

| PROPERTIES         | ASTMPC | MB1000-10 | MB1000-15 | MB1000-25 | MB1000-5 | MB2000-8 | MB2000-10 | MB2000-15 | MB2000-20 | MB2000-25 | MB3000-15 | MB3000-15NY | MB3000-20NY | MB4000 | MB5500 |
|--------------------|--------|-----------|-----------|-----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|--------|--------|
| Listed File E80533 | - Yes  | No        | Yes       | No        | Yes      | No       | Yes       | Yes       | Yes       | Yes       | Yes       | Yes         | Yes         | Yes    | Yes    |
| Flammability UL94  | - HB   | HB        | HB        | HB        | V0       | V0/SV    | V0        | V0        | V0        | V0        | V0        | V0/SV       | V0/SV       | V0     | V0     |

#### MECHANICAL PROPERTIES

|  |      |         |         |         |         |         |         |         |         |         |         |         |         |         |         |         |
|--|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Impact Strength, Notched Izod, Ft Lbs/in | D256 | 5-6     | 2.5-3.5 | 4-6     | 7-10    | 1.5-2.5 | 2-4     | 4-6     | 5-7     | 8-10    | 10-12   | 5-7     | 8-10    | 8-14    | 7-10    | 8-10    |
| Flexural Strength, Kpsi                  | D790 | 10-12   | 14-16   | 18-21   | 19-22   | 8-11    | 10-12   | 13-16   | 16-18   | 19-22   | 23-25   | 15-17   | 18-20   | 18-21   | 13-17   | 17-19   |
| Flexural Modulus, Mpsi                   | D790 | 1.3-1.6 | 2-2.2   | 1.6-1.8 | 1.6-1.7 | 1.3-1.6 | 1.2-1.5 | 1.3-1.6 | 1.5-1.8 | 1.7-2.0 | 1.6-1.7 | 1.4-1.6 | 1.8-1.9 | 1.8-1.9 | 1.7-1.9 | 1.6-1.8 |
| Tensile Strength, Kpsi                   | D638 | 4.5-5.5 | 5-6     | 7-9     | 8-10    | 4-5     | 4-5     | 4.5-5.5 | 6.0-7.5 | 5.0-8.0 | 8.5-10  | 5.5-6.0 | 5-6     | 6-9     | 5-6.5   | 6.0-8.0 |
| Compressive Strength, Kpsi               | D695 | 20-22   | 15-18   | 18-22   | 20-24   | 14-16   | 13-16   | 17-19   | 18-21   | 20-24   | 20-25   | 18-20   | 14-16   | 14-16   | 14-15   | 13-15   |
| Compressive Modulus, Mpsi                | D695 | 55-57   | 48-52   | 52-54   | 50-54   | 52-55   | 50-52   | 52-55   | 48-52   | 57-61   | 56-60   | 45-49   | 50-55   | 50-55   | 50-54   | 46-50   |
| Shear Strength, Kpsi                     | D732 | 10-11   | 6-7     | 7-8     | 7-9     | 4-5     | 4-5     | 6-7     | 8-9     | 9-11    | 10-12   | 8-9     | 8-9     | 8-9     |         | 7-8     |

#### ELECTRICAL PROPERTIES

|                                  |       |            |      |      |      |       |       |       |       |       |       |       |       |       |       |       |
|----------------------------------|-------|------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Arc Resistance, Seconds          | D495  |            | 180+ | 180+ | 140+ | 185+  | 240+  | 185+  | 185+  | 185+  | 185+  | 185+  | 185+  | 185+  | 185+  | 185+  |
| Inclined-Plane Tracking, Minutes | D2303 |            | 500+ | 500+ | 500+ | 1000+ | 1000+ | 1000+ | 1000+ | 1000+ | 1000+ | 1000+ | 1000+ | 1000+ | 1500+ | 1000+ |
| Dielectric Strength, S/T VPM     | D149  | Conductive | 320  | 320  | 355  | 400+  | 350+  | 320+  | 350+  | 350+  | 350+  | 360+  | 360+  | 360+  | 350+  | 350+  |

#### PHYSICAL PROPERTIES

|                                      |       |         |         |         |         |         |         |         |          |          |          |          |           |           |         |          |
|--------------------------------------|-------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|-----------|-----------|---------|----------|
| Specific Gravity                     | D792  | 1.9-2.1 | 1.9-2.0 | 1.8-2.0 | 1.7-1.9 | 1.8-1.9 | 2.0-2.1 | 1.8-1.9 | 1.8-1.85 | 1.75-1.8 | 1.7-1.75 | 1.8-1.85 | 1.85-1.95 | 1.75-1.85 | 1.7-1.9 | 1.75-1.8 |
| Mold Shrinkage 0.001/in              | D955  | 0-1     | 0.5-3   | 0.5-3   | 0.5-2   | 0.5-3   | 0.5-3   | 0.5-3   | 0.5-3    | 0.5-2    | 0.5-2    | 0.5-3    | 0.5-1.5   | 0.5-1.5   | 0.5-3   | 0.5-2    |
| Barcol Hardness                      | D2583 | 60-65   | 35-48   | 35-45   | 45-55   | 25-35   | 40-50   | 35-45   | 35-45    | 35-45    | 40-50    | 40-50    | 45-55     | 45-55     | 41-47   | 35-45    |
| Heat Distortion Temp @ 264 psi Deg F | D648  | >500    | >500    | >500    | >500    | >500    | >500    | >500    | >500     | >500     | >500     | >500     | >500      | >500      | >500    | >500     |
| Water Absorption % in 24 hrs         | D670  | 0.17    | 0.17    | 0.17    | 0.13    | 0.17    | 0.1     | 0.14    | 0.13     | 0.12     | 0.13     | 0.12     | 0.12      | 0.12      | 0.12    | 0.12     |
| Bulk Factor                          | D1895 | 1       | 1       | 1       | 3       | 1       | 1       | 1       | 1        | 2        | 3        | 1.5      | 1.5       | 1.5-2     | 1-1.5   | 2        |

#### COLOR CHANGE UNDER HEAT

|                                 |  |  |  |  |  |  |  |  |  |  |  |  |         |         |  |  |
|---------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|---------|---------|--|--|
| White, 300 °F for 300 hrs, ΔE   |  |  |  |  |  |  |  |  |  |  |  |  | 1.2-1.7 | 1.2-1.7 |  |  |
| Blisque, 300 °F for 300 hrs, ΔE |  |  |  |  |  |  |  |  |  |  |  |  | 1-1.5   | 1-1.5   |  |  |

\*Values shown are based on standard tests on specified configurations and are offered as a guide. No other guarantee is implied. Characteristics are subject to variations as applied to a specific design. Except for any written warranties which may be given by Mar-Bal, Inc., no express or implied warranties are made, and ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSLY DISCLAIMED. Buyers' exclusive remedies are limited solely to repair or replacement of nonconforming goods, and CONSEQUENTIAL DAMAGES ARE EXCLUDED.

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