

# Aegis® H85QP

Polyamide 6

Honeywell

## Message:

Aegis® H85QP is a lubricated, medium viscosity nylon 6 extrusion grade homopolymer for cast or blown film. It conforms to FDA requirements of 21 CFR 177.1500 as well as EU Directive 2002/72/EC. It possesses the combination of strength, toughness and thermoforming properties associated with nylon 6 as well as excellent heat, chemical, and abrasion resistance.

| General Information |                          |
|---------------------|--------------------------|
| Additive            | Nucleating agent         |
|                     | Lubricant                |
| Features            | Nucleated                |
|                     | Homopolymer              |
|                     | Good strength            |
|                     | Good wear resistance     |
|                     | Good chemical resistance |
|                     | Heat resistance, high    |
|                     | Good toughness           |
|                     | Lubrication              |
|                     | Medium viscosity         |
| Uses                | Packaging                |
|                     | cast film                |
| Agency Ratings      | FDA 21 CFR 177.1500      |
|                     | European 2002/72/EC      |
| Forms               | Particle                 |
| Processing Method   | Blow film                |
|                     | Extrusion                |
|                     | cast film                |

| Physical                                 | Nominal Value | Unit              | Test Method |
|--|---------------|-------------------|-------------|
| Density                                  | 1.13          | g/cm <sup>3</sup> | ASTM D1505  |
| Melt Mass-Flow Rate (MFR) (235°C/1.0 kg) | 3.5           | g/10 min          | ASTM D1238  |
| Water Absorption                         |               |                   | ASTM D570   |
| 24 hr                                    | 1.6           | %                 | ASTM D570   |
| Saturation                               | 9.5           | %                 | ASTM D570   |
| Balance                                  | 2.7           | %                 | ASTM D570   |
| Moisture Content                         |               | %                 |             |

| Films                                   | Nominal Value | Unit                                   | Test Method |
|---|---------------|--|-------------|
| Carbon Dioxide Transmission Rate (23°C) | 72.8          | cm <sup>3</sup> /m <sup>2</sup> /24 hr | ASTM D1434  |
| Nitrogen Transmission Rate (23°C)       | 14.0          | cm <sup>3</sup> /m <sup>2</sup> /24 hr | ASTM D1434  |
| Oxygen Transmission Rate (23°C)         | 40            | cm <sup>3</sup> /m <sup>2</sup> /24 hr | ASTM D3985  |

| Thermal             | Nominal Value | Unit |
|---------------------|---------------|------|
| Melting Temperature | 220           | °C   |

#### Additional Information

FAV, ASTM D789: 8596% SAV: 3.15Extractible Content: 0.7 %

| Extrusion              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 80.0          | °C   |
| Suggested Max Moisture | 0.080         | %    |
| Cylinder Zone 1 Temp.  | 230 - 260     | °C   |
| Cylinder Zone 2 Temp.  | 230 - 260     | °C   |
| Cylinder Zone 3 Temp.  | 230 - 260     | °C   |
| Cylinder Zone 4 Temp.  | 230 - 260     | °C   |
| Cylinder Zone 5 Temp.  | 230 - 260     | °C   |
| Adapter Temperature    | 260 - 266     | °C   |
| Melt Temperature       | 260 - 270     | °C   |
| Die Temperature        | 260           | °C   |

#### Extrusion instructions

The values listed above in Extrusion are for cast film. Typical Barrel Profile for Tubular (Blown) Films:

Barrel Temperature: 246 to 254°C (474 to 490°F)

Adapter Temperature: 260°C (500°F)

Die Temperature: 254°C (490°F)

Processing Melt Temperature: 254 to 260°C (490 to 500°F)

Screw Parameters:

Metering section: 40%

Transition section: 3 to 4 flights

Feed section balance of screw length

Compression ratio: 3.5:1 to 4.0:1

L/D ratio: 24:1

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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