

Technical Literature F-04

Water Absorption Properties of AURUM[®]

The water absorption properties of resin vary significantly with the type of resin (chemical structure). For example, the water absorption of polyethylene, polystyrene, fluorocarbon resin, etc. is low, while that of nylon is high.

Generally, the degree of water absorption of a material affects changes with time in electrical, mechanical and dimensional properties of the material, among other properties, causing a serious problem in practical use in some cases. Therefore, particular care is usually taken in using nylon.

AURUM[®] has practically the same water absorption properties as those of representative engineering plastics, PES, etc.

Table 1 shows dimensional changes caused by water absorption by AURUM[®] JCN3030. Fig. 1 displays a curve plotting changes with time in water absorption of AURUM[®] natural resin.

Table 1 Dimensional Changes Caused by Water Absorption by AURUM[®] JCN3030

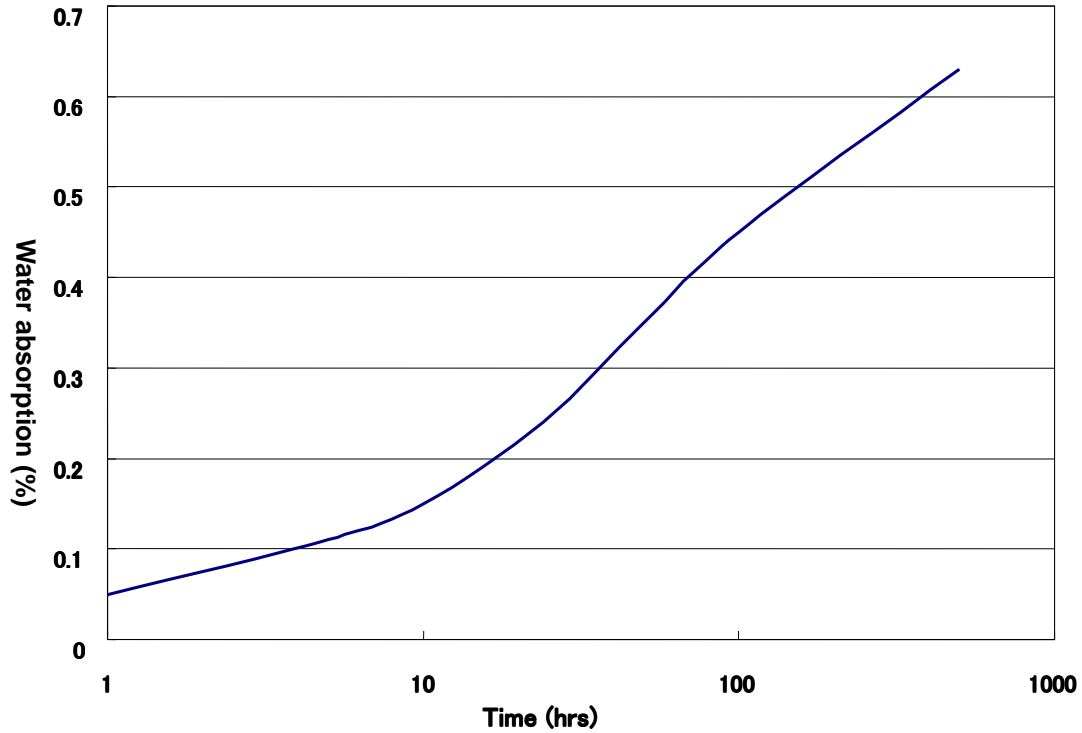
- (1) Sample shape: Bar: 12*128*3t (L=128, T=3)
 Ring: 13 φ *21 φ *12t (ID=13, OD=21, T=12)
- (2) Dimensional changes caused by water absorption

(23°C, 60%RH)

		Time			
		50 hrs	100 hrs	300 hrs	500 hrs
Board	Water absorption (%)	0.35	0.42	0.62	0.74
	Length (%)	0.0	0.1	0.1	0.1
	Thickness (%)	0.0	0.1	0.2	0.4
Ring	Water absorption (%)	0.11	0.19	0.35	0.45
	Inside diameter, ID (%)	0.0	0.0	0.0	0.0
	Outside diameter, OD (%)	0.0	0.0	0.0	0.0
	Thickness (%)	0.0	0.0	0.0	0.0

The information contained herein is based on the information and data available at this moment, but none of the data or evaluation results contained herein provide any warranty whatsoever.

Fig. 1 Curve Plotting Changes with Time in Water Absorption of AURUM[®] Natural Resin (23°C, 60%RH)



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