

# Styrolution PS 6210/6211

High Impact Polystyrene  
INEOS Styrolution Group GmbH

Message:

Styrolution PS 6210/6211 is a High Impact Polystyrene product. It can be processed by profile extrusion or thermoforming and is available in Latin America or North America. Applications of Styrolution PS 6210/6211 include containers, medical/healthcare and food contact applications. Characteristics include:

Flame Rated  
Good Toughness  
Impact Resistant  
Rigid

| General Information |                           |
|---------------------|---------------------------|
| Features            | Good Toughness            |
|                     | High Impact Resistance    |
|                     | Medium Rigidity           |
| Uses                | Containers                |
|                     | Food Service Applications |
|                     | Medical Packaging         |
|                     | Profiles                  |
|                     | Thin-walled Containers    |
| Agency Ratings      | USP Class VI              |
| UL File Number      | E57787                    |
| Forms               | Pellets                   |
| Processing Method   | Profile Extrusion         |
|                     | Thermoforming             |

| Physical                                 | Nominal Value | Unit              | Test Method |
|------------------------------------------|---------------|-------------------|-------------|
| Specific Gravity                         | 1.04          | g/cm <sup>3</sup> | ASTM D792   |
| Apparent Density <sup>1</sup>            | 0.59 to 0.64  | g/cm <sup>3</sup> |             |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 2.9           | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow                 | 0.40 to 0.70  | %                 | ASTM D955   |
| Hardness                                 | Nominal Value | Unit              | Test Method |
| Rockwell Hardness (L-Scale)              | 50            |                   | ASTM D785   |
| Mechanical                               | Nominal Value | Unit              | Test Method |
| Tensile Modulus                          | 2000          | MPa               | ASTM D638   |
| Tensile Strength (Yield, 23°C)           | 23.4          | MPa               | ASTM D638   |
| Tensile Elongation (Break)               | 45            | %                 | ASTM D638   |
| Flexural Modulus                         | 2000          | MPa               | ASTM D790   |
| Flexural Strength                        | 48.3          | MPa               | ASTM D790   |

| Impact                                                | Nominal Value                      | Unit     | Test Method             |
|-------------------------------------------------------|------------------------------------|----------|-------------------------|
| Notched Izod Impact (23°C)                            | 150                                | J/m      | ASTM D256               |
| Thermal                                               | Nominal Value                      | Unit     | Test Method             |
| Deflection Temperature Under Load (1.8 MPa, Annealed) | 85.0                               | °C       |                         |
| Vicat Softening Temperature                           | 101                                | °C       | ASTM D1525 <sup>2</sup> |
| CLTE - Flow                                           | 9.0E-5                             | cm/cm/°C | ASTM D696               |
| Electrical                                            | Nominal Value                      | Unit     | Test Method             |
| Dielectric Strength (3.18 mm)                         | 16                                 | kV/mm    | ASTM D149               |
| Dielectric Constant (1.00 mm, 1 MHz)                  | 2.50                               |          | ASTM D150               |
| Flammability                                          | Nominal Value                      | Unit     | Test Method             |
| Flame Rating                                          | HB                                 |          | UL 94                   |
| Optical                                               | Nominal Value                      |          | Test Method             |
| Gardner Gloss (60°)                                   | 60                                 |          | ASTM D523               |
| Injection                                             | Nominal Value                      | Unit     |                         |
| Processing (Melt) Temp                                | 182 to 277                         | °C       |                         |
| Mold Temperature                                      | 37.8 to 82.2                       | °C       |                         |
| NOTE                                                  |                                    |          |                         |
| 1.                                                    | without external lubricant         |          |                         |
| 2.                                                    | Rate B (120°C/h), Loading 1 (10 N) |          |                         |

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