

Ascend Sealing Technology Compound: E12670BL

Ascend Sealing has developed Ethylene Propylene rubber (EPDM) E12670BL to be the most cost-effective compound, without sacrificing performance for general usage. We particularly formulated E12670BL, to equip the material with excellent mechanical properties and resistance on a wide range of chemicals. As the EPDM for general purpose, E12670BL is a sulfur-cured compound with good balance between physical and chemical resistance.

Service Temperature: -67°F to 257°F (-55°C to 125°C)

Ascend Sealing provides a wide range of EPDM compounds. For additional technical support, please contact us at customer_service@ascendsealing.com.

Compatible

- Ideal for cost sensitive application.
- Excellent mechanical properties especially on compression set performance.
- Excellent resistance to ketones, hot and cold water, alcohols, phosphate ester based hydraulic fluid – Skydrol®, ozone, aging and weathering.

Incompatible

- Aliphatic and aromatic hydrocarbon
- Di-ester based lubricants
- Halogenated solvent
- Petroleum based oil and grease.

Physical Properties Date: 04/29/2016

MATERIAL : ETHYLENE PROPYLENE
 COMPOUND : E12670BL
 SPEC : ASTM D2000 M3CA707 A25 B35 EA14 F17 G11 Z1
 COLOR : BLACK

| <u>Original Physical Properties</u> | <u>ASTM Method</u> | <u>Requirements</u> | <u>Results</u> |
|--|--------------------|---------------------|----------------|
| Hardness, (Shore A) | ASTM D2240-05 | 70±5 | 72 |
| Tensile Strength, psi (MPa) | ASTM D412-06a | 1015 (7) (min) | 1496 (10.31) |
| Elongation, (%) | ASTM D412-06a | 200 (min) | 274 |
| Modulus at 100%, psi (MPa) | ASTM D412-06a | | 828(5.71) |
| Specific Gravity, (g/cm ³) | | | 1.27 |

| A25 | <u>Heat Age, 70 Hrs @ 125°C</u> | <u>ASTM D865-99</u> | <u>Requirements</u> | <u>Results</u> |
|-----|---------------------------------|---------------------|---------------------|----------------|
| | Hardness Change, pts. | | +10 (max) | +2 |
| | Tensile Strength Change, % | | -20 (max) | +15 |
| | Elongation Change, % | | -40 (max) | -28 |
| | Weight Change, % | | | +0.1 |

| | | | | |
|-----|---------------------------------|---------------------------|-------------------------|-------|
| G11 | Tear Resistance | ASTM D624-00 | 26kN/m (Die B) (min) | 32.36 |
| B35 | Compression Set, 22 Hrs @ 125°C | ASTM D395-14, Method B | 70% (plied) (max) | 55.5 |

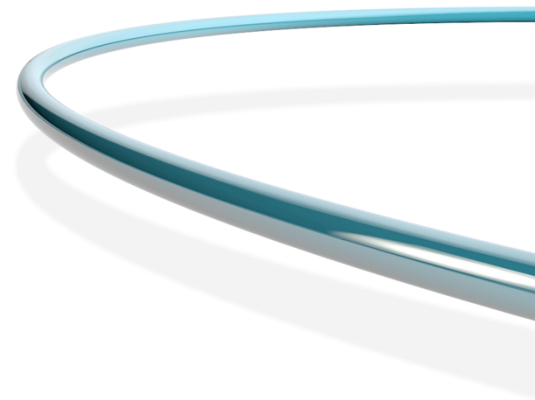
| EA14 | <u>Water Resistance, 70 Hrs @ 100°C</u> | <u>ASTM D471-12a</u> | <u>Requirements</u> | <u>Results</u> |
|------|---|----------------------|---------------------|----------------|
| | Hardness Change, pts. | | | 0 |
| | Tensile Strength Change, % | | | -12 |
| | Elongation Change, % | | | -18 |
| | Volume Change, % | | ±5 | +1.8 |

| | | | | |
|-----|--|----------------------------|-----------|------|
| F17 | Low-Temperature Brittleness Point Test, 3 minute @ -40°C Sample type: T-50, Coolant : Isopropyl alcohol, Brittleness temperature to nearest 1°C, | ASTM D2137-11, Method A | | |
| | | | no-cracks | PASS |

| | | | | |
|----|--|------------------------|--|----------------|
| Z1 | <u>Low Temperature Retraction Test (TR Test)</u> Testing Elongation 50% | <u>(ASTM D1329-02)</u> | | <u>Results</u> |
|----|--|------------------------|--|----------------|

The Equipment of measure temperature: thermocouple
 Length of Sample: 51 mm
 Rate of Temperature: 1 °C /min
 Test Temperature: 26 °C
 Coolant: Methanol

Statement and recommendation provided in this data sheet correspond to Ascend Sealing Technology's best knowledge on the subject at the date of its publication. The user should conduct their own analysis and testing and is solely responsible for making the final selection of the system and component. Since Ascend Sealing Technology cannot anticipate all the application parameters in actual conditions, we do not guarantee the results and assume no liability in connection with any use of this information.



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