

## TECHNICAL DATA SHEET

# XANTAR™ FC 25 UR

Mitsubishi EP

PC FR

**Processing**

Injection molding, Other extrusion, Blow molding

**Delivery Form**

Pellets

**Additives**

Release agent

**Special Characteristics**

Flame retardant, Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

## Product Text

**Product Information**

High Viscosity, Flame Retardant, Molding Release, UV Stabilized

ISO 1043 PC FR

XANTAR Polycarbonate &amp; Blends, your global partner for innovative added value

| Processing/Physical Characteristics | Value  | Unit                   | Standard        |
|-------------------------------------|--------|------------------------|-----------------|
| Melt volume-flow rate, MVR          | 5      | cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                         | 300    | °C                     |                 |
| Load                                | 1.2    | kg                     |                 |
| Molding shrinkage, parallel         | 0.6    | %                      | ISO 294-4, 2577 |
| Density of melt                     | 1010   | kg/m <sup>3</sup>      |                 |
| Thermal conductivity of melt        | 0.24   | W/(m K)                |                 |
| Spec. heat capacity of melt         | 1710   | J/(kg K)               |                 |
| Eff. thermal diffusivity            | 1.4E-7 | m <sup>2</sup> /s      |                 |
| Ejection temperature                | 131    | °C                     |                 |
| Mechanical Properties               | Value  | Unit                   | Standard        |
| Tensile modulus                     | 2300   | MPa                    | ISO 527         |
| Yield stress                        | 60     | MPa                    | ISO 527         |
| Yield strain                        | 6      | %                      | ISO 527         |
| Nominal strain at break             | >50    | %                      | ISO 527         |
| Poisson's ratio                     | 0.35   |                        | ISO 527         |

