

# Arnitel<sup>®</sup> CM550-S

## TPC-ES FR

57 Shore D, Extrusion, Flame Retardant

Print Date: 2024-03-27

| <i>PROPERTIES</i>                                 | <i>TYPICAL DATA</i> | <i>UNIT</i>            | <i>TEST METHOD</i> |
|---|---------------------|------------------------|--------------------|
| <b><i>RHEOLOGICAL PROPERTIES</i></b>              |                     |                        |                    |
|   | <b><i>VALUE</i></b> |                        |                    |
| Melt volume-flow rate                             | 17                  | cm <sup>3</sup> /10min | ISO 1133           |
| Temperature                                       | 230                 | °C                     | ISO 1133           |
| Load  | 2.16                | kg                     | ISO 1133           |
| <b><i>MECHANICAL PROPERTIES</i></b>               |                     |                        |                    |
|   | <b><i>VALUE</i></b> |                        |                    |
| Shore D Hardness (3s)                             | 57                  | –                      | ISO 868            |
| Shore D Hardness (15s)                            | 57                  | –                      | ISO 868            |
| Tensile modulus                                   | 200                 | MPa                    | ISO 527-1/-2       |
| Stress at break                                   | 28                  | MPa                    | ISO 527-1/-2       |
| Nominal strain at break                           | 400                 | %                      | ISO 527-1/-2       |
| Stress at 5% strain                               | 10                  | MPa                    | ISO 527-1/-2       |
| Stress at 10% strain                              | 14                  | MPa                    | ISO 527-1/-2       |
| Stress at 50% strain                              | 18                  | MPa                    | ISO 527-1/-2       |
| Stress at 100% strain                             | 17                  | MPa                    | ISO 527-1/-2       |
| Charpy notched impact strength (+23°C)            | N                   | kJ/m <sup>2</sup>      | ISO 179/1eA        |
| Charpy notched impact strength (-30°C)            | 5                   | kJ/m <sup>2</sup>      | ISO 179/1eA        |
| Izod notched impact strength (-20°C)              | N                   | kJ/m <sup>2</sup>      | ISO 180/1A         |
| Izod notched impact strength (-30°C)              | 5.4                 | kJ/m <sup>2</sup>      | ISO 180/1A         |
| Compression Set under constant strain at 70 °C    | 52                  | %                      | ISO 815            |
| <b><i>MECHANICAL PROPERTIES (DIE CUTTING)</i></b> |                     |                        |                    |
|   | <b><i>VALUE</i></b> |                        |                    |
| Stress at break (normal)                          | 31                  | MPa                    | ISO 527-1/-2       |

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| <i>PROPERTIES</i>              | <i>TYPICAL DATA</i> | <i>UNIT</i> | <i>TEST METHOD</i> |
|--------------------------------|---------------------|-------------|--------------------|
| Stress at 5% strain (normal)   | 9.6                 | MPa         | ISO 527-1/-2       |
| Stress at 10% strain (normal)  | 13                  | MPa         | ISO 527-1/-2       |
| Stress at 50% strain (normal)  | 16                  | MPa         | ISO 527-1/-2       |
| Stress at 100% strain (normal) | 15                  | MPa         | ISO 527-1/-2       |
| Tear strength (normal)         | 145                 | kN/m        | ISO 34-1; Method B |
| Tear strength (parallel)       | 160                 | kN/m        | ISO 34-1; Method B |
| Strain at break (normal)       | 590                 | %           | ISO 527-1/-2       |

| <i>THERMAL PROPERTIES</i>                | <i>VALUE</i> |    |                |
|--|--------------|----|----------------|
| Melting temperature (10°C/min)           | 205          | °C | ISO 11357-1/-3 |
| Vicat softening temperature (50°C/h 50N) | 71           | °C | ISO 306        |

| <i>ELECTRICAL PROPERTIES</i>  | <i>VALUE</i> |       |               |
|-------------------------------|--------------|-------|---------------|
| Relative permittivity (100Hz) | 4.2          | –     | IEC 62631-2-1 |
| Relative permittivity (1 MHz) | 3.5          | –     | IEC 62631-2-1 |
| Dissipation factor (100 Hz)   | 180          | E-4   | IEC 62631-2-1 |
| Dissipation factor (1 MHz)    | 495          | E-4   | IEC 62631-2-1 |
| Volume resistivity            | >1E13        | Ohm*m | IEC 62631-3-1 |

| <i>OTHER PROPERTIES</i> | <i>VALUE</i> |                   |                |
|-------------------------|--------------|-------------------|----------------|
| Density                 | 1310         | kg/m <sup>3</sup> | ISO 1183       |
| Humidity absorption     | 0.11         | %                 | Sim. to ISO 62 |

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