

WeConnectScience



# XR404

## Description

XR404 has well-balanced properties with high heat (VST≥112oC), targeted for injection molding

## Key Features

Standard Purpose, High Heat Resistance, Paintability, High Stiffness

## Application

Air Conditioner,Battery,Bumper,Cockpit,Coffee Machine,Consent,Delivery Robot,Drone,Electric Bike,Electric Rice Cooker,Exterior ETC,Fan,Fan Heater,Fire Alarm,Food Serving Robot,Hair Dryer,Interior ETC,Microwave Oven,Motorcycle,Multi Tap,Outside Mirror,PCB (Printed Circuit Board),Power Tool,Rear Combination Lamp,Security Alarm,Set-Top Box,Spoiler,Switch,Terminal Box,Tractor,UPS (Uninterruptible Power Supply System),Water Purifier,Wireless Router

| Properties                  | Condition                            | Method     | Unit     | XR404     |
|-----------------------------|--------------------------------------|------------|----------|-----------|
| <b>Physical</b>             |                                      |            |          |           |
| Specific Gravity            | 23°C                                 | ASTM D792  |          | 1.05      |
| Mold Shrinkage              | 23°C, 3.2mm                          | ASTM D955  | %        | 0.4 ~ 0.7 |
| Melt Flow Index             | 220°C, 10kg                          | ASTM D1238 | g/10min  | 7         |
| <b>Mechanical</b>           |                                      |            |          |           |
| Tensile Strength at Yield   | 23°C, 50mm/min, 3.2mm                | ASTM D638  | MPa      | 52        |
| Tensile Elongation at Break | 23°C, 50mm/min, 3.2mm                | ASTM D638  | %, (Min) | 15        |
| Tensile Modulus             | 23°C, 50mm/min, 3.2mm                | ASTM D638  | MPa      | 2500      |
| Flexural Strength           | 23°C, 15mm/min, 3.2mm                | ASTM D790  | MPa      | 84        |
| Flexural Modulus            | 23°C, 15mm/min, 3.2mm                | ASTM D790  | MPa      | 2650      |
| Izod Impact Strength        | Notched, 3.2mm, 23°C                 | ASTM D256  | J/m      | 160       |
| Izod Impact Strength        | Notched, 3.2mm, -30°C                | ASTM D256  | J/m      | 60        |
| Izod Impact Strength        | Notched, 6.4mm, 23°C                 | ASTM D256  | J/m      | 140       |
| Izod Impact Strength        | Notched, 6.4mm, -30°C                | ASTM D256  | J/m      | 50        |
| Rockwell Hardness           | R-Scale                              | ASTM D785  |          | 112       |
| <b>Thermal</b>              |                                      |            |          |           |
| Heat Deflection Temperature | Edgewise, 1.82MPa, 6.4mm, Unannealed | ASTM D648  | °C       | 100       |
| Heat Deflection Temperature | Edgewise, 0.46MPa, 6.4mm, Unannealed | ASTM D648  | °C       | 108       |
| Heat Deflection Temperature | Edgewise, 1.82MPa, 6.4mm, Annealed   | ASTM D648  | °C       | 106       |
| Heat Deflection Temperature | Edgewise, 0.46MPa, 6.4mm, Annealed   | ASTM D648  | °C       | 111       |
| Vicat Softening Temperature | 50N, 50°C/h                          | ASTM D1525 | °C       | 112       |
| Flammability                | 1.5mm                                | UL 94      |          | HB        |
| Flammability                | 3.0mm                                | UL 94      |          | HB        |

## 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°C, 50% Relative Humidity. 05-07 Issued Date : 2023-03-14

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WeConnectScience



# XR404

## Description

XR404 has well-balanced properties with high heat (VST $\geq$ 1120C), targeted for injection molding

## Key Features

Standard Purpose, High Heat Resistance, Paintability, High Stiffness

## Application

Air Conditioner,Battery,Bumper,Cockpit,Coffee Machine,Consent,Delivery Robot,Drone,Electric Bike,Electric Rice Cooker,Exterior ETC,Fan,Fan Heater,Fire Alarm,Food Serving Robot,Hair Dryer,Interior ETC,Microwave Oven,Motorcycle,Multi Tap,Outside Mirror,PCB (Printed Circuit Board),Power Tool,Rear Combination Lamp,Security Alarm,Set-Top Box,Spoiler,Switch,Terminal Box,Tractor,UPS (Uninterruptible Power Supply System),Water Purifier,Wireless Router

## Processing Guide (Injection Molding)

| Processing Parameters | Unit | Value     |
|-----------------------|------|-----------|
| Drying Temperature    | °C   | 80 ~ 90   |
| Drying Time           | hrs  | 3 ~ 4     |
| Injection Temperature | °C   | 230 ~ 270 |
| Mold Temperature      | °C   | 40 ~ 80   |
| Screw Speed           | rpm  | 30 ~ 60   |

## 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.

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

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