Celanese
The chemistry inside innovation™

# VECTRA® E845I LDS

## Liquid Crystal Polymer

LDS capable LCP with higher DTUL and impact
Chemical abbreviation according to ISO 1043-1 : LCP Inherently flame retardant
UL-Listing V-0 in black a 0.25mm thickness per UL 94 flame testing.
UL = Underwriters Laboratories (USA)

## Product information

| | | | |
|---|---|---|---|
| Resin Identification | LCP-(GF+MD)36 | | ISO 1043 |
| Part Marking Code | >LCP-(GF+MD)36< | | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Molding shrinkage, parallel | 0 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 0.2 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 2.18E6 | psi | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 18900 | psi | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 1.7 | % | ISO 527-1/-2 |
| Flexural modulus | 2.18E6 | psi | ISO 178 |
| Flexural strength | 27600 | psi | ISO 178 |
| Flexural strain at failure | 2.3 | % | ISO 178 |
| Charpy notched impact strength, 23°C | 5.71 | ftlb/in² | ISO 179/1eA |

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 635 | °F | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 491 | °F | ISO 75-1/-2 |
| Coefficient of linear thermal expansion (CLTE), parallel | 0.04 | E-4/°F | ISO 11359-1/-2 |
| Coefficient of linear thermal expansion (CLTE), normal | 0.322 | E-4/°F | ISO 11359-1/-2 |

## Electrical properties

| | | | |
|---|---|---|---|
| Relative permittivity, 1MHz | 3.87 | | IEC 62631-2-1 |
| Relative permittivity, 2GHz | 4.2[OT, 1] | | IEC 61189-2-721 |
| Relative permittivity, 10GHz | 4.12[OT, 2] | | IEC 61189-2-721 |
| Dissipation factor, 1MHz | 370 | E-4 | IEC 62631-2-1 |
| Dissipation factor, 2GHz | 52[OT, 1] | E-4 | IEC 61189-2-721 |
| Dissipation factor, 10GHz | 49[OT, 2] | E-4 | IEC 61189-2-721 |
| Dielectric Constant, 23°C, 10 GHz | 4.1 | | ASTM D 2520 B / IPC-TM-650 |
| Dissipation Factor, 23°C, 10 GHz | 49 | E-4 | ASTM D 2520 B / IPC-TM-650 |

[OT]: One time tested
[1]: Black color, tested at 1.9GHz
[2]: Black color

# VECTRA® E845I LDS

Liquid Crystal Polymer

## Physical/Other properties

| | | | |
|---|---|---|---|
| Density | 0.0639 | lb/in³ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | yes | |
| Drying Temperature | 302 | °F |
| Drying Time, Dehumidified Dryer | 4 - 6 | h |
| Processing Moisture Content | ≤0.01 | % |
| Melt Temperature Optimum | 644 | °F |
| Min. melt temperature | 644 | °F |
| Max. melt temperature | 653 | °F |
| Max. screw tangential speed | 0.2 - 0.3 | m/s |
| Mold Temperature Optimum | 212 | °F |
| Min. mold temperature | 176 | °F |
| Max. mold temperature | 248 | °F |
| Ejection temperature | 565 | °F |

## Characteristics

| | |
|---|---|
| Processing | Injection Molding |
| Special characteristics | Flame retardant, Platable, High impact or impact modified, Heat stabilized or stable to heat, High Flow, Low Warpage, Laser Direct Structurable, Lead-free soldering resistant |

## Additional information

Processing Notes

### Pre-Drying

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.



Revised: 2025-10-13 Source: Celanese Materials Database

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