

SD POLYCA™
シリコン系難燃グレード Silicone-based Flame Retardant Grades

| 特性 ¹ Properties | 試験法 Test Method | 試験条件 Test Condition | 単位 Units | 875-20 | 876-20 | 878-20 | SI8001H | SI8081L | SI8001-20 | 776-20 | SI8013H | TF1153-5 |
|--|--------------------|------------------------|------------------------|----------|----------------------|----------|----------|-----------------------|-----------------------|--------------|-----------------|----------|
| | | | | 難燃 | 難燃 | 難燃 | 難燃 | 難燃 | 難燃 | 難燃 | 透明難燃 | 透明難燃 |
| | | | | - | - | 耐候性 | 薄肉難燃 | 薄肉難燃 | 良外觀 | 透明 | 透明 | 透明 |
| | | | | - | - | - | - | 高強度 | - | Clear限定 | 耐候性 | 耐候性 |
| 物理的特性 Physical Properties | | | | | | | | | | | | |
| 密度 Density | ISO 1183 | - | g/cm ³ | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 | 1.20 |
| 吸水率 Water Absorption | ISO 62 | 23°C, 24hrs | % | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| メルトマスフローレート Melt Mass-flow Rate | ISO1133 | 300°C, 1.2kg | g/10min | 20 | 20 | 20 | 20 | - | - | - | - | 5 |
| メルトボリュームフローレート Melt Volume-flow Rate | ISO1133 | 300°C, 1.2kg | cm ³ /10min | 19 | 19 | 19 | 19 | 7 | 20 | 20 | 15 | 5 |
| 成形収縮率 Molding Shrinkage | Internal Method | MD | % | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 |
| | | TD | % | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 | 0.5-0.7 |
| 光学特性 Optical Properties | | | | | | | | | | | | |
| 全光線透過率 ² Transmittance | ISO 13468 | 2mm | % | - | - | - | - | - | - | 89 | 89 | 89 |
| ヘーズ ² Haze | ISO 14782 | 2mm | % | - | - | - | - | - | - | 0.9 | 0.7 | 0.6 |
| 屈折率 Refractive Index | ISO 489 | - | - | - | - | - | - | - | - | - | - | - |
| 機械的特性 Mechanical Properties | | | | | | | | | | | | |
| 引張弾性率 Tensile Modulus | ISO 527-2 | - | MPa | 2300 | 2250 | 2250 | 2300 | 2300 | 2300 | 2300 | 2300 | 2300 |
| 降伏応力 Tensile Stress at Yield | ISO 527-2 | - | MPa | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 62 | 60 |
| 破壊伸び Nominal Strain at Break | ISO 527-2 | - | % | 80 | 80 | 80 | 80 | 110 | 80 | 90 | 110 | 100 |
| 曲げ弾性率 Flexural Modulus | ISO 178 | - | MPa | 2300 | 2250 | 2250 | 2300 | 2300 | 2300 | 2300 | 2400 | 2300 |
| 曲げ強度 Flexural Strength | ISO 178 | - | MPa | 94 | 94 | 94 | 94 | 91 | 94 | 85 | 93 | 94 |
| ノッチ付きシャルピー衝撃強さ Charpy Notched Impact Strength | ISO 179-1, 2 | 23°C, 3mm | kJ/m ² | 50 | 60 | 60 | 60 | - | - | - | - | - |
| | | 23°C, 4mm | kJ/m ² | 20 | 20 | 11 | 20 | 70 | 20 | 25 | 60 | 65 |
| ノッチ無しシャルピー衝撃強さ Charpy Unnotched Impact Strength | ISO 179-1, 2 | 23°C, 4mm | kJ/m ² | NB | NB | NB | NB | - | - | - | - | NB |
| ロクウェル硬度 Rockwell Hardness | ISO 2039 | R Scale | - | - | - | - | - | - | - | - | - | - |
| 熱的特性 Thermal Properties | | | | | | | | | | | | |
| 荷重たわみ温度 Temperature of Deflection under Load | ISO 75-2 Af | 1.80MPa | °C | 126 | 125 | 121 | 126 | 126 | 125 | 125 | 125 | 128 |
| 線膨張係数 Coefficient of Linear Thermal Expansion | ISO 11359-2 | MD | cm/cm/°C | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 |
| | | TD | cm/cm/°C | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 | 7.0E-05 |
| 相対温度指数(電気) Relative Thermal Index(Electric) | UL 746B | 3.0mm | °C | 125 | 125 | 80 | 80 | 80 | 80 | 80(2.95mm) | 80(2.9-3.2mm) | 80 |
| | | 2.5mm | °C | 125 | 125 | - | - | - | - | - | - | - |
| | | 2.0mm | °C | - | - | 80 | - | - | - | - | - | - |
| | | 1.5mm | °C | 125 | 125 | 80 | - | - | 80 | - | - | 80 |
| | | 1.2mm | °C | - | 80 | - | - | - | - | - | - | - |
| | | 0.95mm | °C | 80 | - | - | - | - | - | - | - | - |
| | | 0.75mm | °C | - | - | - | 80 | 80 | - | 80 | - | - |
| | | 3.0mm | °C | 125 | 125 | 80 | 80 | 80 | 80 | 80(2.95mm) | 80(2.9-3.2mm) | 80 |
