

## AuroraGuard™ 408X

Aurora Material Solutions, LLC - Acrylonitrile Butadiene Styrene

### General Information

#### Product Description

High impact ABS

Formerly known as EnCore 408X

#### General

|                   |                                          |                             |                   |
|-------------------|------------------------------------------|-----------------------------|-------------------|
| Material Status   | • Commercial: Active                     |                             |                   |
| Availability      | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America   |
| Features          | • High Impact Resistance                 |                             |                   |
| Uses              | • Construction Applications              | • Displays                  | • Sporting Goods  |
| Appearance        | • Black                                  | • Colors Available          | • Natural Color   |
| Processing Method | • Injection Molding                      | • Profile Extrusion         | • Sheet Extrusion |

### Properties <sup>1</sup>

| Physical                                                | Nominal Value    | Unit     | Test Method |
|---------------------------------------------------------|------------------|----------|-------------|
| Density / Specific Gravity                              | 1.03             |          | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)               | 4.5              | g/10 min | ISO 1133    |
| Molding Shrinkage - Flow (0.126 in)                     | 6.0E-3 to 8.0E-3 | in/in    | ASTM D955   |
| Molding Shrinkage - Across Flow (0.126 in)              | 6.0E-3 to 8.0E-3 | in/in    | ASTM D955   |
| Mechanical                                              | Nominal Value    | Unit     | Test Method |
| Tensile Strength (Yield)                                | 5660             | psi      | ASTM D638   |
| Tensile Elongation (Break)                              | 4.4              | %        | ASTM D638   |
| Flexural Modulus                                        | 313000           | psi      | ASTM D790   |
| Flexural Strength                                       | 9570             | psi      | ASTM D790   |
| Impact                                                  | Nominal Value    | Unit     | Test Method |
| Notched Izod Impact                                     |                  |          | ASTM D256   |
| -8°F                                                    | 5.6              | ft-lb/in |             |
| 73°F                                                    | 8.1              | ft-lb/in |             |
| Thermal                                                 | Nominal Value    | Unit     | Test Method |
| Deflection Temperature Under Load (264 psi, Unannealed) | 171              | °F       | ASTM D648   |
| Flammability                                            | Nominal Value    | Unit     | Test Method |
| Flame Rating (0.06 in)                                  | HB               |          | UL 94       |

### Processing Information

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | 180 to 200    | °F   |
| Drying Time            | 2.0 to 4.0    | hr   |
| Suggested Max Moisture | 0.10          | %    |
| Rear Temperature       | 370 to 450    | °F   |
| Middle Temperature     | 400 to 475    | °F   |
| Front Temperature      | 425 to 500    | °F   |
| Nozzle Temperature     | 425 to 525    | °F   |
| Processing (Melt) Temp | 425 to 525    | °F   |
| Mold Temperature       | 120 to 170    | °F   |
| Back Pressure          | 25.0 to 100   | psi  |
| Screw Speed            | 25 to 75      | rpm  |

