

LCP(liquid Crystal Polymer)

# **VECTRA**<sup>®</sup>

A230

(Standardgrade)

# CONTENS

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## 1. General physical properties of VECTRA® A230

### NOTES TO USERS

- All property values shown in this brochure are the typical values obtained under varying conditions prescribed by applicable standards and test method.
- This brochure has been prepared based on our own experiences and laboratory test data, and therefore all data shown here are not always applicable to parts used under different conditions. We do not guarantee that these data are directly applicable to the application conditions of users and we ask each user to make his own decision on the application.
- It is the users' responsibility to investigate patent rights, service life and potentiality of applications introduced in this brochure. Materials we supply are not intended for the implant applications in the medical and dental fields, and therefore are not recommended for such uses.
- For all works done properly, it is advised to refer to the appropriate **“Technical Catalog”** for specific material processing.
- For safe handling of materials we supply, it is advised to refer to the Material Safety Data Sheet **“MSDS”** of the proper material.
- This brochure is edited based on reference literatures, information and data currently available to us. So the contents of this brochure are subject to change without notice due to new data.
- Please contact our office for any questions about products we supply, descriptive literatures or any description in this brochure.

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# 1. General physical properties of VECTRA A230

Table 1-1 General properties (ISO)

Item	Unit	Testing Method	Standard
			A230
			CF reinforced
Density	g/cm <sup>3</sup>	ISO 1183	1.49
Tensile strength*	MPa	ASTM D638	200
Tensile elongation*	%	ASTM D638	1.5
Flexural strength	MPa	ISO 178	300
Flexural modulus	MPa	ISO 178	29000
Flexural strain	%	ISO 178	1.7
Charpy impact strength(notched)	kJ/m <sup>2</sup>	ISO 179/1eA	12
Temperature of deflection under load(1.8MPa)	°C	ISO 75-1,2	240
Mold Shrinkage(80 x1mmt, Flow direction, Injection pressure60MPa)	%		-
Mold Shrinkage(80 x1mmt, Transverse direction, Injection pressure60MPa)	%		-
Mold Shrinkage(80 x1mmt, Flow direction, Injection pressure79MPa)	%		-0.06
Mold Shrinkage(80 x1mmt, Transverse direction, Injection pressure79MPa)	%		0.24
Volume resistivity	Ohm·cm	IEC 60093	-
Surface resistivity	Ohm	IEC 60093	-
Dielectric constant(1kHz)		IEC 60250	-
Dielectric constant(1MHz)		IEC 60250	-
Dielectric constant(10GHz)			-
Dielectric dissipation factor(1kHz)		IEC 60250	-
Dielectric dissipation factor(1MHz)		IEC 60250	-
Dielectric dissipation factor(10GHz)			-
Dielectric breakdown strength(Thickness 1mm)	kV/mm	IEC 60243-1	-
Dielectric breakdown strength(Thickness 3mm)	kV/mm	IEC 60243-1	-
Tracking resistance (CTI)	CTI	IEC 60112	-
Arc resistance	s		-
Flammability		UL94	V-0

All figures in the table are the typical values of the material and not the minimum values of the material specifications.

\*1)For qualified values of UL (Underwriters Laboratories Inc.) refer to the yellow card (File No.E106764 ) issued by UL.

\*2)This grade comes under Item 5 (18) of Annex 1 of the Export Trade Control Order on the basis of the Foreign Exchange and Foreign Trade Law of Japan.

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