TSD-1004 April, 2008

Weight Loss under Elevated Temperature

In order to complete a crystallization of molded parts, post annealing is suitable. In this process, a very small quantity of gas is coming out from parts. The following is evaluation data in post annealing process.

1. Weight Loss

Weight loss of molded parts is shown in Figs.1 to 3. The measured specimen and annealing condition is as follows;

Part Size = 50 X 50mm X 2mm injection molded sheet.
Post annealing temperature; 150C, 200C and 250C

2. Content of Out-Gas

Main component of outgas at 150 to 200C are H_2O (moisture) and CO_2, additionally small amount of the following components are investigated.

At 150C annealing----------Xylene, Dichlorobenzene, and others
Over 200C annealing---------Toluene, Xylene, Phenol, Dichlorobenzene, and others

Also, Fig.4 shows the data analyzed by gas-Chromatograph. In other hand, if temperature is up to 250C, very small amount of SO_2 may be investigated.

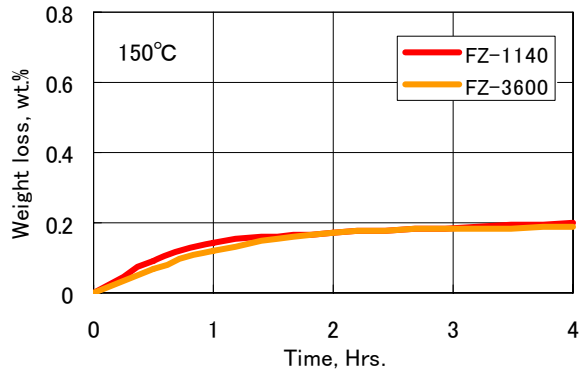

Fig.1 Weight loss at 150℃.

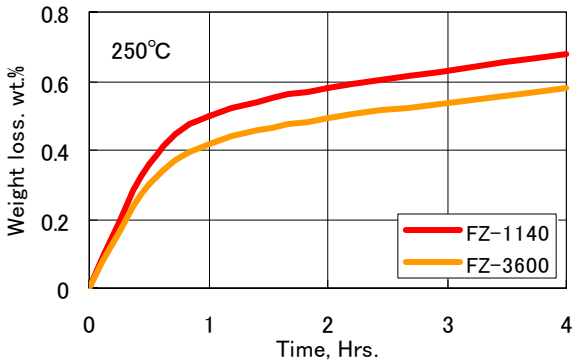

Fig.3 Weight loss at 250℃.

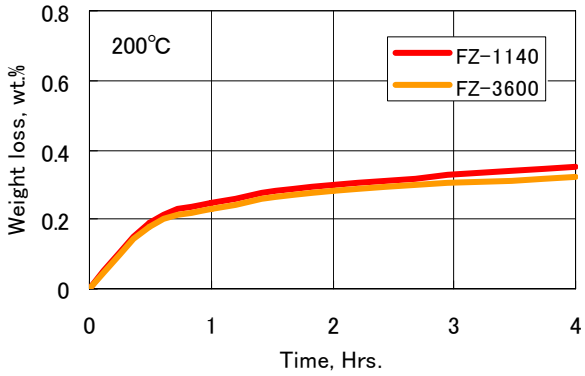

Fig.2 Weight loss at 200℃.

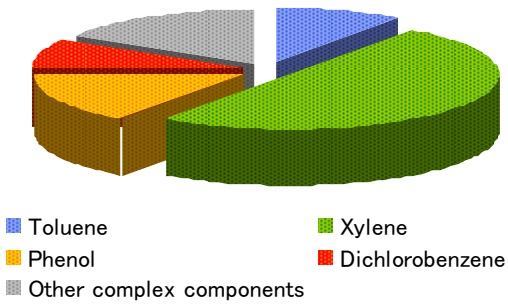

Fig.4 Off-gas components of FZ-1140 at 200℃/15min.