



## CYCOLOY™ Resin EX58

### Asia Pacific: COMMERCIAL

High impact ABS for sheet extrusion and blow molding applications.

| TYPICAL PROPERTIES <sup>1</sup>              | TYPICAL VALUE | Unit                | Standard     |
|----------------------------------------------|---------------|---------------------|--------------|
| <b>MECHANICAL</b>                            |               |                     |              |
| Tensile Stress, yld, Type I, 5 mm/min        | 400           | kgf/cm <sup>2</sup> | ASTM D 638   |
| Tensile Stress, brk, Type I, 5 mm/min        | 300           | kgf/cm <sup>2</sup> | ASTM D 638   |
| Tensile Strain, yld, Type I, 5 mm/min        | 3.1           | %                   | ASTM D 638   |
| Tensile Strain, brk, Type I, 5 mm/min        | 31.6          | %                   | ASTM D 638   |
| Tensile Modulus, 5 mm/min                    | 21200         | kgf/cm <sup>2</sup> | ASTM D 638   |
| Flexural Stress, yld, 1.3 mm/min, 50 mm span | 680           | kgf/cm <sup>2</sup> | ASTM D 790   |
| Flexural Modulus, 1.3 mm/min, 50 mm span     | 22000         | kgf/cm <sup>2</sup> | ASTM D 790   |
| <b>IMPACT</b>                                |               |                     |              |
| Izod Impact, notched, 23°C                   | 44            | cm-kgf/cm           | ASTM D 256   |
| Izod Impact, notched, -30°C                  | 30            | cm-kgf/cm           | ASTM D 256   |
| Instrumented Impact Total Energy, 23°C       | 380           | cm-kgf              | ASTM D 3763  |
| <b>THERMAL</b>                               |               |                     |              |
| Vicat Softening Temp, Rate B/50              | 106           | °C                  | ASTM D 1525  |
| HDT, 0.45 MPa, 3.2 mm, unannealed            | 93            | °C                  | ASTM D 648   |
| HDT, 1.82 MPa, 3.2mm, unannealed             | 80            | °C                  | ASTM D 648   |
| CTE, -40°C to 40°C, flow                     | 1.01E-04      | 1/°C                | ASTM E 831   |
| CTE, -40°C to 40°C, xflow                    | 1.04E-04      | 1/°C                | ASTM E 831   |
| Relative Temp Index, Elec                    | 60            | °C                  | UL 746B      |
| Relative Temp Index, Mech w/impact           | 60            | °C                  | UL 746B      |
| Relative Temp Index, Mech w/o impact         | 60            | °C                  | UL 746B      |
| <b>PHYSICAL</b>                              |               |                     |              |
| Specific Gravity                             | 1.03          | -                   | ASTM D 792   |
| Mold Shrinkage, flow, 3.2 mm (5)             | 0.6 - 0.8     | %                   | SABIC Method |
| Melt Viscosity, 240°C, 100 sec-1             | 14000         | poise               | ASTM D 3825  |



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| <b>PHYSICAL</b>                            |               |                         |            |
| Melt Volume Rate, MVR at 220°C/10.0 kg     | 4             | cm <sup>3</sup> /10 min | ISO 1133   |
| <b>ELECTRICAL</b>                          |               |                         |            |
| Arc Resistance, Tungsten {PLC}             | 5             | PLC Code                | ASTM D 495 |
| Hot Wire Ignition {PLC}                    | 4             | PLC Code                | UL 746A    |
| High Voltage Arc Track Rate {PLC}          | 1             | PLC Code                | UL 746A    |
| High Ampere Arc Ign, surface {PLC}         | 4             | PLC Code                | UL 746A    |
| Comparative Tracking Index (UL) {PLC}      | 0             | PLC Code                | UL 746A    |
| <b>FLAME CHARACTERISTICS</b>               |               |                         |            |
| UL Recognized, 94HB Flame Class Rating (3) | 1.52          | mm                      | UL 94      |



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- Recommend initial lower temperatures settings to avoid material degradation/hang-up in die.

| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Sheet Extrusion</b>      |               |      |
| Drying Temperature          | 80 - 95       | °C   |
| Drying Time                 | 4             | hrs  |
| Maximum Moisture Content    | 0.02          | %    |
| Melt Temperature            | 215 - 260     | °C   |
| Barrel - Zone 1 Temperature | 170 - 200     | °C   |
| Barrel - Zone 2 Temperature | 180 - 220     | °C   |
| Barrel - Zone 3 Temperature | 190 - 225     | °C   |
| Barrel - Zone 4 Temperature | 200 - 240     | °C   |
| Adapter Temperature         | 205 - 250     | °C   |
| Die Temperature             | 205 - 250     | °C   |
| Roll Stack Temp - Top       | 90 - 95       | °C   |
| Roll Stack Temp - Middle    | 95 - 105      | °C   |
| Roll Stack Temp - Bottom    | 100 - 105     | °C   |

- Purge material from extruder prior to shutdown.