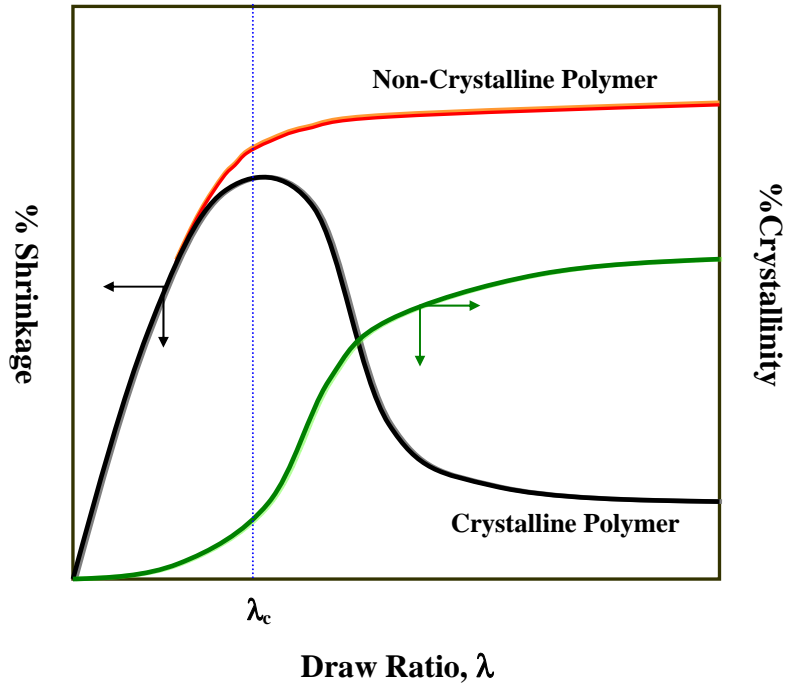




가 . ,



**Figure 1. The difference of the shrinkage behavior between non-crystalline polymer and crystalline polymer.**

가  $X_0$   
 $\lambda$   
 ( 가 ),  
 ( 가 ).  $S$   
 $S_r$   
 $X$  가 가 (affine  
 deformation) 가 (end-to-  
 end distance) 가 가

Figure 2

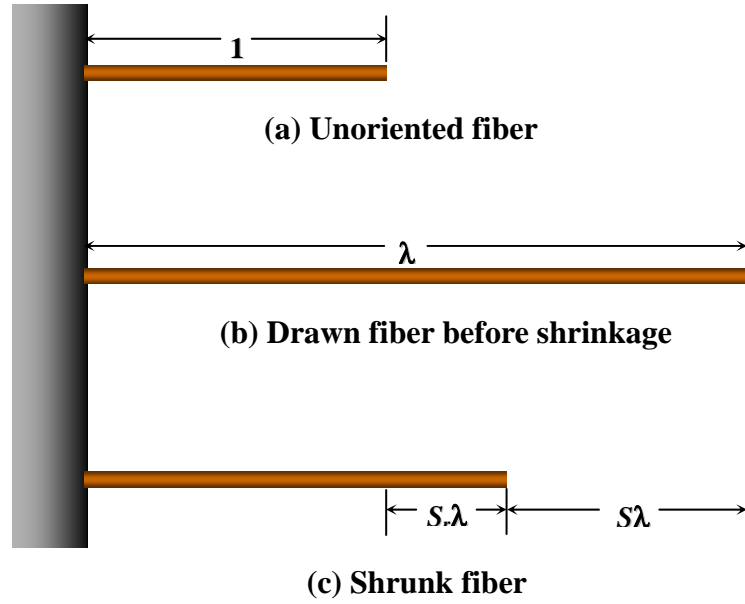


Figure 2. Schematic shrinkage behavior of a fiber drawn by  $\lambda$ .

$$S = 1 - \frac{1}{\lambda} - S_r \quad (1)$$

$S_r$  가 ,  $X - X_c$   $\lambda$

가 . ( 가 . )

$$S_r = \zeta \frac{X - X_0}{\lambda} \quad (2)$$

$\zeta$  가 .  $\zeta$

(1) (2) 가 S

$$S = 1 - \frac{1}{\lambda} - \zeta \frac{X - X_0}{\lambda} \quad (3)$$

(3)  
 가 가  
 가  
 $\lambda_c$   
 ,  
 ,  
 가

(3)  
 가 , 가  
 가  
 가 가  
 가 가

. Figure 3

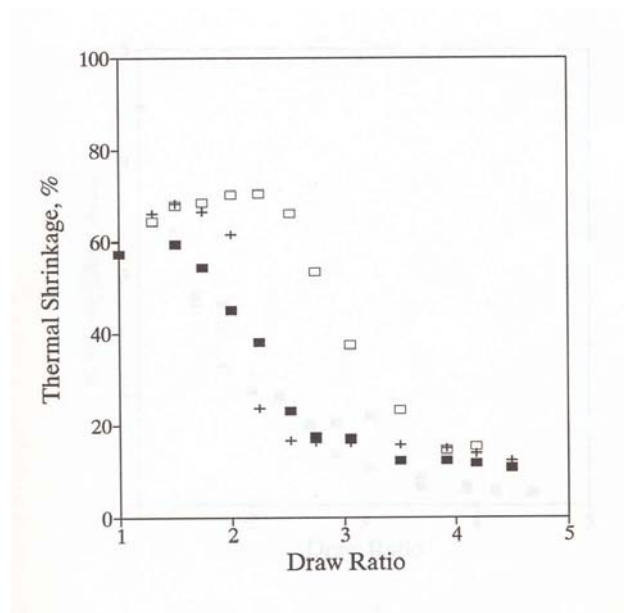
가

3.

가

가

(3)



**Figure 3. Drawing temperature dependence of thermal shrinkage of PET drawn at different temperatures, respectively. ( □ : 60°C; ■ : 76°C; +: 85°C)**

가

가