# EMERGE™ PC 6900

## Trinseo - Advanced Resin

### General Information

**Product Description**

EMERGE™ PC 6900 is a specially designed ignition-resistant polycarbonate alloy. It combines high flow, high heat and high strength together. It is especially suited for thin-wall applications and has excellent high gloss aesthetics. EMERGE PC 6900 has a UL94 V-0 rating at 1.0 mm. This material does not contain chlorinated or brominated flame retardant additives.

Applications:

- Thin-Wall Powered Device Housings
- Consumer Electronics
- Information technology equipment
- Computer housings

**General**

| | | | |
|---|---|---|---|
| Features | • Bromine Free<br>• Chlorine Free<br>• Flame Retardant | • High Flow<br>• High Gloss<br>• High Heat Resistance | • High Strength<br>• Pleasing Surface Appearance<br>• UV Resistant |
| Uses | • Electrical Housing<br>• Electrical/Electronic Applications | • Housings<br>• Thin-walled Parts | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

### Properties [1]

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 1.20 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (260°C/2.16 kg) | 15 | g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow | 5.0E-3 to 7.0E-3 | in/in | ASTM D955 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus [2] | 334000 | psi | ASTM D638 |
| Tensile Strength [3] (Yield) | 8700 | psi | ASTM D638 |
| Tensile Strength [3] (Break) | 7980 | psi | ASTM D638 |
| Tensile Elongation [3] (Yield) | 6.0 | % | ASTM D638 |
| Tensile Elongation [3] (Break) | 100 | % | ASTM D638 |
| Flexural Modulus [4] | 363000 | psi | ASTM D790 |
| Flexural Strength [4] | 14000 | psi | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Notched Izod Impact (73°F) | 2.8 | ft·lb/in | ASTM D256 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 264 psi, Unannealed | 194 | °F | |
| Vicat Softening Temperature | 241 | °F | ASTM D1525 [5] |
| CLTE - Flow (-40 to 176°F) | 3.6E-5 | in/in/°F | ASTM D696 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Volume Resistivity | 1.0E+15 | ohms·cm | ASTM D257 |
| Dielectric Strength | 790 | V/mil | ASTM D149 |
| Arc Resistance | PLC 7 | | ASTM D495 |

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| Flammability | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Flame Rating [6] | | | UL 94 |
| 0.020 in | V-2 | | |
| 0.031 in | V-1 | | |
| 0.04 in | V-0 | | |
| 0.08 in | 5VB | | |
| Glow Wire Flammability Index [6] (0.06 in) | 1760 | °F | IEC 60695-2-12 |
| Glow Wire Ignition Temperature [6] (0.06 in) | 1380 | °F | IEC 60695-2-13 |

## Processing Information

| Injection | Nominal Value | Unit |
|---|---|---|
| Drying Temperature | 212 | °F |
| Drying Time | 3.0 to 4.0 | hr |
| Processing (Melt) Temp | 428 to 500 | °F |
| Mold Temperature | 158 to 230 | °F |

### Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 0.039 in/min

[3] 2.0 in/min

[4] 0.051 in/min

[5] Rate B (120°C/h), Loading 1 (10 N)

[6] This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.