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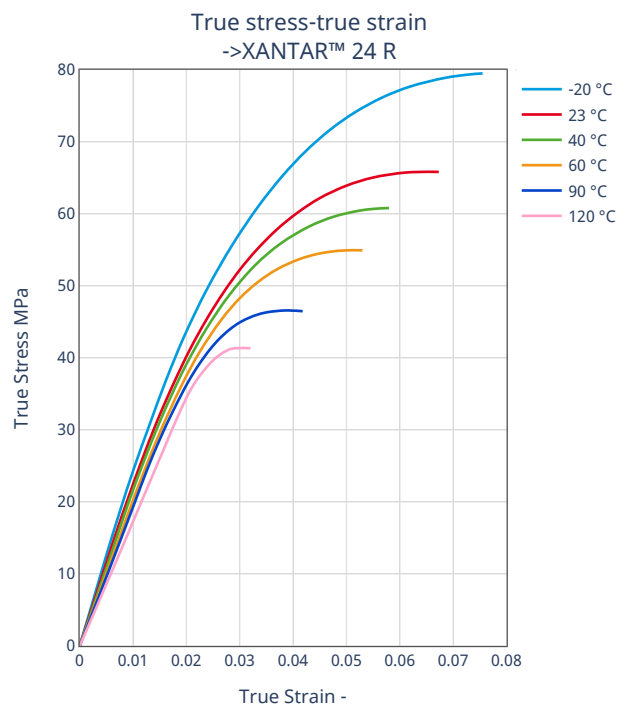
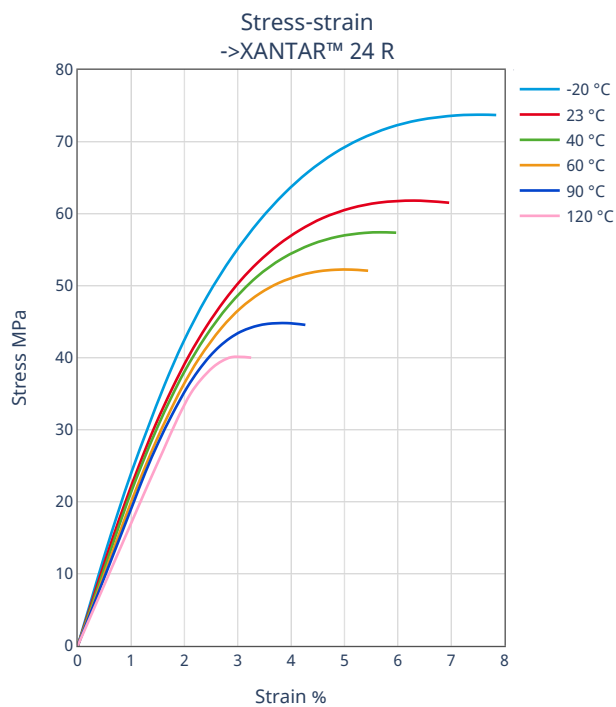
| Thermal Properties                          | Value | Unit  | Standard            |
|---------------------------------------------|-------|-------|---------------------|
| Temp. of deflection under load, 1.80 MPa    | 130   | °C    | ISO 75-1/-2         |
| Vicat softening temperature, B              | 150   | °C    | ISO 306             |
| Coeff. of linear therm. expansion, parallel | 65    | E-6/K | ISO 11359-1/-2      |
| Burning behav. at 1.5 mm nom. thickn.       | V-0   | class | IEC 60695-11-10     |
| Thickness tested                            | 1.5   | mm    |                     |
| Yellow card available                       | yes   |       |                     |
| Burning behav. at thickness h               | V-0   | class | IEC 60695-11-10     |
| Thickness tested                            | 3     | mm    |                     |
| Yellow card available                       | yes   |       |                     |
| Burning behav. 5V at thickness h            | 5VA   | class | IEC 60695-11-20     |
| Thickness tested                            | 3     | mm    |                     |
| Yellow card available                       | yes   |       |                     |
| Oxygen index                                | 35    | %     | ISO 4589-1/-2       |
| Electrical Properties                       | Value | Unit  | Standard            |
| Relative permittivity, 100Hz                | 3     |       | IEC 62631-2-1       |
| Relative permittivity, 1MHz                 | 2.9   |       | IEC 62631-2-1       |
| Dissipation factor, 100Hz                   | 6.6   | E-4   | IEC 62631-2-1       |
| Dissipation factor, 1MHz                    | 92    | E-4   | IEC 62631-2-1       |
| Volume resistivity                          | >1E13 | Ohm*m | IEC 62631-3-1       |
| Surface resistivity                         | >1E15 | Ohm   | IEC 62631-3-2       |
| Electric strength                           | 29    | kV/mm | IEC 60243-1         |
| Comparative tracking index                  | 225   |       | IEC 60112           |
| Other Properties                            | Value | Unit  | Standard            |
| Water absorption                            | 0.35  | %     | Sim. to ISO 62      |
| Density                                     | 1200  | kg/m³ | ISO 1183            |
| Material Specific Properties                | Value | Unit  | Standard            |
| Viscosity number                            | 63    | cm³/g | ISO 307, 1157, 1628 |
| Test Specimen Production                    | Value | Unit  | Standard            |
| Injection molding, melt temperature         | 300   | °C    | ISO 294             |
| Injection molding, mold temperature         | 90    | °C    | ISO 294             |