| | | 2.5mm | °C | 125 | 125 | - | - | - | - | - | - | - |
| | | 2.0mm | °C | - | - | 80 | - | - | - | - | - | - |
| 相対温度指数(衝撃) Relative Thermal Index(Impact) | UL 746B | 1.5mm | °C | 125 | 125 | 80 | - | - | 80 | - | - | 80 |
| | | 1.2mm | °C | - | 80 | - | - | - | - | - | - | - |
| | | 0.95mm | °C | 80 | - | - | - | - | - | - | - | - |
| | | 0.75mm | °C | - | - | - | 80 | 80 | - | 80 | - | - |
| | | 3.0mm | °C | 125 | 125 | 80 | 80 | 80 | 80 | 80(2.95mm) | 80(2.9-3.2mm) | 80 |
| | | 2.5mm | °C | 125 | 125 | - | - | - | - | - | - | - |
| 相対温度指数(強度) Relative Thermal Index(Strength) | UL 746B | 2.0mm | °C | - | - | 80 | - | - | - | - | - | - |
| | | 1.5mm | °C | 125 | 125 | 80 | - | - | 80 | - | - | 80 |
| | | 1.2mm | °C | - | 80 | - | - | - | - | - | - | - |
| | | 0.95mm | °C | 80 | - | - | - | - | - | - | - | - |
| | | 0.75mm | °C | - | - | - | 80 | 80 | - | 80 | - | - |
| | | | | | | | | | | | | |
| 電気的特性 Electrical Properties | | | | | | | | | | | | |
| 表面抵抗率 Surface Resistivity | IEC 60093 | - | Ω | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 | ≥1.0E+15 |
| 体積抵抗率 Volume Resistivity | IEC 60093 | - | Ω·cm | 3.0E+14 | 3.0E+14 | 3.0E+14 | 3.0E+14 | 3.0E+14 | 3.0E+14 | 3.0E+14 | 3.0E+14 | 3.0E+14 |
| 耐電圧 Dielectric Strength | IEC60243 | 1mm | kV/mm | 25 | 25 | - | - | - | - | - | - | - |
| 比誘電率 Relative Permittivity | IEC 60250 | 100Hz, 2mm | - | 3.0 | 3.0 | - | - | - | - | - | - | - |
| | | 1MHz, 2mm | - | 3.0 | 3.0 | - | - | - | - | - | - | - |
| 誘電正接 Dissipation Factor | IEC 60250 | 100Hz, 2mm | - | 1.0E-03 | 1.0E-03 | - | - | - | - | - | - | - |
| | | 1MHz, 2mm | - | 9.0E-02 | 9.0E-02 | - | - | - | - | - | - | - |
| 耐トラッキング性 Comparative Tracking Index | IEC 60112 | 3mm | - | 3 | 3 | - | - | - | - | - | - | - |
| 難燃性 Flammability | | | | | | | | | | | | |
| 燃焼等級 Flammability Rating | UL94 | 3.0mm | - | V-0/5VB | V-0/5VA | V-0/5VA | V-0 | V-1 (BK) ³ | V-0 | V-0 (2.95mm) | V-0 (2.9-3.2mm) | V-0 |
| | | 2.5mm | - | V-0/5VB | V-0/5VA | - | - | - | - | - | - | - |
| | | 2.0mm | - | - | - | V-0/5VB | - | - | - | - | - | - |
| | | 1.5mm | - | V-0 | V-0 | V-0 | - | - | V-0 | - | - | V-0 |
| | | 1.2mm | - | - | V-0(BK) ³ | - | - | - | - | - | - | - |
| | | 0.95mm | - | V-0 | - | - | - | - | - | - | - | - |
| | | 0.75mm | - | - | - | - | - | V-0 | V-1 (BK) ³ | - | V-2 | - |
| 標準成形条件等 Standard Molding Conditions | | | | | | | | | | | | |
| 乾燥温度条件 Drying Conditions | - | - | - | 125°C | 125°C | 125°C | 125°C | 125°C | 125°C | 125°C | 125°C | 125°C |
| シリンダー設定温度(後部) Barrel Setting Temperature (Rear) | - | - | °C | 220-240 | 220-240 | 220-240 | 220-240 | 250-270 | 220-240 | 220-240 | 230-250 | 250-270 |
| シリンダー設定温度(中部) Barrel Setting Temperature (Middle) | - | - | °C | 240-260 | 240-260 | 240-260 | 240-260 | 270-290 | 240-260 | 240-260 | 250-270 | 270-290 |
| シリンダー設定温度(全部) Barrel Setting Temperature (Front) | - | - | °C | 260-280 | 260-280 | 260-280 | 260-280 | 290-310 | 260-280 | 260-280 | 270-290 | 290-310 |
| ノズル設定温度 Nozzle Setting Temperature | - | - | °C | 260-280 | 260-280 | 260-280 | 260-280 | 290-310 | 260-280 | 260-280 | 270-290 | 290-310 |
| 金型温度 Mold Temperature | - | - | °C | 60-100 | 60-100 | 60-100 | 60-100 | 60-100 | 60-100 | 60-100 | 60-100 | 60-100 |
| スクロー回転数 Screw Rotation | - | - | rpm | 60-80 | 60-80 | 60-80 | 60-80 | 60-80 | 60-80 | 60-80 | 60-80 | 60-80 |

1. 記載の数値は測定値であり、保証値ではありません。
 1. Typical properties are not to be consulted as specifications.
 2. グラスカラーにおける測定値
 2. The value of optical data is measured by clear color.
 3. BK: Black color