WeConnectScience

LG Chem

# XR407E

## Description

XR407E has well-balanced properties with high heat, targeted for injection molding

## Key Features

Ultra High Heat Resistance

| Properties | Condition | Method | Unit | XR407E |
|---|---|---|---|---|
| **Physical** | | | | |
| Specific Gravity | 23℃ | ASTM D792 | | 1.07 |
| Mold Shrinkage | 23℃, 3.2mm | ASTM D955 | % | 0.4 ~ 0.7 |
| Melt Flow Index | 220℃, 10kg | ASTM D1238 | g/10min | 7 |
| **Mechanical** | | | | |
| Tensile Strength at Yield | 23℃, 50mm/min, 3.2mm | ASTM D638 | MPa | 45 |
| Tensile Elongation at Break | 23℃, 50mm/min, 3.2mm | ASTM D638 | %, (Min) | 10 |
| Tensile Modulus | 23℃, 50mm/min, 3.2mm | ASTM D638 | MPa | 2300 |
| Flexural Strength | 23℃, 15mm/min, 3.2mm | ASTM D790 | MPa | 75 |
| Flexural Modulus | 23℃, 15mm/min, 3.2mm | ASTM D790 | MPa | 2450 |
| Izod Impact Strength | Notched, 3.2mm, 23℃ | ASTM D256 | J/m | 175 |
| Izod Impact Strength | Notched, 3.2mm, -30℃ | ASTM D256 | J/m | 70 |
| Izod Impact Strength | Notched, 6.4mm, 23℃ | ASTM D256 | J/m | 165 |
| Izod Impact Strength | Notched, 6.4mm, -30℃ | ASTM D256 | J/m | 60 |
| Rockwell Hardness | R-Scale | ASTM D785 | | 112 |
| **Thermal** | | | | |
| Heat Deflection Temperature | Edgewise, 1.82MPa, 6.4mm, Unannealed | ASTM D648 | ℃ | 105 |
| Vicat Softening Temperature | 50N, 50℃/h | ASTM D1525 | ℃ | 114 |
| Flammability | 1.5mm | UL 94 | | HB |
| Flammability | 3.0mm | UL 94 | | HB |
| Relative Temperature Index(RTI) | Electrical | UL746B | ℃ | 60 |
| Relative Temperature Index(RTI) | Mechanical with Impact | UL746B | ℃ | 60 |
| Relative Temperature Index(RTI) | Mechanical without Impact | UL746B | ℃ | 60 |

## Note

Typical values can be used only for the purpose of selecting material, and there can be variation within normal tolerances for various colors.
Values given should not be interpreted as specification and not be used for designing part or tool.
All properties, except melt flow index are measured by injection molded specimens after 48 hours storage at 23℃, 50% relative humidity.

Updated Date: 2021-05-07 Issued Date : 2023-03-14

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## Processing Guide (Injection Molding)

| Processing Parameters | Unit | Value |
|---|---|---|
| Drying Temperature | ℃ | 80 ~ 90 |
| Drying Time | hrs | 3 ~ 4 |
| Injection Temperature | ℃ | 230 ~ 260 |
| Mold Temperature | ℃ | 40 ~ 60 |
| Screw Speed | rpm | Low speed |

## Note

Injection Temperature & Screw Speed are only mentioned as general guidelines.
These may not apply or need adjustment in specific situations such as low shot sizes, thin wall molding and gas-assist molding.

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