Technical Data Sheet

# DOWLEX™ GM 8070G Linear Low Density Polyethylene Resin

## Overview

DOWLEX™ GM 8070G Polyethylene Resin is suitable for a wide variety of blown film applications with good processability, superior extensibility and good physical properties.

Main Characteristics

- Superior extensibility
- High strength and good optical properties

Complies with:

- EU, No 10/2011
- U.S. FDA FCN 741
- Canadian HPFB No Objection

Consult the regulations for complete details

## Sustainability Attribute:

Resoursa™
Advancing resource efficiency with Dow

## Additive

- Antiblock: No
- Slip: No
- Processing aid: No

## Physical Properties

| Physical | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method[1] |
|---|---|---|---|---|---|
| Density | 0.917 | g/cm³ | 0.917 | g/cm³ | ASTM D792 |
| Base Density[2] | 0.917 | g/cm³ | 0.917 | g/cm³ | Dow Method |
| Melt Index (190°C/2.16 kg) | 0.90 | g/10 min | 0.90 | g/10 min | ASTM D1238 |
| **Mechanical** | | | | | |
| Tensile Elongation (Break) | 510 | % | 510 | % | ASTM D882 |
| **Films** | | | | | |
| Film Thickness — Tested | 1 | mil | 20 | µm | |
| Film Puncture Resistance | 194 | ft·lb/in³ | 16.1 | J/cm³ | Dow Method |

1. ASTM: American Society for Testing and Materials
2. Base density is estimated using the assumption that every 1000 ppm of antiblock in the finished product raises the density of the polymer by 0.0006 g/cm³. Base density is the estimated density of the polymer if it did not contain any antiblock.

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

## Physical Properties (Cont.)

| Films | Nominal Value | Unit (English) | Nominal Value | Unit (SI) | Test Method |
|---|---|---|---|---|---|
| Secant Modulus | | | | | ASTM D882 |
| 2% Secant, MD | 51200 | psi | 353 | MPa | |
| 2% Secant, TD | 46300 | psi | 319 | MPa | |
| Tensile Strength | | | | | ASTM D882 |
| MD: Yield | 2510 | psi | 17.3 | MPa | |
| TD: Yield | 2630 | psi | 18.1 | MPa | |
| MD: Break | 12700 | psi | 87.3 | MPa | |
| Tensile Elongation | | | | | ASTM D882 |
| MD: Break | 510 | % | 510 | % | |
| TD: Break | 490 | % | 490 | % | |
| Dart Drop Impact | 450 | g | 450 | g | ASTM D1709A |
| Elmendorf Tear Strength | | | | | ASTM D1922 |
| MD | 320 | g | 320 | g | |
| TD | 490 | g | 490 | g | |
| **Thermal** | | | | | |
| Vicat Softening Temperature | 217 | °F | 103 | °C | ASTM D1525 |
| Melting Temperature (DSC) | 250 | °F | 121 | °C | Dow Method |
| **Optical** | | | | | |
| Gloss (45°, 0.800 mil (20.3 µm)) | 54 | | 54 | | ASTM D2457 |
| Haze (0.800 mil (20.3 µm)) | 10.0 | % | 10.0 | % | ASTM D1003 |
| **Extrusion Notes** | | | | | |

Fabrication Conditions for Blown Film:

- Machine: Monolayer blown film extrusion line
- Monolayer Film (0.8 mil)
- Screw Size: 2.5 inch (63.5 mm) 30:1 L/D
- Screw Type: DSBII
- Die Gap: 70 mil
- Output: 10 lbs/hr./in. of die circumference
- Die Diameter: 6 in.
- Blow-up Ratio: 2.5:1

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