DIC Corporation
EP Division
7-20, Nihonbashi 3-chome, Chuo-ku, Tokyo 103-8233
Tel.+81-3-3278-9905 Fax.+81-3-3278-1844



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# Stress Relaxation

Creep and stress relaxation are very similar phenomena and both phenomena are caused by the native visco-elasticity of materials. These properties are expressed as follows;

Creep ; e(t)=σ/E(t)
Stress relaxation ; σ(t)＝e E(t)

Where, e, σ and E denote strain, stress and modulus respectively. Also, (t) denotes a function of time; t.

The Cross-linked polymer based compounds and low polymer content compounds are generally advantageous in creep or stress relaxation.

Figs.1 to 4 show the short term compressive stress relaxation data of four DIC.PPS main grades comparing with PBT G30 and polyamide-66 G30.

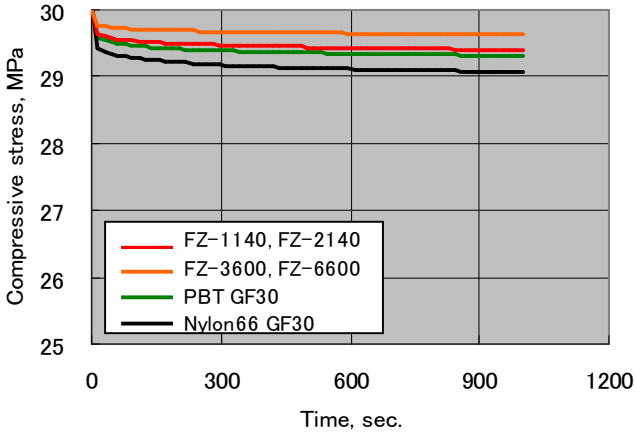


Fig.1 Short term stress relaxation at 23℃

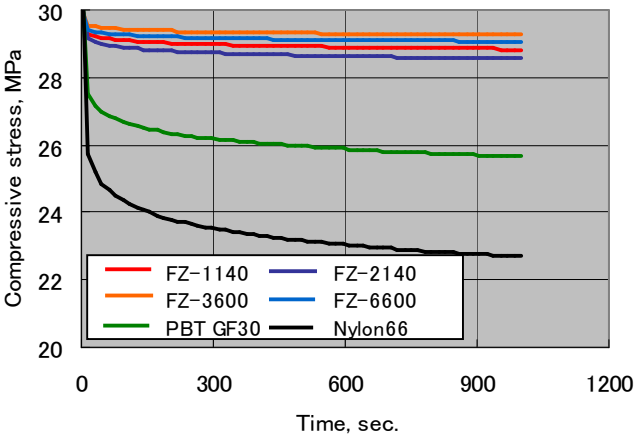


Fig.2 Short term stress relaxation at 80℃

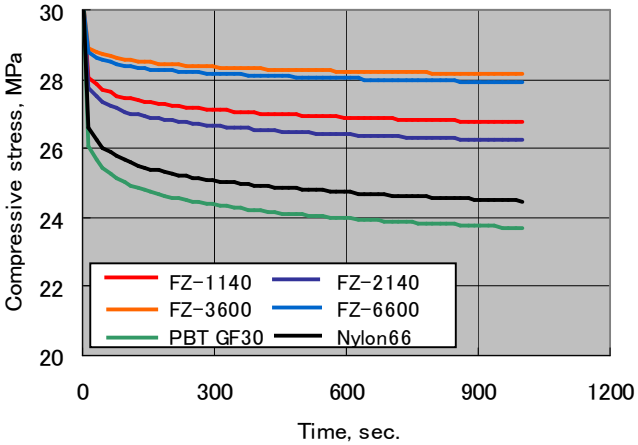


Fig.3 Short term stress relaxation at 120℃

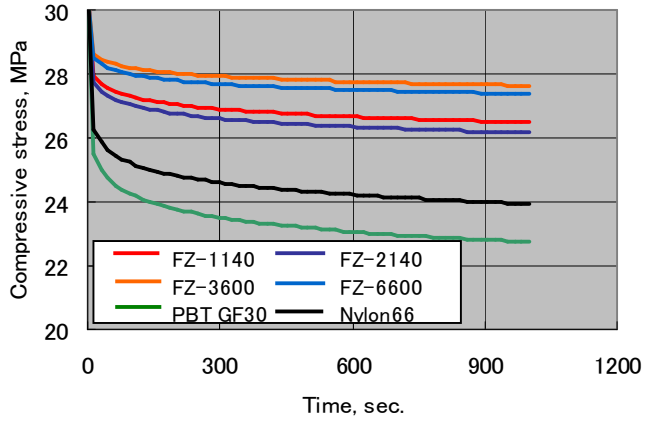


Fig.4 Short term stress relaxation at 160℃