

BOYD CORPORATION

TECHNICAL REPORT N168-70 FDA NITRILE COMPOUND

GENERAL PROPERTIES

The N168-70 Nitrile (BUNA-N) is a copolymer of butadiene and acrylonitrile. This compound is a special Black Color FDA Grade Nitrile (BUNA-N) that is acceptable for use over a temperature range of -40F to +250F. The ingredients in the N168-70 are listed in the U.S. Code of Federal Regulations (21 CFR 177.2600) as being acceptable for repeated use in contact with food. This compound meets the following popular ASTM Specifications.

| <u>ASTM Designation</u> | <u>ORIGINAL PROPERTIES</u> | <u>ASTM D2000 SPECIFICATION</u> | <u>N168-70 LABORATORY PROPERTY</u> |
|-------------------------|--|---------------------------------|------------------------------------|
| | Durometer, Shore A | 70 +/- 5 | 72 |
| | Tensile, psi (MPa), Minimum | 2031 (14) | 2420 (17) |
| | Elongation, % Minimum | 250 | 310 |
| | Specific Gravity | - | 1.24 |
| | <u>HEAT AGE, 70 HRS @ 100 C</u> | | |
| | Durometer Change, Points | +/-15 | +3 |
| | Tensile Strength Change, % Maximum | +/-30 | +7 |
| | Elongation Change, % Maximum | -50 | -21 |
| B14 | <u>COMPRESSION SET, 22 HRS @ 100 C</u> | | |
| | Original Deflection, % Maximum | 25 | 18 |
| EA14 | <u>WATER RESISTANCE, 70 HRS @ 100C</u> | | |
| | Durometer Change, Points | +/-10 | +2 |
| | Volume Change, % | +/-15 | +6.2 |
| Z1 | <u>LOW TEMPERATURE RETRACTION</u> | | |
| | TR10, Degrees C | - | -30.5 |

SPECIFICATIONS MET

ASTM D2000 Grade M2BG714 B14 EA14

Z1=TR10

Z2=Meets FDA CFR 177.2600

MANUFACTURER'S CROSS REFERENCE

N168-70 is designed to meet or exceed the properties of these popular Nitrile Compounds: N1069-70, N508-75, 7077, C22-70, 2068-70, H14100 and 275B.