

Product Information

**TROGAMID® CX9710 BL E50156 LA**

**MICROCRYSTALLINE, PERMANENTLY TRANSPARENT  
POLYAMIDE WITH LASER -MARKABLE AND -WRITEABLE  
PROPERTIES**



TROGAMID® CX9710 BL E50156 LA is a microcrystalline, permanently transparent polyamide for the production of optical molded parts using the injection molding process and offers laser-markable and -writeable properties.

The crystallites are so small that they do not scatter visible light. The product thus appears transparent to the human eye. The microcrystalline structure gives this polymer excellent resistance to stress cracking.

TROGAMID® CX9710 BL E50156 LA is supplied as cylindrical granules in polyethylene packaging.

The results shown have been generated from a low number of production lots. In general, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

Pigmentation may affect values.

**Key Features**

**Industrial Sector**

Industry and Engineering

**Optics**

Laser transparent, Laser markable

**Processing**

Injection molding

**Electrical**

Insulating

**Delivery form**

Pellets, Granules

**Additives**

Unfilled

**Mechanical properties ISO**

Tensile modulus

dry / cond

1530 / -

Unit

MPa

Test Standard

ISO 527

Tensile strength

61 / -

MPa

ISO 527

TROGAMID® CX

Yield stress	<b>61 / -</b>	MPa	ISO 527
Yield strain	<b>8 / -</b>	%	ISO 527
Stress at 50% strain	<b>42 / -</b>	MPa	ISO 527
Stress at break	<b>62 / -</b>	MPa	ISO 527
Nominal strain at break, tB	<b>160 / -</b>	%	ISO 527
Charpy impact strength, +23°C	<b>N / -</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -40°C	<b>N / -</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, +23°C	<b>10 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C / -</b>	-	-
Charpy notched impact strength, -40°C	<b>9 / -</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Type of failure	<b>C / -</b>	-	-

Physical properties	dry / cond	Unit	Test Standard
Density	<b>1020 / -</b>	kg/m <sup>3</sup>	ISO 1183
Density	<b>1020</b>	kg/m <sup>3</sup>	ASTM D 792

Optical properties	dry	Unit	Test Standard
Color b	<b>-30</b>	-	CIE

Polymer analytics	dry / cond	Unit	Test Standard
Viscosity number	<b>157 / *</b>	cm <sup>3</sup> /g	ISO 307, 1157, 1628

Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	<b>280</b>	°C	ISO 294
Injection Molding, mold temperature	<b>80</b>	°C	ISO 294
Injection Molding, injection velocity	<b>200</b>	mm/s	ISO 294

Characteristics

## TROGAMID® CX

### Applications

Encapsulation

### Color

Blue

### Special Characteristics

Semi-crystalline, Environmental stress crack resistance

### Additives

Laser absorptions agent, Processing aids