

## VECTRA® E840i LDS | LCP | Mineral Reinforced

### Description

40% Mineral filled Laser Direct Structuring grade.

Chemical abbreviation according to ISO 1043-1 : LCP  
Inherently flame retardant

UL-Listing V-0 in black at 1.5mm thickness per UL 94 flame testing.

UL = Underwriters Laboratories (USA)

Physical properties	Value	Unit	Test Standard
Density	<b>1810</b>	kg/m <sup>3</sup>	ISO 1183
Mold shrinkage - parallel	<b>0.1</b>	%	ISO 294-4
Mold shrinkage - normal	<b>0.5</b>	%	ISO 294-4

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	<b>9300</b>	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	<b>102</b>	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	<b>3.4</b>	%	ISO 527-2/1A
Flexural modulus (23°C)	<b>10500</b>	MPa	ISO 178
Flexural strength (23°C)	<b>109</b>	MPa	ISO 178
Charpy notched impact strength @ 23°C	<b>5.0</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Unnotched impact str (Izod) @ 23°C	<b>33</b>	kJ/m <sup>2</sup>	ISO 180/1U
Notched impact strength (Izod) @ 23°C	<b>6.0</b>	kJ/m <sup>2</sup>	ISO 180/1A

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	<b>335</b>	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	<b>227</b>	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	<b>0.12</b>	E-4/°C	ISO 11359-2
Coeff.of linear therm. expansion (normal)	<b>0.27</b>	E-4/°C	ISO 11359-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 100 Hz	<b>4.97</b>	-	IEC 60250
Dissipation factor - 100 Hz	<b>289</b>	E-4	IEC 60250
Volume resistivity	<b>2E14</b>	Ohm*m	IEC 60093
Surface resistivity	<b>2E16</b>	Ohm	IEC 60093

**VECTRA® E840i LDS | LCP | Mineral Reinforced**

**Typical injection moulding processing conditions**



**Pre Drying:**

**Necessary low maximum residual moisture content: 0.01%**

VECTRA should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< - 40° C. The time between drying and processing should be as short as possible.

**Drying time: 6 h**

**Drying temperature: 150 - 150 °C**

**Temperature:**

	ϕManifold	ϕMold	ϕMelt	ϕNozzle	ϕZone4	ϕZone3	ϕZone2	ϕZone1	ϕFeed	ϕHopper
min (°C)	340	80	340	340	335	325	320	315	60	20
max (°C)	350	120	350	350	345	335	330	325	80	30

**Pressure:**

	Inj press	Hold press
min (bar)	500	500
max (bar)	1500	1500

**Speed:**

**Injection speed: medium**

**Screw speed**

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	200	140	80	-	-

**Special Info:**

For MID applications mold temperature between 120 - 140°C are recommended. For applications with extremely thin wall applications pre-humidity of max. 0,01% is recommended. When using short metering strokes an accumulator is recommended to get short injec

**Contact Information**

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## VECTRA® E840i LDS | LCP | Mineral Reinforced

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## General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values.

Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.

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