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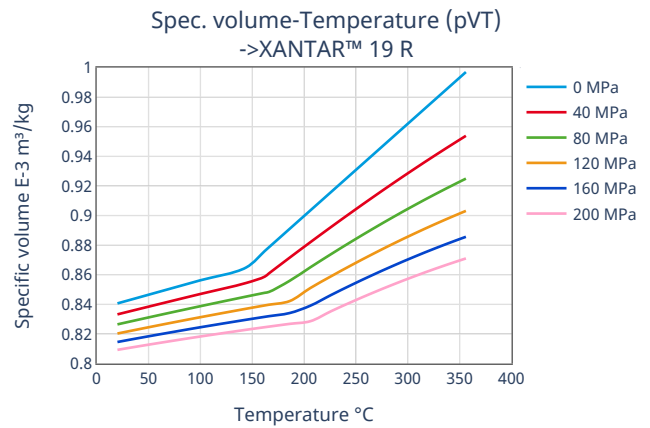
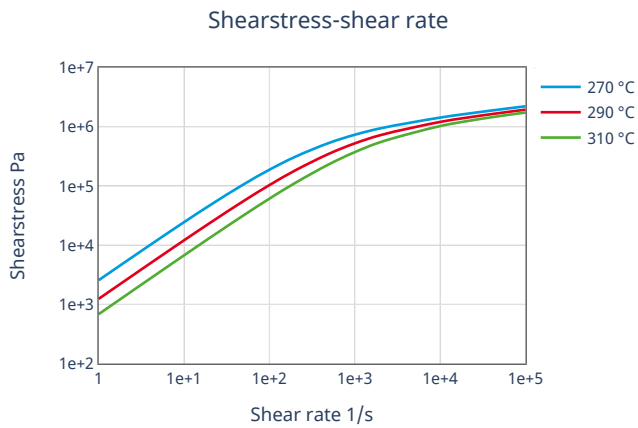
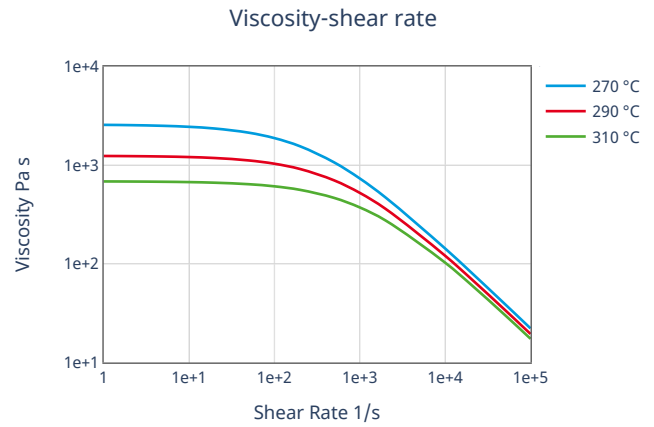
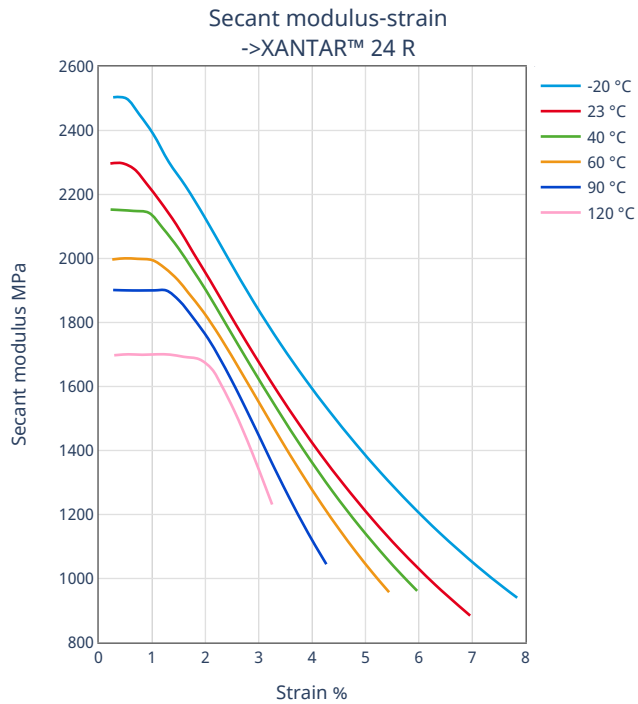
| Processing Recommendation Injection Molding | Value     | Unit | Standard |
|---------------------------------------------|-----------|------|----------|
| Pre-drying - temperature                    | 120       | °C   |          |
| Pre-drying - time                           | 4         | h    |          |
| Processing humidity                         | ≤0.03     | %    |          |
| Melt temperature                            | 290 - 320 | °C   |          |
| Mold temperature                            | 80 - 120  | °C   |          |
| Zone 1                                      | 260 - 280 | °C   |          |
| Zone 2                                      | 270 - 290 | °C   |          |
| Zone 3                                      | 280 - 300 | °C   |          |
| Nozzle temperature                          | 270 - 290 | °C   |          |

## Diagrams



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## Processing Information

### Injection molding

#### Injection Molding Recommendations