

# STYRON™ 484

High Impact Polystyrene

Americas Styrenics LLC

Message:

STYRON™484 is a high impact polystyrene material. This product is available in North America or Latin America and is processed by extrusion or injection molding.

STYRON™The main features of the 484 are:

- flame retardant/rated flame
- accessible food
- Good stiffness
- Good toughness
- Heat resistance

Typical application areas include:

- electrical appliances
- packing
- home apps
- hat/cap/cork
- food contact applications

| General Information                      |               |                             |             |
|------------------------------------------|---------------|-----------------------------|-------------|
| UL YellowCard                            |               | E326906-100188713           |             |
| Features                                 |               | Rigid, good                 |             |
|                                          |               | Heat resistance, high       |             |
|                                          |               | Good toughness              |             |
|                                          |               | Compliance of Food Exposure |             |
| Uses                                     |               | Packaging                   |             |
|                                          |               | Electrical appliances       |             |
|                                          |               | Cover                       |             |
|                                          |               | Home appliance components   |             |
|                                          |               | Household goods             |             |
| Agency Ratings                           |               | FDA 21 CFR 177.1640         |             |
| UL File Number                           |               | E326906                     |             |
| Forms                                    |               | Particle                    |             |
| Processing Method                        |               | Extrusion                   |             |
|                                          |               | Injection molding           |             |
| Physical                                 | Nominal Value | Unit                        | Test Method |
| Specific Gravity                         | 1.04          | g/cm³                       | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 2.8           | g/10 min                    | ASTM D1238  |
| Molding Shrinkage - Flow                 | 0.40 - 0.80   | %                           | ASTM D955   |
| Hardness                                 | Nominal Value | Unit                        | Test Method |
| Rockwell Hardness (R-Scale)              | 107           |                             | ASTM D785   |

| Mechanical                                   | Nominal Value | Unit     | Test Method |
|----------------------------------------------|---------------|----------|-------------|
| Tensile Modulus (Injection Molded)           | 1900          | MPa      | ASTM D638   |
| Tensile Strength                             |               |          | ASTM D638   |
| Fracture, injection molding                  | 25.5          | MPa      | ASTM D638   |
| Injection Molding                            | 27.0          | MPa      | ASTM D638   |
| Tensile Elongation (Break, Injection Molded) | 65            | %        | ASTM D638   |
| Flexural Modulus (Injection Molded)          | 1900          | MPa      | ASTM D790   |
| Flexural Strength (Injection Molded)         | 36.0          | MPa      | ASTM D790   |
| Impact                                       | Nominal Value | Unit     | Test Method |
| Notched Izod Impact                          |               |          | ASTM D256   |
| 23°C, molded                                 | 95            | J/m      | ASTM D256   |
| 23°C, injection molding                      | 110           | J/m      | ASTM D256   |
| Thermal                                      | Nominal Value | Unit     | Test Method |
| Deflection Temperature Under Load            |               |          | ASTM D648   |
| 0.45 MPa, not annealed                       | 89.0          | °C       | ASTM D648   |
| 1.8 MPa, not annealed                        | 79.0          | °C       | ASTM D648   |
| Vicat Softening Temperature                  | 101           | °C       | ASTM D1525  |
| CLTE - Flow                                  | 9.0E-5        | cm/cm/°C | ASTM D696   |
| Flammability                                 | Nominal Value |          | Test Method |
| Flame Rating                                 | HB            |          | UL 94       |
| Injection                                    | Nominal Value | Unit     |             |
| Rear Temperature                             | 218 - 249     | °C       |             |
| Middle Temperature                           | 218 - 249     | °C       |             |
| Front Temperature                            | 199 - 213     | °C       |             |
| Nozzle Temperature                           | 213 - 243     | °C       |             |
| Mold Temperature                             | 15.6 - 65.6   | °C       |             |
| Injection Rate                               | Fast          |          |             |
| Back Pressure                                | 0.200 - 1.20  | MPa      |             |
| Cushion                                      | 6.35          | mm       |             |
| Extrusion                                    | Nominal Value | Unit     |             |
| Cylinder Zone 1 Temp.                        | 177 - 193     | °C       |             |
| Cylinder Zone 2 Temp.                        | 182 - 204     | °C       |             |
| Cylinder Zone 3 Temp.                        | 188 - 210     | °C       |             |
| Cylinder Zone 4 Temp.                        | 199 - 216     | °C       |             |
| Cylinder Zone 5 Temp.                        | 204 - 221     | °C       |             |
| Adapter Temperature                          | 193 - 232     | °C       |             |
| Melt Temperature                             | 193 - 232     | °C       |             |
| Die Temperature                              | 199 - 232     | °C       |             |
| Extrusion instructions                       |               |          |             |

Zone 6 Temperature: 204 to 221°C Melt Pump, Pipes, Screen Changer Temperature: 193 to 232°C Polish Rolls Temperature: 66 to 104°C Head Pressure: 10 to 21 MPa

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