Celanese
The chemistry inside innovation™

# VECTRA® A450 (PRELIMINARY)

## Liquid Crystal Polymer

Provides many of the characteristics of A130 with added lubricity. Suitable for applications requiring excellent wear characteristics. Chemical abbreviation according to ISO 1043-1:

### 产品信息

| | | |
|---|---|---|
| 树脂鉴别 | LCP-MD | ISO 1043 |
| 制品标识码 | >LCP-MD< | ISO 11469 |

### 流变性能

| | | | |
|---|---|---|---|
| 模塑收缩率, 平行 | 0.1 | % | ISO 294-4, 2577 |
| 模塑收缩率范围, 垂直 | ≥ 0.8 | % | ISO 294-4, 2577 |

### 机械性能

| | | | |
|---|---|---|---|
| 拉伸断裂应力, 5mm/min | 150 | MPa | ISO 527-1/-2 |
| 断裂伸长率, 5mm/min | 5 | % | ISO 527-1/-2 |
| 弯曲模量 | 10000 | MPa | ISO 178 |
| 弯曲强度 | 150 | MPa | ISO 178 |
| 简支梁无缺口冲击强度, 23°C | 90 | kJ/m² | ISO 179/1eU |
| 简支梁缺口冲击强度, 23°C | 49 | kJ/m² | ISO 179/1eA |
| 洛氏硬度, M | 50 | | ISO 2039-2 |

### 热性能

| | | | |
|---|---|---|---|
| 熔融温度, 10°C/min | 280 | °C | ISO 11357-1/-3 |
| 热变形温度, 1.8 MPa | 190 | °C | ISO 75-1/-2 |
| 热变形温度, 0.45 MPa | 234 | °C | ISO 75-1/-2 |
| 线性热膨胀系数, 平行 | 5 | E-6/K | ISO 11359-1/-2 |
| 线性热膨胀系数, 垂直 | 80 | E-6/K | ISO 11359-1/-2 |

### 其它性能

| | | | |
|---|---|---|---|
| 吸水率, 2mm | 0.005 | % | 类似ISO 62 |
| 密度 | 1500 | kg/m³ | ISO 1183 |

### 注塑

| | | |
|---|---|---|
| 建议干燥 | 是 | |
| 干燥温度 | 150 | °C |
| 干燥时间，除湿干燥机 | 4 - 6 | h |
| 加工前水分含量 | ≤ 0.01 | % |
| 最优熔体温度 | 295 | °C |
| 最低熔体温度*** | 285 | °C |
| 最高熔体温度 | 310 | °C |
| 螺杆最大切线速度 | 0.2 - 0.3 | m/s |
| 最优模具温度 | 100 | °C |
| 最低模具温度 | 80 | °C |
| 最高模具温度 | 120 | °C |
| 背压 | 3 | MPa |
| 顶出温度 | 242 | °C |

# VECTRA® A450 (PRELIMINARY)

Liquid Crystal Polymer

## 特性

| | |
|---|---|
| 加工方法 | 注塑 |
| 特殊性能 | 光稳定, 低磨损/低摩擦, 高流动性 |

## 其他信息

注塑

### Preprocessing

Vectra resins are well known for their excellent thermal and hydrolytic stability. In order to ensure these properties are optimum, the resin should be dried correctly prior to processing. Vectra A-grades should be dried at 150 C for a minimum of 4 hours in a desiccant dryer.

### Processing

A three-zone screw evenly divided into feed, compression, and metering zones is preferred. A higher percentage of feed flights may be needed for smaller machines: 1/2 feed, 1/4 compression, 1/4 metering.

Vectra LCPs are shear thinning, their melt viscosity decreases quickly as shear rate increases. For parts that are difficult to fill, the molder can increase the injection velocity to improve melt flow.

加工注意事项

### 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.

### Storage

For subsequent storage of the material in the dryer until processed the temperature does not need to be lowered for grades A, B, C, D and V (<= 24 h).



Revised: 2026-10-13 Source: Celanese Materials Database

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.
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