

# DSM Engineering Plastics - Property Data

## Xantar® MX 1004

PC-unfilled

Impact modified, flame retardant, Chlorine/Bromine free

| Properties                                   | Typical Data    | Unit                   | Test Method     |
|----------------------------------------------|-----------------|------------------------|-----------------|
| <b>RHEOLOGICAL PROPERTIES</b>                |                 |                        |                 |
| Melt volume-flow rate                        | <b>21</b>       | cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                                  | <b>300</b>      | °C                     | ISO 1133        |
| Load                                         | <b>1.2</b>      | kg                     | ISO 1133        |
| Molding shrinkage (parallel)                 | <b>0.6</b>      | %                      | ISO 294-4       |
| <b>MECHANICAL PROPERTIES</b>                 |                 |                        |                 |
| Tensile modulus                              | <b>2200</b>     | MPa                    | ISO 527-1/-2    |
| Yield stress                                 | <b>55</b>       | MPa                    | ISO 527-1/-2    |
| Yield strain                                 | <b>6</b>        | %                      | ISO 527-1/-2    |
| Nominal strain at break                      | <b>&gt;50</b>   | %                      | ISO 527-1/-2    |
| Flexural modulus                             | <b>2300</b>     | MPa                    | ISO 178         |
| Flexural strength                            | <b>80</b>       | MPa                    | ISO 178         |
| Izod notched impact strength (23°C)          | <b>50</b>       | kJ/m <sup>2</sup>      | ISO 180/4A      |
| <b>THERMAL PROPERTIES</b>                    |                 |                        |                 |
| Temp. of deflection under load (1.80 MPa)    | <b>115</b>      | °C                     | ISO 75-1/-2     |
| Vicat softening temperature (50°C/h 50N)     | <b>135</b>      | °C                     | ISO 306         |
| Coeff. of linear therm. expansion (parallel) | <b>0.65</b>     | E-4/°C                 | ISO 11359-1/-2  |
| Burning Behav. at 1.6 mm nom. thickn.        | <b>V-0</b>      | class                  | IEC 60695-11-10 |
| Thickness tested                             | <b>1.5</b>      | mm                     | IEC 60695-11-10 |
| Burning Behav. at thickness h                | <b>V-0</b>      | class                  | IEC 60695-11-10 |
| Thickness tested                             | <b>3</b>        | mm                     | IEC 60695-11-10 |
| Oxygen index                                 | <b>33</b>       | %                      | ISO 4589-1/-2   |
| Ball pressure temperature                    | <b>125</b>      | °C                     | IEC 60695-10-2  |
| Glow Wire Flammability Index GWFI            | <b>960</b>      | °C                     | IEC 60695-2-12  |
| GWFI (Thickness (1) tested)                  | <b>1.5</b>      | mm                     | IEC 60695-2-12  |
| Glow Wire Flammability Index GWFI            | <b>960</b>      | °C                     | IEC 60695-2-12  |
| GWFI (Thickness (2) tested)                  | <b>3</b>        | mm                     | IEC 60695-2-12  |
| Glow Wire Ignition Temperature GWIT          | <b>800</b>      | °C                     | IEC 60695-2-13  |
| GWIT (Thickness (1) tested)                  | <b>1.5</b>      | mm                     | IEC 60695-2-12  |
| Glow Wire Ignition Temperature GWIT          | <b>775</b>      | °C                     | IEC 60695-2-13  |
| GWIT (Thickness (2) tested)                  | <b>3</b>        | mm                     | IEC 60695-2-12  |
| <b>ELECTRICAL PROPERTIES</b>                 |                 |                        |                 |
| Relative permittivity (100Hz)                | <b>3.1</b>      | -                      | IEC 60250       |
| Relative permittivity (1 MHz)                | <b>3</b>        | -                      | IEC 60250       |
| Dissipation factor (100 Hz)                  | <b>18</b>       | E-4                    | IEC 60250       |
| Dissipation factor (1 MHz)                   | <b>82</b>       | E-4                    | IEC 60250       |
| Volume resistivity                           | <b>&gt;1E13</b> | Ohm*m                  | IEC 60093       |
| Surface resistivity                          | <b>&gt;1E15</b> | Ohm                    | IEC 60093       |

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|                                  |            |       |             |
|----------------------------------|------------|-------|-------------|
| Electric strength                | <b>29</b>  | kV/mm | IEC 60243-1 |
| Comparative tracking index       | <b>325</b> | -     | IEC 60112   |
| Comparative tracking index (PLC) | <b>0</b>   | class | UL 746A     |

### OTHER PROPERTIES

|                  |             |                   |                |
|------------------|-------------|-------------------|----------------|
| Water absorption | <b>0.35</b> | %                 | Sim. to ISO 62 |
| Density          | <b>1190</b> | kg/m <sup>3</sup> | ISO 1183       |

### RHEOLOGICAL CALCULATION PROPERTIES

|                              |             |         |   |
|------------------------------|-------------|---------|---|
| Thermal conductivity of melt | <b>0.23</b> | W/(m K) | - |
|------------------------------|-------------|---------|---|

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