



**CYCOLOY™ Resin CY2010**  
**Europe-Africa-Middle East: COMMERCIAL**

Flame retardant PC/ABS blend using non-brominated and non-chlorinated flame retardant systems, offering hydrolytic stability and excellent flow for a wide variety of thin wall or large size applications including business equipment, TV enclosures, among others

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 50 mm/min       | 660           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 50 mm/min       | 480           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yld, Type I, 50 mm/min       | 3.9           | %                   | ASTM D 638  |
| Tensile Strain, brk, Type I, 50 mm/min       | 34            | %                   | ASTM D 638  |
| Tensile Modulus, 5 mm/min                    | 28500         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 980           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 26800         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield, 50 mm/min             | 63            | MPa                 | ISO 527     |
| Tensile Stress, break, 50 mm/min             | 43            | MPa                 | ISO 527     |
| Tensile Strain, yield, 50 mm/min             | 3.5           | %                   | ISO 527     |
| Tensile Strain, break, 50 mm/min             | 40            | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 2670          | MPa                 | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 95            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 2700          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, notched, 23°C                   | 9             | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 7             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 203           | cm-kgf              | ASTM D 3763 |
| Izod Impact, unnotched 80*10*4 +23°C         | NB            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, unnotched 80*10*4 -30°C         | NB            | kJ/m <sup>2</sup>   | ISO 180/1U  |
| Izod Impact, notched 80*10*4 +23°C           | 10            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 5             | kJ/m <sup>2</sup>   | ISO 180/1A  |



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| <b>IMPACT</b>                                 |               |                         |                |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm    | 10            | kJ/m <sup>2</sup>       | ISO 179/1eA    |
| Charpy -30°C, V-notch Edgew 80*10*4 sp=62mm   | 5             | kJ/m <sup>2</sup>       | ISO 179/1eA    |
| Charpy 23°C, Unnotch Edgew 80*10*4 sp=62mm    | NB            | kJ/m <sup>2</sup>       | ISO 179/1eU    |
| Charpy -30°C, Unnotch Edgew 80*10*4 sp=62mm   | NB            | kJ/m <sup>2</sup>       | ISO 179/1eU    |
| <b>THERMAL</b>                                |               |                         |                |
| HDT, 1.82 MPa, 6.4 mm, unannealed             | 81            | °C                      | ASTM D 648     |
| 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    |
| Vicat Softening Temp, Rate B/50               | 89            | °C                      | ISO 306        |
| Vicat Softening Temp, Rate B/120              | 92            | °C                      | ISO 306        |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm         | 73            | °C                      | ISO 75/Af      |
| <b>PHYSICAL</b>                               |               |                         |                |
| Specific Gravity                              | 1.18          | -                       | ASTM D 792     |
| Mold Shrinkage, flow, 3.2 mm (5)              | 0.4 - 0.6     | %                       | SABIC Method   |
| Melt Flow Rate, 260°C/2.16 kgf                | 31            | g/10 min                | ASTM D 1238    |
| Density                                       | 1.18          | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/sat)                  | 0.1           | %                       | ISO 62         |
| Moisture Absorption (23°C / 50% RH)           | 0.05          | %                       | ISO 62         |
| Melt Volume Rate, MVR at 260°C/2.16 kg        | 27            | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>FLAME CHARACTERISTICS</b>                  |               |                         |                |
| UL Recognized, 94V-2 Flame Class Rating (3)   | 1             | mm                      | UL 94          |
| UL Recognized, 94V-0 Flame Class Rating (3)   | 1.5           | mm                      | UL 94          |
| Glow Wire Flammability Index 960°C, passes at | 1             | mm                      | IEC 60695-2-12 |
| Glow Wire Ignitability Temperature, 1.0 mm    | 800           | °C                      | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 2.0 mm    | 750           | °C                      | IEC 60695-2-13 |
| Glow Wire Ignitability Temperature, 3.0 mm    | 725           | °C                      | IEC 60695-2-13 |





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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 75 - 80       | °C   |
| Drying Time                 | 2 - 4         | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 230 - 270     | °C   |
| Nozzle Temperature          | 220 - 260     | °C   |
| Front - Zone 3 Temperature  | 230 - 270     | °C   |
| Middle - Zone 2 Temperature | 220 - 260     | °C   |
| Rear - Zone 1 Temperature   | 200 - 230     | °C   |
| Hopper Temperature          | 60 - 80       | °C   |
| Mold Temperature            | 50 - 70       | °C   |

