

# CERTENE™ PBS-4AN

Polypropylene Impact Copolymer  
Muehlstein

Message:

PBS-4AN is a certified prime grade Impact copolymer specially designed for extrusion of sheet for thermoforming food packaging containers. PBS-4AN features Antistatic to protect against dust pick-up, and Nucleation for faster crystallization times. It combines good thermal stability and fast cycles with good Toughness and Stiffness, good melt processing stability, and very good Organoleptic properties. PBS-4AN other applications include injection molding of household goods, food storage containers, and hospital wares. PBS-4AN complies with FDA regulation 21CFR 177.1520 (a)(3)(i) / (c)3.1+3.2, and most international regulations concerning the use of Polypropylene in contact with food.

| General Information                       |                              |                   |             |
|---|------------------------------|-------------------|-------------|
| Additive                                  | Nucleating agent             |                   |             |
|   | Antistatic property          |                   |             |
| Features                                  | Nucleated                    |                   |             |
|   | Rigid, good                  |                   |             |
|   | Impact copolymer             |                   |             |
|   | Antistatic property          |                   |             |
|   | Fast molding cycle           |                   |             |
|   | Good sensory characteristics |                   |             |
|   | Good processing stability    |                   |             |
|   | Thermal stability, good      |                   |             |
|   | Good toughness               |                   |             |
|   | Compliance of Food Exposure  |                   |             |
| Uses                                      | Household goods              |                   |             |
|   | Food packaging               |                   |             |
|   | Food container               |                   |             |
|   | Medical/nursing supplies     |                   |             |
| Agency Ratings                            | FDA 21 CFR 177.1520(a) 3 (i) |                   |             |
|   | FDA 21 CFR 177.1520(c) 3.1   |                   |             |
|   | FDA 21 CFR 177.1520(c) 3.2   |                   |             |
| Forms                                     | Particle                     |                   |             |
| Processing Method                         | Sheet extrusion molding      |                   |             |
|   | Thermoforming                |                   |             |
| Physical                                  | Nominal Value                | Unit              | Test Method |
| Density                                   | 0.900                        | g/cm <sup>3</sup> | ASTM D1505  |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 4.0                          | g/10 min          | ASTM D1238  |

| Hardness   | Nominal Value | Unit | Test Method |
|--|---------------|------|-------------|
| Rockwell Hardness (R-Scale)  | 80            |      | ASTM D785   |
| Mechanical   | Nominal Value | Unit | Test Method |
| Tensile Strength <sup>1</sup> (Yield, Injection Molded)                    | 30.0          | MPa  | ASTM D638   |
| Tensile Elongation <sup>2</sup> (Yield, Injection Molded)                  | 8.0           | %    | ASTM D638   |
| Flexural Modulus - 1% Secant <sup>3</sup> (Injection Molded)               | 1380          | MPa  | ASTM D790   |
| Impact   | Nominal Value | Unit | Test Method |
| Notched Izod Impact (23°C, Injection Molded)                               | 96            | J/m  | ASTM D256   |
| Thermal  | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load (0.45 MPa, Unannealed, Injection Molded) | 102           | °C   | ASTM D648   |
| Vicat Softening Temperature  | 145           | °C   | ASTM D1525  |
| Additional Information   |               |      |             |
| All specimens were injection molded according to ASTM D2146 Type 1.        |               |      |             |
| NOTE   |               |      |             |
| 1.   | 50 mm/min     |      |             |
| 2.   | 50 mm/min     |      |             |
| 3.   | 1.3 mm/min    |      |             |

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