



## CYCOLOY™ Resin C7410

### Asia Pacific: COMMERCIAL

CYCOLOY C7410 resin is a talc-filled PC+ABS, nonhalogenated FR for thinwall molding applications.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard    |
|----------------------------------------------|---------------|---------------------|-------------|
| <b>MECHANICAL</b>                            |               |                     |             |
| Tensile Stress, yld, Type I, 5 mm/min        | 550           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Stress, brk, Type I, 5 mm/min        | 440           | kgf/cm <sup>2</sup> | ASTM D 638  |
| Tensile Strain, yld, Type I, 5 mm/min        | 3.5           | %                   | ASTM D 638  |
| Tensile Strain, brk, Type I, 5 mm/min        | 74            | %                   | ASTM D 638  |
| Tensile Modulus, 5 mm/min                    | 33700         | kgf/cm <sup>2</sup> | ASTM D 638  |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 970           | kgf/cm <sup>2</sup> | ASTM D 790  |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 32400         | kgf/cm <sup>2</sup> | ASTM D 790  |
| Tensile Stress, yield, 5 mm/min              | 58            | MPa                 | ISO 527     |
| Tensile Stress, break, 5 mm/min              | 38            | MPa                 | ISO 527     |
| Tensile Strain, yield, 5 mm/min              | 3.6           | %                   | ISO 527     |
| Tensile Strain, break, 5 mm/min              | 78            | %                   | ISO 527     |
| Tensile Modulus, 1 mm/min                    | 3340          | MPa                 | ISO 527     |
| Flexural Stress, yield, 2 mm/min             | 95            | MPa                 | ISO 178     |
| Flexural Modulus, 2 mm/min                   | 3260          | MPa                 | ISO 178     |
| <b>IMPACT</b>                                |               |                     |             |
| Izod Impact, notched, 23°C                   | 32            | cm-kgf/cm           | ASTM D 256  |
| Izod Impact, notched, -30°C                  | 7             | cm-kgf/cm           | ASTM D 256  |
| Instrumented Impact Total Energy, 23°C       | 0             | cm-kgf              | ASTM D 3763 |
| Izod Impact, notched 80*10*4 +23°C           | 31            | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Izod Impact, notched 80*10*4 -30°C           | 7             | kJ/m <sup>2</sup>   | ISO 180/1A  |
| Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm   | 11            | kJ/m <sup>2</sup>   | ISO 179/1eA |
| <b>THERMAL</b>                               |               |                     |             |
| Vicat Softening Temp, Rate B/50              | 103           | °C                  | ASTM D 1525 |



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| <b>THERMAL</b>                              |               |                         |                |
| HDT, 1.82 MPa, 3.2mm, unannealed            | 80            | °C                      | ASTM D 648     |
| HDT, 1.82 MPa, 6.4 mm, unannealed           | 87            | °C                      | ASTM D 648     |
| CTE, -40°C to 40°C, flow                    | 6.E-05        | 1/°C                    | ASTM E 831     |
| CTE, -40°C to 40°C, xflow                   | 6.E-05        | 1/°C                    | ASTM E 831     |
| CTE, -40°C to 40°C, flow                    | 6.E-05        | 1/°C                    | ISO 11359-2    |
| CTE, -40°C to 40°C, xflow                   | 6.E-05        | 1/°C                    | ISO 11359-2    |
| Ball Pressure Test, 75°C +/- 2°C            | ----          | -                       | IEC 60695-10-2 |
| Vicat Softening Temp, Rate B/50             | 103           | °C                      | ISO 306        |
| Vicat Softening Temp, Rate B/120            | 106           | °C                      | ISO 306        |
| HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm       | 83            | °C                      | ISO 75/Af      |
| <b>PHYSICAL</b>                             |               |                         |                |
| Specific Gravity                            | 1.22          | -                       | ASTM D 792     |
| Mold Shrinkage, flow, 3.2 mm (5)            | 0.3 - 0.5     | %                       | SABIC Method   |
| Mold Shrinkage, xflow, 3.2 mm (5)           | 0.3 - 0.5     | %                       | SABIC Method   |
| Melt Flow Rate, 260°C/2.16 kgf              | 13.4          | g/10 min                | ASTM D 1238    |
| Density                                     | 1.22          | g/cm <sup>3</sup>       | ISO 1183       |
| Water Absorption, (23°C/sat)                | 0.26          | %                       | ISO 62         |
| Moisture Absorption (23°C / 50% RH)         | 0.06          | %                       | ISO 62         |
| Melt Volume Rate, MVR at 260°C/2.16 kg      | 12            | cm <sup>3</sup> /10 min | ISO 1133       |
| <b>FLAME CHARACTERISTICS</b>                |               |                         |                |
| UL Recognized, 94V-0 Flame Class Rating (3) | 0.8           | mm                      | UL 94          |
| UL Recognized, 94-5VB Rating (3)            | 0             | mm                      | UL 94          |



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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 80 - 90       | °C   |
| Drying Time                 | 3 - 4         | hrs  |
| Drying Time (Cumulative)    | 8             | hrs  |
| Maximum Moisture Content    | 0.04          | %    |
| Melt Temperature            | 245 - 275     | °C   |
| Nozzle Temperature          | 245 - 275     | °C   |
| Front - Zone 3 Temperature  | 245 - 275     | °C   |
| Middle - Zone 2 Temperature | 220 - 265     | °C   |
| Rear - Zone 1 Temperature   | 220 - 255     | °C   |
| Mold Temperature            | 60 - 80       | °C   |
| Back Pressure               | 0.3 - 0.7     | MPa  |
| Screw Speed                 | 40 - 70       | rpm  |
| Shot to Cylinder Size       | 30 - 80       | %    |
| Vent Depth                  | 0.038 - 0.076 | mm   |