

| Properties | Test Method | Condition | Unit | IH830 | IH830A | IH830C | IH830CA | IH830G | IH830H | IH830HR | IH830S | IH830U | IH830U7 |
|------------|-------------|-----------|------|-------|--------|--------|---------|--------|--------|---------|--------|--------|---------|
|------------|-------------|-----------|------|-------|--------|--------|---------|--------|--------|---------|--------|--------|---------|

Physical Properties

| | | | | | | | | | | | | | |
|---------------------------|------------|-------|---|------|------|------|------|------|------|------|------|------|------|
| Specific Gravity | ASTM D792 | - | - | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 |
| Total Light Transmittance | ASTM D1003 | 3.2mm | % | 93 | 93 | 93 | 93 | 93 | 93 | 92.7 | 93 | 92 | 93 |
| Refractive Index | ASTM D542 | nd | - | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 | 1.49 |
| HAZE | ASTM D1003 | 3.2mm | % | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Water Absorption | ASTM D570 | 24h | % | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |

Thermal Properties

| | | | | | | | | | | | | | |
|---------------------------------|------------|--------------------|---------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Flow Index | ASTM D1238 | 3.8Kg,230 | g/10min | 2.5 | 5.3 | 2 | 1.1 | 1.7 | 2.5 | 1.4 | 0.8 | 2.7 | 2.2 |
| VICAT Softening Point | ASTM D1525 | 1 kg | | 235 | 227 | 235 | 235 | 235 | 235 | 252 | 235 | 235 | 235 |
| | | | | 113 | 108.5 | 113 | 112.5 | 113 | 113 | 122 | 113 | 113 | 113 |
| Coefficient of Linear Expansion | ASTM D696 | - | mm/mm/ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ | 6 10 ⁻⁵ |
| Molding Shrinkage | ASTM D955 | - | % | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 | 0.4 ~ 0.8 |
| HDT | ASTM D648 | Unannealed | | 201 | 193 | 201 | 200 | 201 | 201 | 217 | 201 | 201 | 201 |
| | | | | 94 | 89.5 | 94 | 93.5 | 94 | 94 | 103 | 94 | 94 | 94 |
| HDT | ASTM D648 | 18.6kg Annealed | | 217 | 209 | 217 | 217 | 217 | 217 | 237 | 217 | 217 | 217 |
| | | | | 103 | 98.5 | 103 | 102.5 | 103 | 103 | 114 | 103 | 103 | 103 |

Mechanical Properties

| | | | | | | | | | | | | | | |
|----------------------|-----------|---------|--------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|------|
| Izod Impact Strength | ASTM D256 | Notched | J/m | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 14.7 | 12.8 | 14.7 | 14.7 | 14.7 | |
| | | | KJ/m ² | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.3 | 1.5 | 1.5 | 1.5 | |
| | | | ft.lb/cm | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.28 | 0.24 | 0.28 | 0.28 | 0.28 | 0.28 |
| | | | kg cm/cm | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.3 | 1.5 | 1.5 | 1.5 | 1.5 |
| Rockwell Hardness | ASTM D785 | M Scale | - | 99 | 96 | 99 | 98 | 99 | 99 | 101 | 96 | 95 | 98 | |
| Tensile Strength | ASTM D638 | - | psi | 10,938 | 10,199 | 10,895 | 10,938 | 10,938 | 11,080 | 10,824 | 10,724 | 10,653 | 10,795 | |
| | | - | M Pa | 75 | 70 | 75 | 75 | 75 | 76 | 75 | 74 | 74 | 75 | |
| | | - | kg/cm ² | 770 | 718 | 767 | 770 | 770 | 780 | 762 | 755 | 750 | 760 | |
| Elongation | ASTM D638 | - | % | 14 | 12 | 14 | 20 | 13 | 16 | 13 | 23 | 13 | 13 | |
| Flexural Strength | ASTM D790 | - | psi | 19,886 | 19,460 | 20,739 | 20,597 | 20,170 | 20,313 | 20,838 | 21,307 | 19,460 | 20,170 | |
| | | - | M Pa | 137 | 134 | 143 | 142 | 139 | 140 | 144 | 147 | 134 | 139 | |
| | | - | kg/cm ² | 1,400 | 1,370 | 1,460 | 1,450 | 1,420 | 1,430 | 1,467 | 1,500 | 1,370 | 1,420 | |
| Flexural Modulus | ASTM D790 | - | psi | 477,841 | 519,886 | 482,955 | 481,108 | 482,955 | 480,114 | 467,330 | 468,750 | 473,011 | 485,284 | |
| | | - | M Pa | 3,298 | 3,588 | 3,333 | 3,321 | 3,333 | 3,314 | 3,225 | 3,235 | 3,265 | 3,349 | |
| | | - | kg/cm ² | 33,640 | 36,600 | 34,000 | 33,870 | 34,000 | 33,800 | 32,900 | 33,000 | 33,300 | 34,164 | |

Electrical Properties

| | | | | | | | | | | | | | |
|---------------------|-----------|-------|-------|------|------|------|------|------|------|------|------|------|------|
| Volume Resistance | ASTM D257 | - | ·cm | > 10 | > 10 | > 10 | > 10 | > 10 | > 10 | > 10 | > 10 | > 10 | > 10 |
| Dielectric Strength | ASTM D149 | 4KV/S | kV/mm | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| Dielectric Constant | ASTM D150 | 60Hz | - | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Power Factor | ASTM D150 | 60Hz | - | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 | 0.05 |

Flame Retardant Properties

| | | | | | | | | | | | | | |
|------------------|-------|---|-------------------------|----|----|----|----|----|----|----|----|----|----|
| Flame Retardancy | UL 94 | - | class (thickness:mm) | HB | HB | HB | HB | HB | HB | HB | HB | HB | HB |
|------------------|-------|---|-------------------------|----|----|----|----|----|----|----|----|----|----|

REMARKS : The listed values should be used for referential purposed only