# CYCOLOY™ FR RESIN CX2244ME

REGION EUROPE

## DESCRIPTION

CYCOLOY CX2244ME Polycarbonate/Acrylonitrile Butadiene Styrene (PC/ABS) blend is an injection moldable, medium flow, non chlorinated/brominated flame retardant grade. It has a UL94 V0@0.75mm and 5VB@1.5mm flame rating. This grade has improved chemical resistance compared to standard PC/ABS blends and is a good candidate for thin wall applications and hospital/medical equipment.

## TYPICAL PROPERTY VALUES

Revision 20260206

| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| MECHANICAL [1] | | | |
| Tensile Stress, yld, Type I, 50 mm/min | 65 | MPa | ASTM D638 |
| Tensile Stress, brk, Type I, 50 mm/min | 58 | MPa | ASTM D638 |
| Tensile Strain, yld, Type I, 50 mm/min | 4.1 | % | ASTM D638 |
| Tensile Strain, brk, Type I, 50 mm/min | 100 | % | ASTM D638 |
| Tensile Modulus, 5 mm/min | 2600 | MPa | ASTM D638 |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 104 | MPa | ASTM D790 |
| Flexural Modulus, 1.3 mm/min, 50 mm span | 2500 | MPa | ASTM D790 |
| Tensile Stress, yield, 50 mm/min | 65 | MPa | ISO 527 |
| Tensile Stress, break, 50 mm/min | 50 | MPa | ISO 527 |
| Tensile Strain, yield, 50 mm/min | 4 | % | ISO 527 |
| Tensile Strain, break, 50 mm/min | 90 | % | ISO 527 |
| Tensile Modulus, 1 mm/min | 2600 | MPa | ISO 527 |
| Flexural Stress, yield, 2 mm/min | 96 | MPa | ISO 178 |
| Flexural Modulus, 2 mm/min | 2500 | MPa | ISO 178 |
| IMPACT [1] | | | |
| Izod Impact, notched, 23°C | 700 | J/m | ASTM D256 |
| Izod Impact, notched, -30°C | 175 | J/m | ASTM D256 |
| Instrumented Dart Impact Total Energy, 23°C | 65 | J | ASTM D3763 |
| Izod Impact, notched 80*10*3 +23°C | 40 | kJ/m² | ISO 180/1A |
| Izod Impact, notched 80*10*3 -30°C | 10 | kJ/m² | ISO 180/1A |
| Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm | 40 | kJ/m² | ISO 179/1eA |
| Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm | 10 | kJ/m² | ISO 179/1eA |
| THERMAL [1] | | | |
| Vicat Softening Temp, Rate B/50 | 110 | °C | ASTM D1525 |
| HDT, 1.82 MPa, 3.2mm, unannealed | 89 | °C | ASTM D648 |
| CTE, -40°C to 40°C, flow | 7.5E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, xflow | 7.5E-05 | 1/°C | ASTM E831 |
| CTE, -40°C to 40°C, flow | 7.5E-05 | 1/°C | ISO 11359-2 |
| CTE, -40°C to 40°C, xflow | 7.5E-05 | 1/°C | ISO 11359-2 |
| Ball Pressure Test, 75°C +/- 2°C | Pass | - | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50 | 110 | °C | ISO 306 |
| Vicat Softening Temp, Rate B/120 | 113 | °C | ISO 306 |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm | 93 | °C | ISO 75/Af |

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| PROPERTIES | TYPICAL VALUES | UNITS | TEST METHODS |
|---|---|---|---|
| Relative Temp Index, Elec [2] | 90 | °C | UL 746B |
| Relative Temp Index, Mech w/impact [2] | 90 | °C | UL 746B |
| Relative Temp Index, Mech w/o impact [2] | 90 | °C | UL 746B |
| PHYSICAL [1] | | | |
| Specific Gravity | 1.19 | - | ASTM D792 |
| Mold Shrinkage, flow, 3.2 mm [3] | 0.4 – 0.6 | % | SABIC method |
| Melt Flow Rate, 260°C/2.16 kgf | 18 | g/10 min | ASTM D1238 |
| Density | 1.2 | g/cm³ | ISO 1183 |
| Water Absorption, (23°C/saturated) | 0.2 | % | ISO 62-1 |
| Moisture Absorption (23°C / 50% RH) | 0.1 | % | ISO 62 |
| Melt Volume Rate, MVR at 260°C/2.16 kg | 15 | cm³/10 min | ISO 1133 |
| ELECTRICAL [1] | | | |
| Volume Resistivity | >1.E+15 | Ω.cm | IEC 60093 |
| Surface Resistivity, ROA | >1.E+15 | Ω | IEC 60093 |
| Dielectric Strength, in oil, 0.8 mm | 35 | kV/mm | IEC 60243-1 |
| Dielectric Strength, in oil, 1.6 mm | 25 | kV/mm | IEC 60243-1 |
| Dielectric Strength, in oil, 3.2 mm | 17 | kV/mm | IEC 60243-1 |
| Comparative Tracking Index (UL) {PLC} | 3 | PLC Code | UL 746A |
| Hot-Wire Ignition (HWI), PLC 3 | 0.75 | mm | UL 746A |
| High Amp Arc Ignition (HAI), PLC 0 | 0.75 | mm | UL 746A |
| High Voltage Arc Track Rate {PLC} | 2 | PLC Code | UL 746A |
| Arc Resistance, Tungsten {PLC} | 6 | PLC Code | ASTM D495 |
| FLAME CHARACTERISTICS [2] | | | |
| UL Yellow Card Link | E45329-564206 | - | - |
| UL Recognized, 94-5VA Flame Class Rating | ≥3 | mm | UL 94 |
| UL Recognized, 94-5VB Flame Class Rating | ≥1.5 | mm | UL 94 |
| UL Recognized, 94V-0 Flame Class Rating | ≥0.75 | mm | UL 94 |
| Glow Wire Ignitability Temperature, 3.0 mm | 800 | °C | IEC 60695-2-13 |
| Glow Wire Flammability Index, 3.0 mm | 960 | °C | IEC 60695-2-12 |
| INJECTION MOLDING [4] | | | |
| Drying Temperature | 80 – 90 | °C | |
| Drying Time | 2 – 4 | Hrs | |
| Maximum Moisture Content | 0.02 | % | |
| Melt Temperature | 250 – 300 | °C | |
| Nozzle Temperature | 250 – 300 | °C | |
| Front - Zone 3 Temperature | 250 – 300 | °C | |
| Middle - Zone 2 Temperature | 240 – 290 | °C | |
| Rear - Zone 1 Temperature | 230 – 280 | °C | |
| Hopper Temperature | 60 – 80 | °C | |
| Mold Temperature | 60 – 85 | °C | |
| Vent Depth | 0.03 - 0.075 | mm | |

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(1) The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(2) UL Ratings shown on the technical datasheet might not cover the full range of thicknesses and colors. For details, please see the UL Yellow Card.

(3) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.,The information stated on Technical Datasheets should be used as indicative only for material selection purposes and not be utilized as specification or used for part or tool design.

(4) Injection Molding parameters are only mentioned as general guidelines. These may not apply or may need adjustment in specific situations such as low shot sizes, large part molding, thin wall molding and gas-assist molding.

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