

# EVAL™ E105B

Ethylene Vinyl Alcohol

EVAL Europe nv

## Message:

EVAL™ E105B is an Ethylene Vinyl Alcohol (EVOH) product. It is available in Europe.

| General Information                        |               |                                                |                 |
|--------------------------------------------|---------------|------------------------------------------------|-----------------|
| Forms                                      | Pellets       |                                                |                 |
| Physical                                   | Nominal Value | Unit                                           | Test Method     |
| Density                                    | 1.14          | g/cm <sup>3</sup>                              | ISO 1183        |
| Melt Mass-Flow Rate (MFR)                  |               |                                                | ISO 1133        |
| 190°C/2.16 kg                              | 5.7           | g/10 min                                       |                 |
| 210°C/2.16 kg                              | 13            | g/10 min                                       |                 |
| 230°C/2.16 kg                              | 25            | g/10 min                                       |                 |
| Ethylene Content                           | 44.0          | mol%                                           | Internal Method |
| Hardness                                   | Nominal Value | Unit                                           | Test Method     |
| Rockwell Hardness (M-Scale)                | 80            |                                                | ISO 2039-2      |
| Mechanical                                 | Nominal Value | Unit                                           | Test Method     |
| Tensile Modulus                            | 2300          | MPa                                            | ISO 527-2       |
| Tensile Stress (Break)                     | 29.0          | MPa                                            | ISO 527-2       |
| Tensile Strain (Break)                     | 11            | %                                              | ISO 527-2       |
| Flexural Modulus                           | 4800          | MPa                                            | ISO 178         |
| Films                                      | Nominal Value | Unit                                           | Test Method     |
| Oxygen Permeability <sup>1</sup>           |               |                                                | ISO 14663-2     |
| 20°C, 0% RH                                | 0.016         | cm <sup>3</sup> · mm/m <sup>2</sup> /atm/24 hr |                 |
| 20°C, 35% RH                               | 0.022         | cm <sup>3</sup> · mm/m <sup>2</sup> /atm/24 hr |                 |
| 20°C, 65% RH                               | 0.030         | cm <sup>3</sup> · mm/m <sup>2</sup> /atm/24 hr |                 |
| 20°C, 85% RH                               | 0.066         | cm <sup>3</sup> · mm/m <sup>2</sup> /atm/24 hr |                 |
| 20°C, 90% RH                               | 0.088         | cm <sup>3</sup> · mm/m <sup>2</sup> /atm/24 hr |                 |
| Water Vapor Transmission Rate <sup>2</sup> | 0.81          | g · mm/m <sup>2</sup> /atm/24 hr               | ASTM E96        |
| Impact                                     | Nominal Value | Unit                                           | Test Method     |
| Charpy Unnotched Impact Strength           |               |                                                | ISO 179         |
| --                                         | 2.0           | kJ/m <sup>2</sup>                              |                 |
| -40°C                                      | 2.0           | kJ/m <sup>2</sup>                              |                 |
| Thermal                                    | Nominal Value | Unit                                           | Test Method     |
| Glass Transition Temperature               | 53.0          | °C                                             | ISO 11357-2     |
| Vicat Softening Temperature                | 156           | °C                                             | ISO 306         |
| Melting Temperature                        | 165           | °C                                             | ISO 11357-3     |
| Peak Crystallization Temperature           | 145           | °C                                             | ISO 11357-3     |
| NOTE                                       |               |                                                |                 |

|    |             |
|----|-------------|
| 1. | Annex C     |
| 2. | Procedure E |

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