# Adflex Z 108 S

## LyondellBasell Industries - Polyolefin

Tuesday, November 5, 2019

## General Information

**Product Description**

Adflex Z 108 S is a reactor TPO (thermoplastic polyolefin) manufactured using the proprietary Catalloy process technology from LyondellBasell. Adflex Z 108 S features a very high softness, a very low flexural modulus and a high melt flow rate. It is used by customers for injection molding, impact modification, extrusion coating, soft compounding, film and fiber applications. It is also selected by customers for the modification of polypropylene homopolymer and random copolymer without altering the transparency. The grade is available in natural pellet form.

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Availability | • Europe | • Latin America | • North America |
| Features | • High Elongation<br>• High Flow | • Low Hardness<br>• Low Temperature Impact Resistance | • Narrow Molecular Weight Distribution<br>• Soft |
| Uses | • Building Materials<br>• Cast Film<br>• Coating Applications<br>• Compounding<br>• Construction Applications | • Fibers<br>• Filaments<br>• Film<br>• Nonwovens<br>• Packaging | • Pipe Coatings<br>• Plastics Modification<br>• Spun Bonding<br>• Textile Applications<br>• Yarn |
| Appearance | • Natural Color | | |
| Forms | • Pellets | | |
| Processing Method | • Cast Film<br>• Compounding | • Extrusion Coating<br>• Fiber (Spinning) Extrusion | • Filament Extrusion<br>• Injection Molding |

## ASTM & ISO Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density (73°F) | 0.880 | g/cm³ | ISO 1183/A |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 27 | g/10 min | ISO 1133 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress (Yield) | 725 | psi | ISO 527-2 |
| Tensile Stress (Break) | 870 | psi | ISO 527-2 |
| Tensile Strain (Yield) | 20 | % | ISO 527-2 |
| Tensile Strain (Break) | 800 | % | ISO 527-2 |
| Flexural Modulus | 11600 | psi | ISO 178 |
| **Elastomers** | **Nominal Value** | **Unit** | **Test Method** |
| Tear Strength | 354 | lbf/in | ASTM D624 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179 |
| -40°F, Complete Break | 0.62 | ft·lb/in² | |
| -4°F, Partial Break | 1.3 | ft·lb/in² | |
| 73°F, Partial Break | 16 | ft·lb/in² | |
| Instrumented Dart Impact [2] | | | ASTM D3763 |
| -40°F, 0.126 in, Ductile Failure | 159 | in·lb | |
| 73°F, 0.126 in, Ductile Failure | 88.5 | in·lb | |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Shore Hardness (Shore D, 15 sec) | 30 | | ISO 868 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Heat Deflection Temperature (66 psi, Unannealed) | 98.6 | °F | ISO 75-2/B |

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| Thermal | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Vicat Softening Temperature | 127 | °F | ISO 306/A50 |
| Melting Temperature | 288 | °F | ISO 11357-3 |
| **Optical** | **Nominal Value** | **Unit** | **Test Method** |
| Gloss (60°, 45.0 mil) | 62 | | ASTM D2457 |
| Haze (45.0 mil) | 49.0 | % | ASTM D1003 |

### Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 7.22 ft/sec