

# Akulon® F132-E2

## PA6

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

Print Date: 2018-12-13

| 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                              | 210          | cm <sup>3</sup> /g                       | ISO 307, 1157, 1628   |
| RSV formic acid, 1g/100ml                     | 3.2          | -  | DSM method            |
| Melt Viscosity (260 °C)                       | 1120         | 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.       | 20           | cm <sup>3</sup> /(m <sup>2</sup> *d*bar) | DIS 15105-1/-2        |
| Oxygen transmission rate at 23°C/85%r.h.      | 31           | 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                      | 96           | MPa                                      | ISO 527-3             |
| Maximum strain, parallel                      | 350          | %  | ISO 527-3             |
| Trouser Tear resistance, parallel             | 32           | -  | ISO 6383-1            |
| Puncture resistance                           | 1230         | J/m                                      | DSM-Method            |

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|---------------------------------|--------------|------|-------------|
| Static coefficient of friction  | 1.4          | -    | ISO 8295    |
| Dynamic coefficient of friction | 0.8          | -    | ISO 8295    |

## Test specimen production (Film)

| Test specimen production (Film) | Value | Unit |   |
|---------------------------------|-------|------|---|
| 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

