

# Akulon<sup>®</sup> F130–E5

## PA6

Medium Viscosity, Nucleated, Lubricated, Film Extrusion, Food Contact Quality

| PROPERTIES                                   | TYPICAL DATA | UNIT               | TEST METHOD                |
|----------------------------------------------|--------------|--------------------|----------------------------|
| <b>MATERIAL SPECIFIC PROPERTIES</b>          | <b>VALUE</b> |                    |                            |
| Viscosity number                             | 195          | cm <sup>3</sup> /g | ISO 307, 1157, 1628        |
| RSV formic acid, 1g/100ml                    | 3            | –                  | Envalior Method            |
| Melt Viscosity (260 °C)                      | 810          | Pa s               | Envalior Method, 260 °C    |
| Density                                      | 1130         | kg/m <sup>3</sup>  | ISO 1183                   |
| <b>THERMAL PROPERTIES</b>                    | <b>VALUE</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>          | <b>VALUE</b> |                    |                            |
| Modulus of elasticity                        | 465          | MPa                | Envalior Method, 50 mm/min |
| Stress at yield, parallel                    | 34           | MPa                | ISO 527–3                  |
| Maximum stress, parallel                     | 96           | MPa                | ISO 527–3                  |
| Maximum strain, parallel                     | 350          | %                  | ISO 527–3                  |
| Trouser Tear resistance, parallel            | 33           | –                  | ISO 6383–1                 |
| Puncture resistance                          | 1230         | J/m                | Envalior Method            |
| Static coefficient of friction               | 1.4          | –                  | ISO 8295                   |
| Dynamic coefficient of friction              | 0.8          | –                  | ISO 8295                   |
| <b>OTHER PROPERTIES (FILM)</b>               | <b>VALUE</b> |                    |                            |

Property Data

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| PROPERTIES                                    | TYPICAL DATA | UNIT           | TEST METHOD     |
|-----------------------------------------------|--------------|----------------|-----------------|
| Transparency/Clarity                          | 85           | %              | Envalior Method |
| Oxygen transmission rate at 23°C/0%r.h.       | 20           | cm³/(m²*d*bar) | DIS 15105–1/–2  |
| Oxygen transmission rate at 23°C/85%r.h.      | 31           | 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

