

Identification for Mooney model: α gel, $\theta=8$, $V=1.25$

Software Name

Mooney model

$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

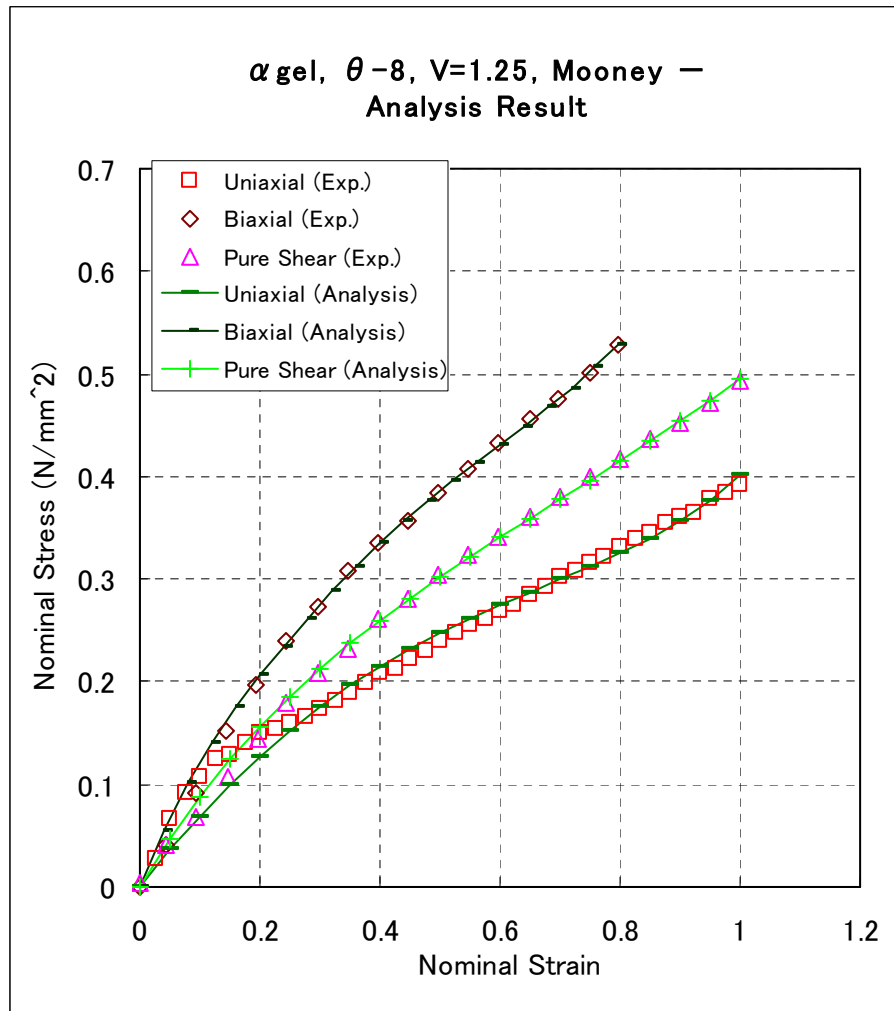
Rate of Loading in Tension Test(s)

1.25 mm/s

Coefficient

Coefficient	
C10 (C1)	0.12772
C01 (C2)	-0.0011846
C20 (C3)	-0.050279
C11 (C4)	0.071768
C02 (C5)	-0.023252
C30 (C6)	0.016434
C21 (C7)	-0.027625
C12 (C8)	0.014033
C03 (C9)	-0.001952
C40 (C10)	0

Input File: gel8_v1.25_ansys_m.dat



Analysis result:
Stress-strain relationship

Identification for Ogden model: α_{gel} , $\theta=8$, $V=1.25$

Software Name

Ogden model

$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[J^{-\frac{\alpha_n}{3}} (\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

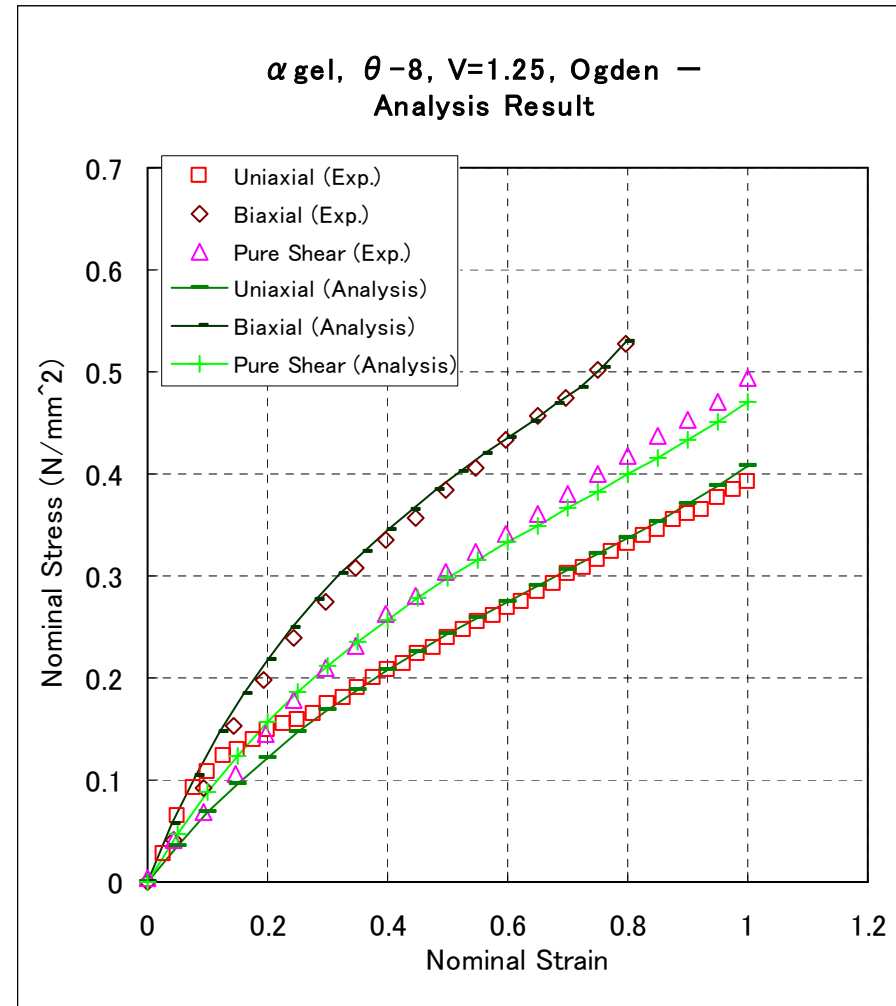
Rate of Loading in Tension Test(s)

1.25 mm/s

Coefficient

Coefficient		
Order	μ	α
1	-2.4634E-10	-16.008
2	1.8902E-05	11.573
3	0.06942	2.7071
4	676.97	0.00047128

Input File: gel8_v1.25_ansys_og.dat



Analysis result:
Stress-strain relationship