

# Akulon<sup>®</sup> XS36–C1 (FC–X9224)

## PA6 copolymer

Very High Viscosity, Lubricated, Film Extrusion, Food Contact Quality

PA with lower crystallization speed compared to PA6

| PROPERTIES                                   | TYPICAL DATA | UNIT               | TEST METHOD                |
|----------------------------------------------|--------------|--------------------|----------------------------|
| <b>MATERIAL SPECIFIC PROPERTIES</b>          |              |                    |                            |
| Viscosity number                             | 245          | cm <sup>3</sup> /g | ISO 307, 1157, 1628        |
| RSV formic acid, 1g/100ml                    | 3.6          | —                  | Envalior Method            |
| Melt Viscosity (260 °C)                      | 2250         | Pa s               | Envalior Method, 260 °C    |
| Density                                      | 1130         | kg/m <sup>3</sup>  | ISO 1183                   |
| <b>THERMAL PROPERTIES</b>                    |              |                    |                            |
| Coeff. of linear therm. expansion (parallel) | 0.9          | E–4/°C             | ISO 11359–1/–2             |
| Spec. heat capacity                          | 1550         | J/(kg K)           | —                          |
| Average spec. heat capacity 20–150 °C        | 2250         | J/(kg K)           | —                          |
| <b>MECHANICAL PROPERTIES (FILM)</b>          |              |                    |                            |
| Modulus of elasticity                        | 465          | MPa                | Envalior Method, 50 mm/min |
| Stress at yield, parallel                    | 34           | MPa                | ISO 527–3                  |
| Maximum stress, parallel                     | 94           | MPa                | ISO 527–3                  |
| Maximum strain, parallel                     | 350          | %                  | ISO 527–3                  |
| Trouser Tear resistance, parallel            | 32           | —                  | ISO 6383–1                 |
| Puncture resistance                          | 1320         | J/m                | Envalior Method            |
| Static coefficient of friction               | 1.4          | —                  | ISO 8295                   |
| Dynamic coefficient of friction              | 0.8          | —                  | ISO 8295                   |



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| PROPERTIES                                    | TYPICAL DATA | UNIT           | TEST METHOD     |
|-----------------------------------------------|--------------|----------------|-----------------|
| OTHER PROPERTIES (FILM)                       |              | VALUE          |                 |
| Transparency/Clarity                          | 85           | %              | Envalior Method |
| Oxygen transmission rate at 23°C/0%r.h.       | 23           | cm³/(m²*d*bar) | DIS 15105–1/–2  |
| Oxygen transmission rate at 23°C/85%r.h.      | 33           | cm³/(m²*d*bar) | DIS 15105–1/–2  |
| Water Vapor Transmission Rate at 23°C/85%r.h. | 35           | g/(m²*d)       | DIS 15106–1/–3  |
| TEST SPECIMEN PRODUCTION (FILM)               |              | VALUE          |                 |
| Type of extrusion                             | cast         | —              | —               |
| Thickness of specimen                         | 0.05         | mm             | —               |
| Extruder temperature                          | 270          | °C             |                 |
| Die temperature                               | 270          | °C             |                 |
| Chill Roll Temperature                        | 110          | °C             |                 |

## Viscosity–shear rate

