

# Akulon® F136-E2

## PA6

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

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| Properties                                    | Typical Data | Unit                                     | Test Method           |
|-----------------------------------------------|--------------|------------------------------------------|-----------------------|
| <b>Thermal properties</b>                     |              |                                          |                       |
|                                               | Value        |                                          |                       |
| 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>Material specific properties</b>           |              |                                          |                       |
|                                               | Value        |                                          |                       |
| Viscosity number                              | 245          | cm <sup>3</sup> /g                       | ISO 307, 1157, 1628   |
| RSV formic acid, 1g/100ml                     | 3.6          | -                                        | DSM method            |
| Melt Viscosity (260 °C)                       | 2250         | Pa s                                     | DSM method, 260 °C    |
| Density                                       | 1130         | kg/m <sup>3</sup>                        | ISO 1183              |
| <b>Other Properties (Film)</b>                |              |                                          |                       |
|                                               | Value        |                                          |                       |
| Transparency/Clarity                          | 85           | %                                        | DSM method            |
| Oxygen transmission rate at 23°C/0%r.h.       | 23           | cm <sup>3</sup> /(m <sup>2</sup> *d*bar) | DIS 15105-1/-2        |
| Oxygen transmission rate at 23°C/85%r.h.      | 33           | cm <sup>3</sup> /(m <sup>2</sup> *d*bar) | DIS 15105-1/-2        |
| Water Vapor Transmission Rate at 23°C/85%r.h. | 35           | g/(m <sup>2</sup> *d)                    | DIS 15106-1/-3        |
| <b>Mechanical properties (Film)</b>           |              |                                          |                       |
|                                               | Value        |                                          |                       |
| Modulus of elasticity                         | 465          | MPa                                      | DSM-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                                      | DSM-Method            |

| Properties                      | Typical Data | Unit | Test Method |
|---------------------------------|--------------|------|-------------|
| Static coefficient of friction  | 1.4          | -    | ISO 8295    |
| Dynamic coefficient of friction | 0.8          | -    | ISO 8295    |

## 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

