-------------|
| <b>Physical</b>                                  |               |                   |             |
| Density                                          | 1.20          | g/cm <sup>3</sup> | ISO 2781    |
| Density - Specific Gravity                       | 1.20          | g/cm <sup>3</sup> | ASTM D471   |
| Change in Volume                                 |               |                   |             |
| (in Reference Fuel B, 27 °C, 168 hr)             | 22            | %                 | ISO 1817    |
| (in Reference Fuel B, 27 °C, 168 hr)             | 22            | %                 | ASTM D471   |
| (in ASTM #1 Oil, 100 °C, 168 hr)                 | -16           | %                 | ISO 1817    |
| (in ASTM #1 Oil, 100 °C, 168 hr)                 | -16           | %                 | ASTM D471   |
| (in IRM 903 Oil, 100 °C, 168 hr)                 | 18            | %                 | ASTM D471   |
| (in IRM 903 Oil, 100 °C, 168 hr)                 | 18            | %                 | ISO 1817    |
| (in Water, 100 °C, 168 hr)                       | 7.0           | %                 | ISO 1817    |
| (in Water, 100 °C, 168 hr)                       | 7.0           | %                 | ASTM D471   |
| Melt Viscosity, (190 °C, 300 sec <sup>-1</sup> ) | 465           | Pa·s              | ASTM D3835  |
| <b>Mechanical</b>                                |               |                   |             |
| Tensile Stress at 100%                           |               |                   |             |
| (1.90 mm)                                        | 4.00          | MPa               | ASTM D412   |
| (1.90 mm)                                        | 4.00          | MPa               | ISO 37      |
| (125 °C, 1.90 mm)                                | 3.50          | MPa               | ASTM D573   |
| (125 °C, 1.90 mm)                                | 3.50          | MPa               | ISO 188     |

|                                                                |        |      |            |
|----------------------------------------------------------------|--------|------|------------|
| <b>Torsion Modulus</b>                                         |        |      |            |
| (24 °C, 1.9 mm)                                                | 2.2    | MPa  | ASTM D1043 |
| Compression Molded                                             |        |      |            |
| (-20 °C, 1.9 mm)                                               | 8.5    | MPa  | ASTM D1043 |
| Compression Molded                                             |        |      |            |
| <b>Tensile Set</b>                                             | 9      | %    | ASTM D412  |
| <b>Clash-Berg Modulus, (-40 °C)</b>                            | 68.9   | MPa  | ASTM D1043 |
| <b>Tensile Strength at Yield</b>                               |        |      |            |
| (1.90 mm)                                                      | 8.60   | MPa  | ASTM D412  |
| (125 °C, 1.90 mm)                                              | 5.50   | MPa  | ASTM D573  |
| <b>Tensile Stress at Yield</b>                                 |        |      |            |
| (1.90 mm)                                                      | 8.60   | MPa  | ISO 37     |
| (125 °C, 1.90 mm)                                              | 5.50   | MPa  | ISO 188    |
| <b>Tensile Strain at Break</b>                                 |        |      |            |
| (1.90 mm)                                                      | 400    | %    | ISO 37     |
| (125 °C, 1.90 mm)                                              | 220    | %    | ISO 188    |
| <b>Tensile Elongation at Break</b>                             |        |      |            |
| (125 °C, 1.90 mm)                                              | 220    | %    | ASTM D573  |
| (1.90 mm)                                                      | 400    | %    | ASTM D412  |
| <b>Tear Strength, (Die C, 1.90 mm)</b>                         | 29.7   | kN/m | ASTM D624  |
| <b>Impact</b>                                                  |        |      |            |
| Ductile/Brittle Transition Temperature                         | -85    | °C   | ASTM D746  |
| <b>Hardness</b>                                                |        |      |            |
| Change in Shore Hardness in Air, (Shore A, 125 °C, 168 hr)     | -3.0   |      | ISO 188    |
| Shore Hardness, (Shore A, 1.90 mm, Compression Molded)         | 68     |      | ISO 868    |
| Change in Durometer Hardness in Air, (Shore A, 125 °C, 168 hr) | -3.0   |      | ASTM D573  |
| Durometer Hardness, (Shore A, 1.90 mm, Compression Molded)     | 68     |      | ASTM D2240 |
| <b>Additional Information</b>                                  |        |      |            |
| <b>Compression Set</b>                                         |        |      |            |
| (24 °C, 22 hr, Method B)                                       | 16     | %    | ASTM D395  |
| (100 °C, 22 hr, Method B)                                      | 64     | %    | ASTM D395  |
| (24 °C, 22 hr)                                                 | 16     | %    | ISO 815    |
| (100 °C, 22 hr)                                                | 64     | %    | ISO 815    |
| Taber Abrasion Resistance, (CS-17 Wheel, 1000 g, 1000 Cycles)  | 9.00   | mg   | ASTM D1044 |
| <b>UL Information</b>                                          |        |      |            |
| UL File Number, (USA)                                          | E51193 |      |            |

| <b>Extrusion Parameters</b> | <b>Nominal<br/>Value</b> | <b>Units</b> |
|-----------------------------|--------------------------|--------------|
| Cylinder Zone 1 Temp.       | 132 to 138               | °C           |
| Drying Time                 | 3.0 to 4.0               | hr           |
| Melt Temperature            | 171 to 182               | °C           |
| Suggested Max Moisture      | <0.020                   | %            |
| Die Temperature             | 163 to 177               | °C           |
| Cylinder Zone 3 Temp.       | 143 to 149               | °C           |
| Drying Temperature          | 82 to 93                 | °C           |
| Cylinder Zone 2 Temp.       | 138 to 143               | °C           |
| Cylinder Zone 4 Temp.       | 157 to 163               | °C           |