

TECHNICAL DATA SHEET

# Arnitel® UM551-V

Envalior  
TPC FR

**Processing**

Injection molding, Other extrusion

**Delivery Form**

Pellets

**Special Characteristics**

Flame retardant, Halogen-free, Phosphorus-free, Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

## Product Text

**Product Information**

Flame Retardant (halogen- phosphorous-free)

ISO 18064 TPC-ES FR

Due to limited hydrolysis resistance, this material should only be used in dry environments.

| Processing/Physical Characteristics   | Value | Unit                   | Standard       |
|---------------------------------------|-------|------------------------|----------------|
| Melt volume-flow rate, MVR            | 15    | cm <sup>3</sup> /10min | ISO 1133       |
| Temperature                           | 230   | °C                     |                |
| Load                                  | 2.16  | kg                     |                |
| Mechanical Properties                 | Value | Unit                   | Standard       |
| Yield stress                          | 15    | MPa                    | ISO 527        |
| Yield strain                          | 22    | %                      | ISO 527        |
| Nominal strain at break               | >50   | %                      | ISO 527        |
| Charpy notched impact strength, +23°C | N     | kJ/m <sup>2</sup>      | ISO 179/1eA    |
| Shore D hardness                      | 55    |                        | ISO 7619-1     |
| Stress at 10% elongation              | 13    | MPa                    | ISO 527        |
| Stress at 100% elongation             | 17.5  | MPa                    |                |
| Stress at break TPE                   | 27    | MPa                    | ISO 527        |
| Thermal Properties                    | Value | Unit                   | Standard       |
| Melting temperature, 10°C/min         | 200   | °C                     | ISO 11357-1/-3 |

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| Thermal Properties                       | Value | Unit              | Standard        |
|--|-------|-------------------|-----------------|
| Temp. of deflection under load, 0.45 MPa | 85    | °C                | ISO 75-1/-2     |
| Vicat softening temperature, B           | 90    | °C                | ISO 306         |
| Burning behav. at 1.5 mm nom. thickn.    | V-2   | class             | IEC 60695-11-10 |
| Thickness tested                         | 1.5   | mm                |                 |
| Yellow card available                    | yes   |                   |                 |
| Electrical Properties                    | Value | Unit              | Standard        |
| Relative permittivity, 100Hz             | 5.2   |                   | IEC 62631-2-1   |
| Dissipation factor, 100Hz                | 0.02  | E-4               | IEC 62631-2-1   |
| Volume resistivity                       | >1E13 | Ohm*m             | IEC 62631-3-1   |
| Electric strength                        | 20    | kV/mm             | IEC 60243-1     |
| Comparative tracking index               | 600   |                   | IEC 60112       |
| Other Properties                         | Value | Unit              | Standard        |
| Water absorption                         | 0.6   | %                 | Sim. to ISO 62  |
| Humidity absorption                      | 0.25  | %                 | Sim. to ISO 62  |
| Density                                  | 1280  | kg/m <sup>3</sup> | ISO 1183        |

## Processing Information

### ***Injection molding***

Injection Molding Recommendations  
Steel recommendations for molds screws and barrels  
Trouble shooting guideline for injection molding

### ***Other extrusion***

Extrusion guideline Arnitel® C and Arnitel® U  
Arnitel® Recommendations for Extrusion