



**TRIVALENCE**

# TriVEX™ 14FR0 (U,R)

**Polycarbonate + Siloxane**

## General Information

### Product Description

Non halogenated flame retardant polycarbonate modified with siloxane for superior cold temperature impact resistance.

#### FEATURES

-Good Impact/Ductility (Ambient and Extreme Cold)  
 -Enhanced Flow and Release  
 -Flame Retardant  
 -RoHS/REACH Compliant  
 -Improved Chemical Resistance

-Halogen Free  
 -Bromine Free  
 -Chlorine Free  
 -PFAS Free  
 -Excellent Aesthetics  
 -Offers Paint Elimination

#### ADDITIONAL FORMULAS

-Added Release "R"  
 -Additional UV "U" - Great UV Performance

#### COLOR

-All

### General

#### Typical Applications

-Solar, military and defense gear, healthcare, EV battery, sporting goods, safety and rescue, transportation, lawn and garden, industrial packaging, electrical components, oil/gas, appliance, aerospace, 3d printing, recreational vehicles, building materials, railway, wire and cable.

#### Processing Method

-Injection/Extrusion

#### Form(s)

-Pellets

#### Availability

-North America, Europe, Latin America

## ASTM / ISO Properties<sup>1</sup>

### Physical

|                                      | Nominal Value | Unit              | Test Method  |
|--------------------------------------|---------------|-------------------|--------------|
| Density                              | 1.19          | g/cm <sup>3</sup> | ASTM D792    |
| Melt Flow Rate (300°C/1.2kg)         | 8             | g/10min           | ASTM D1238   |
| Molding Shrinkage - Flow (3.2mm)     | 0.5 to 0.8    | %                 | TVT Internal |
| Outdoor Suitability (QUV) (U Grades) | Pass          |                   | TVT Internal |

### Mechanical

|                            | Nominal Value | Unit      | Test Method |
|----------------------------|---------------|-----------|-------------|
| Tensile Strength, brk      | 8600          | psi       | ASTM D638   |
| Tensile Elongation         | 120           | %         | ASTM D638   |
| Flexural Modulus           | 320,000       | psi       | ASTM D790   |
| Notched Izod Impact (R.T)  | 14            | ft-lbs/in | ASTM D256   |
| Notched Izod Impact (-40C) | 8             | ft-lbs/in | ASTM D257   |
| Rockwell Hardness          | 118           | R-Scale   | ASTM D785   |

### Thermal

|  | Nominal Value | Unit     | Test Method |
|--|---------------|----------|-------------|
| Deflection Temperature Under Load (0.45 MPa) | 272           | °F       | ASTM D648   |
| Deflection Temperature Under Load (1.8 MPa)  | 252           | °F       | ASTM D648   |
| Vicat Softening Temperature                  | 284           | °F       | ASTM D1525  |
| CLTE - Flow                                  | 3.4E-5        | in/in/°F | ASTM E831   |

### Flammability

|         | Nominal Value | Unit | Test Method    |
|---------|---------------|------|----------------|
| 0.06 in | V0            |      | UL94 - Pending |
| 0.12 in | 5V            |      | UL94 - Pending |

## Recommended Processing Guidance

|                             |            |       |
|-----------------------------|------------|-------|
| Drying Temperature          | 230 to 250 | °F    |
| Drying Time                 | 3 to 6     | Hours |
| Suggested Max Moisture      | 0.02       | %     |
| Processing Melt Temperature | 500 to 590 | °F    |
| Mold Temperature            | 145 to 195 | °F    |