

POLIMAXX K4510ET

IRPC Public Company Limited - *Polypropylene Random Copolymer*

General Information

Product Description

K4510ET is a Medical Grade Polypropylene Random Copolymer (RCPP) with the characteristic of high transparency and good processability. It is designed for injection molding and injection stretch blow molding (ISBM) processing.

Industry:

- Medical Devices
- Syringes
- Baby bottle
- IV bottle (ISBM)

Product Feature:

- Medical grade
- High Transparency
- High Gloss
- Natural Color (OB Free)
- Ethylene oxide/Autoclave sterilization

Regulation Compliance:

- FDA US 21 CFR 177.1520
- Commission Regulation (EU) No. 10/2011
- RoHS Directive 2011/65/EU
- REACH Regulation (EC) No. 1907/2006
- USP Class VI
- EP 3.1.6
- DMF No. 37508

General

| | | | |
|-------------------|-------------------------------|----------------------------------|-----------------------------------|
| Material Status | • Commercial: Active | | |
| Availability | • Asia Pacific | • Europe | • North America |
| Features | • Autoclave Sterilizable | • High Clarity | • Odorless |
| | • Ethylene Oxide Sterilizable | • High Gloss | • Random Copolymer |
| Uses | • Bottles | • Medical Devices | • Medical/Healthcare Applications |
| Agency Ratings | • EC 1907/2006 (REACH) | • EU 2011/65/EC | • FDA 21 CFR 177.1520 |
| | • EP Monograph 3.1.6 | • EU No 10/2011 | • USP Class IV |
| RoHS Compliance | • RoHS Compliant | | |
| Processing Method | • Injection Molding | • Injection Stretch Blow Molding | |

Properties ¹

| Physical | Nominal Value | Unit | Test Method |
|--|---------------|----------|-----------------|
| Density / Specific Gravity ² | 0.902 | | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 10 | g/10 min | ASTM D1238 |
| Molding Shrinkage | 1.2 to 1.7 | % | Internal Method |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Strength ³ (Yield, 0.126 in) | 4350 | psi | ASTM D638 |
| Tensile Elongation ³ (Yield, 0.126 in) | 13 | % | ASTM D638 |
| Flexural Modulus - 1% Secant ⁴ (0.126 in) | 167000 | psi | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (73°F, 0.126 in) | 1.3 | ft-lb/in | ASTM D256 |
| Hardness | Nominal Value | Unit | Test Method |
| Rockwell Hardness (R-Scale, 0.126 in) | 91 | | ASTM D785 |



| Thermal | Nominal Value | Unit | Test Method |
|--|----------------------|-------------|--------------------|
| Deflection Temperature Under Load (66 psi, Unannealed, 0.126 in) | 185 | °F | ASTM D648 |

| Optical | Nominal Value | Unit | Test Method |
|------------------|----------------------|-------------|--------------------|
| Haze (39.37 mil) | 8.00 | % | ASTM D1003 |

Processing Information

| Injection | Nominal Value | Unit |
|--------------------|----------------------|-------------|
| Rear Temperature | 410 to 464 | °F |
| Middle Temperature | 410 to 464 | °F |
| Front Temperature | 410 to 464 | °F |
| Mold Temperature | 122 to 176 | °F |
| Injection Rate | Moderate-Fast | |

Notes

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

² 23°C

³ 2.0 in/min

⁴ 0.051 in/min

