Technical Data Sheet

Version：**V1.0**

Product Type：**V-MTECK® Zenith PPS120**　　Date：**2019.11.11**

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General Disclaimer

Notice : Values shown here are based on testing of laboratory test specimens and represent data that fall within the range of properties for material and component. These value will be a help for keep the stable process and quality control in different level. Factory, Lab and so on. Enough test specimens and data should be defined as the only judgement. Properties of molded parts can be influenced by a wide variety of factors including. But not limited to material section, process parameter control and environment.

To the best of our knowledge, the information contains in this publication is accurate; However, We do not assume any liability whatever for the accuracy and completeness of such information. The information contains in the publication should not be construed as a promise or guarantee of specific properties of products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the material or components mentioned in this publication.

We strongly suggest that the user to adhere the manufacturer's current instructions for handling each good they use. and entrust the handling of such goods to adequately trained personnel only.

The test machine and equipment should be kept in the good conditions once the apple to apple test is needed. The data here is a specific one only for the given specimen and the test conditions, which include the test machine calibration state, the tester, the fields around and the component and so on. The GRR will be key factor and indictor about the external influencing.

Description

25% Mineral filled Laser Direct Induced grade PPS (Poly-Phenylene-Sulfide) polymer.

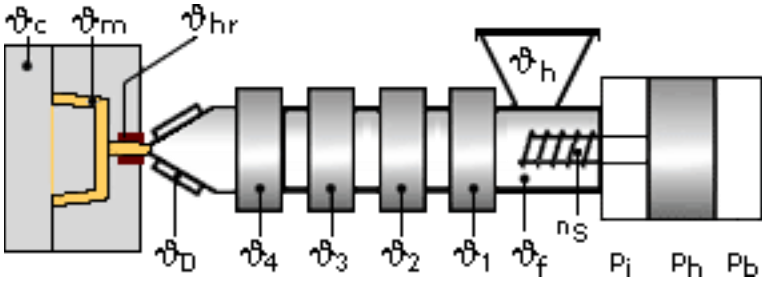
UL = Underwriters Laboratories (USA) **Physical properties**	**Value**	**Unit**	**Test Standard**
Density	**1680**	kg/m³	ISO 1183
Mold shrinkage - parallel	**0.2**	%	ISO 294-4
Mold shrinkage - normal	**0.5**	%	ISO 294-4
Water absorption (23°C-sat)	**0.011**	%	ISO 62
Humidity absorption (23°C/50%RH)	**0.004**	%	ISO 62
Mechanical properties	**Value**	**Unit**	**Test Standard**
Tensile modulus (1mm/min)	**14310**	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	**186**	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	**1.8**	%	ISO 527-2/1A
Flexural modulus (23°C)	**13570**	MPa	ISO 178
Flexural strength (23°C)	**267**	MPa	ISO 178
Charpy notched impact strength @ 23°C	**45**	kJ/m²	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	**33**	kJ/m²	ISO 180/1U
Notched impact strength (Izod) @ 23°C	**6.0**	kJ/m²	ISO 180/1A
Thermal properties	**Value**	**Unit**	**Test Standard**
Melting temperature (10°C/min)	**312**	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	**268**	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	**0.26**	E-4/°C	ISO 11359-2
Coeff.of linear therm. expansion (normal)	**0.39**	E-4/°C	ISO 11359-2
Electrical properties	**Value**	**Unit**	**Test Standard**
Relative permittivity – 1M Hz	**3.9**	-	IEC 60250
Relative permittivity – 2G Hz	**3.6**		IEC 60250
Dissipation factor - 100 Hz	**28**	E-4	IEC 60250
Dissipation factor 2G	**80**	E-4	IEC 60250
Volume resistivity	**2E+13**	Ohm*m	IEC 60093
Surface resistivity	**7.5E+11**	Ohm	IEC 60093
Electric strength	**28**	kV/mm	IEC 60243-1

Pre Drying:

Necessary low maximum residual moisture content: 0.01%,PPS series should in principle be predried. Because moisture content the use of dry air dryers is recommended. The dew point should be =< - 40° C. The time between dr as short as possible.

Drying time: 6 h

Drying temperature: 130 - 140 °C



Typical injection molding processing conditions.

Temperature:	Manifold	Mold	Melt	Nozzle	Zone 4	Zone3	Zone 2	Zone 1	Feed	Hopper
min (°C)	320	130	320	310	330	330	310	290	60	20
max (°C)	340	160	340	330	340	340	320	300	80	30
Pressure:	Inj press					Hold press				
min (bar)	500					500				
max (bar)	1500					1500				
Speed: **Injection speed:** **medium Screw speed**										
Screw diameter (mm)			25	40		55			75	
Screw speed (RPM)			120	75		50			30	
Pre-Drying	**Min**	**130**		**Max**		**140**			**6H**	