



**CYCOLAC™ Resin FXS610SK**  
**Americas: COMMERCIAL**

CYCOLAC FXS610SK is a multi purpose ABS injection moulding grade, providing a favourable balance of engineering properties. CYCOLAC FXS610SK is suitable for those applications that require sparkle colour effects.

| TYPICAL PROPERTIES <sup>1</sup>             | TYPICAL VALUE | Unit              | Standard     |
|---------------------------------------------|---------------|-------------------|--------------|
| <b>MECHANICAL</b>                           |               |                   |              |
| Taber Abrasion, CS-17, 1 kg                 | 89            | mg/1000cy         | SABIC Method |
| Tensile Stress, yield, 5 mm/min             | 45            | MPa               | ISO 527      |
| Tensile Stress, break, 5 mm/min             | 35            | MPa               | ISO 527      |
| Tensile Stress, yield, 50 mm/min            | 50            | MPa               | ISO 527      |
| Tensile Stress, break, 50 mm/min            | 40            | MPa               | ISO 527      |
| Tensile Strain, yield, 5 mm/min             | 2             | %                 | ISO 527      |
| Tensile Strain, break, 5 mm/min             | 9             | %                 | ISO 527      |
| Tensile Strain, yield, 50 mm/min            | 3             | %                 | ISO 527      |
| Tensile Strain, break, 50 mm/min            | 8             | %                 | ISO 527      |
| Tensile Modulus, 1 mm/min                   | 2500          | MPa               | ISO 527      |
| Flexural Stress, yield, 2 mm/min            | 74            | MPa               | ISO 178      |
| Flexural Modulus, 2 mm/min                  | 2500          | MPa               | ISO 178      |
| Hardness, H358/30                           | 98            | MPa               | ISO 2039-1   |
| Hardness, Rockwell R                        | 114           | -                 | ISO 2039-2   |
| <b>IMPACT</b>                               |               |                   |              |
| 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          | 7             | kJ/m <sup>2</sup> | ISO 180/1A   |
| 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 | 6             | kJ/m <sup>2</sup> | ISO 179/1eA  |
| <b>THERMAL</b>                              |               |                   |              |
| Thermal Conductivity                        | 0.2           | W/m-°C            | ISO 8302     |
| CTE, 23°C to 60°C, flow                     | 8.E-05        | 1/°C              | ISO 11359-2  |
| CTE, 23°C to 60°C, xflow                    | 8.E-05        | 1/°C              | ISO 11359-2  |





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| <b>THERMAL</b>                                |               |                         |                   |
| Ball Pressure Test, 75°C +/- 2°C              | PASSES        | -                       | IEC 60695-10-2    |
| Vicat Softening Temp, Rate B/50               | 100           | °C                      | ISO 306           |
| Vicat Softening Temp, Rate B/120              | 102           | °C                      | ISO 306           |
| HDT/Be, 0.45MPa Edgew 120*10*4 sp=100mm       | 92            | °C                      | ISO 75/Be         |
| HDT/Ae, 1.8 MPa Edgew 120*10*4 sp=100mm       | 80            | °C                      | ISO 75/Ae         |
| <b>PHYSICAL</b>                               |               |                         |                   |
| Mold Shrinkage on Tensile Bar, flow (2) (5)   | 0.5 - 0.7     | %                       | SABIC Method      |
| Density                                       | 1.06          | g/cm <sup>3</sup>       | ISO 1183          |
| Water Absorption, (23°C/sat)                  | 1             | %                       | ISO 62            |
| Moisture Absorption (23°C / 50% RH)           | 0.2           | %                       | ISO 62            |
| Melt Flow Rate, 220°C/10.0 kg                 | 25            | g/10 min                | ISO 1133          |
| Melt Volume Rate, MVR at 220°C/10.0 kg        | 24            | cm <sup>3</sup> /10 min | ISO 1133          |
| <b>ELECTRICAL</b>                             |               |                         |                   |
| Volume Resistivity                            | >1.E+15       | Ohm-cm                  | IEC 60093         |
| Surface Resistivity, ROA                      | >1.E+15       | Ohm                     | IEC 60093         |
| Dielectric Strength, in oil, 0.8 mm           | 35            | kV/mm                   | IEC 60243-1       |
| Dielectric Strength, in oil, 1.6 mm           | 26            | kV/mm                   | IEC 60243-1       |
| Dielectric Strength, in oil, 3.2 mm           | 18            | kV/mm                   | IEC 60243-1       |
| Relative Permittivity, 1 MHz                  | 2.6           | -                       | IEC 60250         |
| Dissipation Factor, 50/60 Hz                  | 0.004         | -                       | IEC 60250         |
| Dissipation Factor, 1 MHz                     | 0.009         | -                       | IEC 60250         |
| Comparative Tracking Index                    | 600           | V                       | IEC 60112         |
| Relative Permittivity, 50/60 Hz               | 2.7           | -                       | IEC 60250         |
| <b>FLAME CHARACTERISTICS</b>                  |               |                         |                   |
| UL Compliant, 94HB Flame Class Rating (3)(4)  | 1.5           | mm                      | UL 94 by SABIC-IP |
| Glow Wire Flammability Index 650°C, passes at | 1             | mm                      | IEC 60695-2-12    |





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| PROCESSING PARAMETERS       | TYPICAL VALUE | Unit |
|-----------------------------|---------------|------|
| <b>Injection Molding</b>    |               |      |
| Drying Temperature          | 85 - 95       | °C   |
| Drying Time                 | 2 - 4         | hrs  |
| Maximum Moisture Content    | 0.1           | %    |
| Melt Temperature            | 220 - 260     | °C   |
| Nozzle Temperature          | 210 - 250     | °C   |
| Front - Zone 3 Temperature  | 220 - 260     | °C   |
| Middle - Zone 2 Temperature | 220 - 260     | °C   |
| Rear - Zone 1 Temperature   | 200 - 240     | °C   |
| Hopper Temperature          | 60 - 80       | °C   |
| Mold Temperature            | 40 - 80       | °C   |

