

Identification for Mooney model: α gel, $\theta=6$, $V=1.25$

ADINA

Mooney model

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

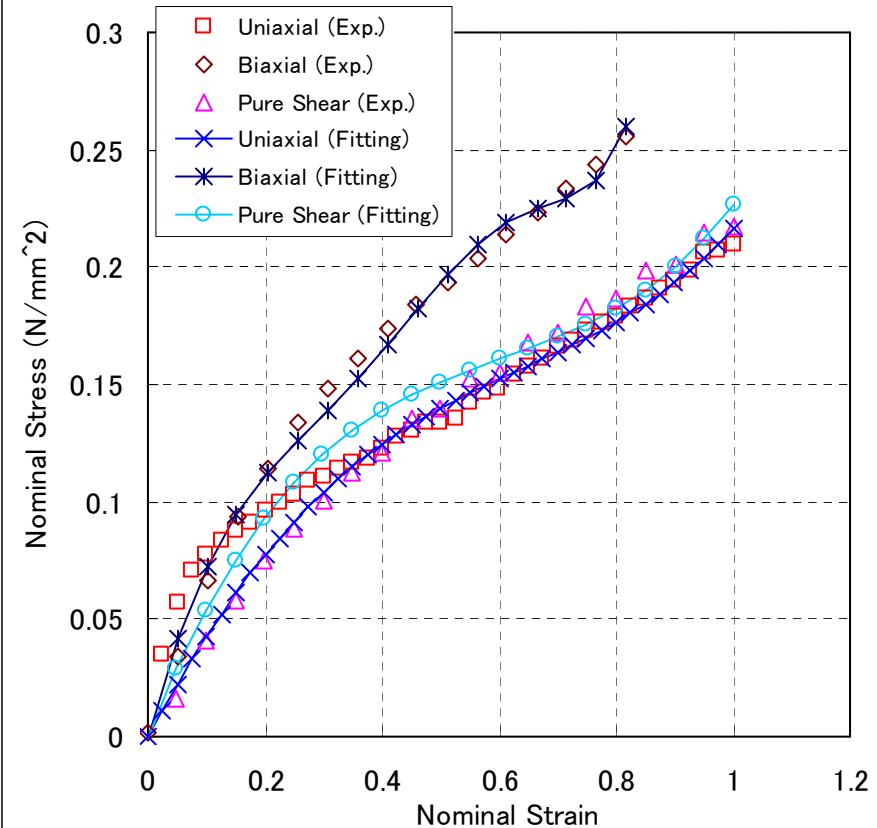
Rate of Loading in Tension Test(s)

1.25 mm/s

Coefficient

Coefficient	
C10 (C1)	8.46E-02
C01 (C2)	-5.96E-03
C20 (C3)	-4.83E-03
C11 (C4)	-2.73E-02
C02 (C5)	1.75E-02
C30 (C6)	-3.05E-03
C21 (C7)	1.89E-02
C12 (C8)	-1.56E-02
C03 (C9)	2.89E-03
C40 (C10)	

α gel, $\theta=6$, $V=1.25$, Mooney — Identification Result



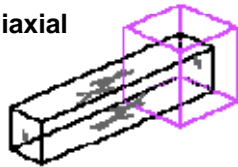
Identification result:
Stress-strain relationship

Analysis with Mooney model: α gel, $\theta=6$, $V=1.25$

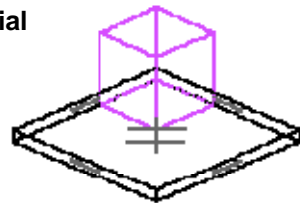
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Input File: gel6_v1_25_uni_m.in
gel6_v1_25_shear_m.in
gel6_v1_25_bi_m.in

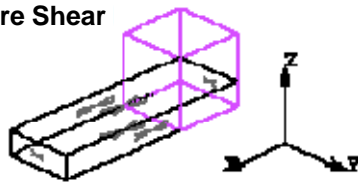
Uniaxial



Biaxial

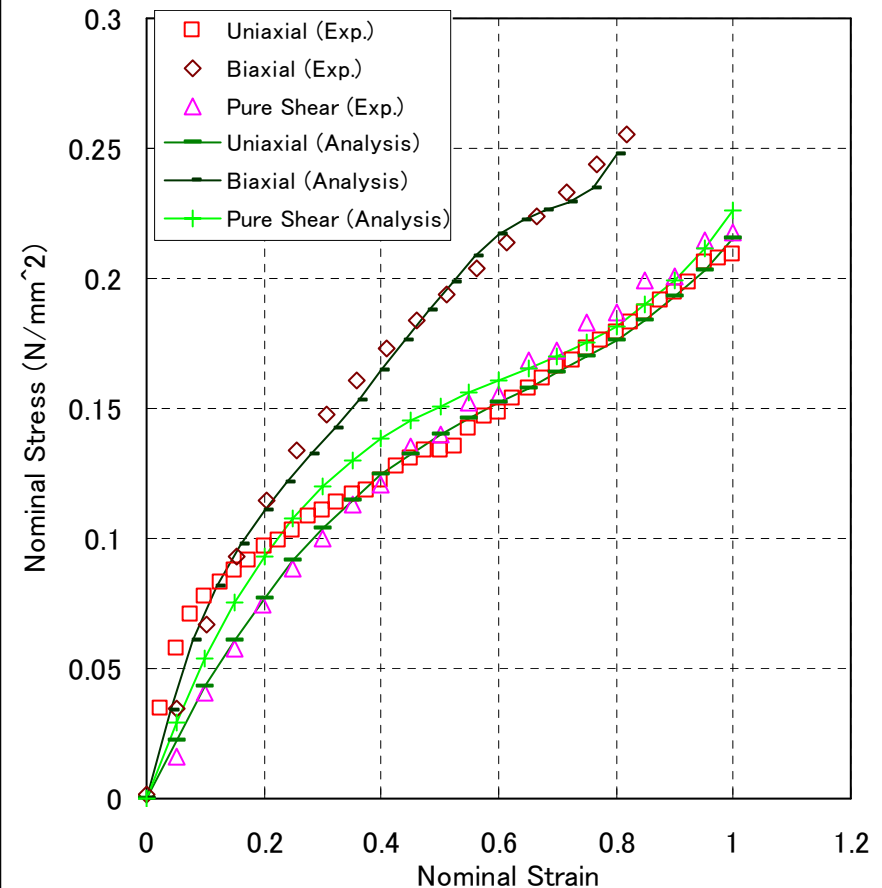


Pure Shear



Analysis model

α gel, $\theta=6$, $V=1.25$, Mooney — Analysis Result



Analysis result:
Stress-strain relationship

Identification for Ogden model: α gel, $\theta=6$, $V=1.25$

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Mooney model

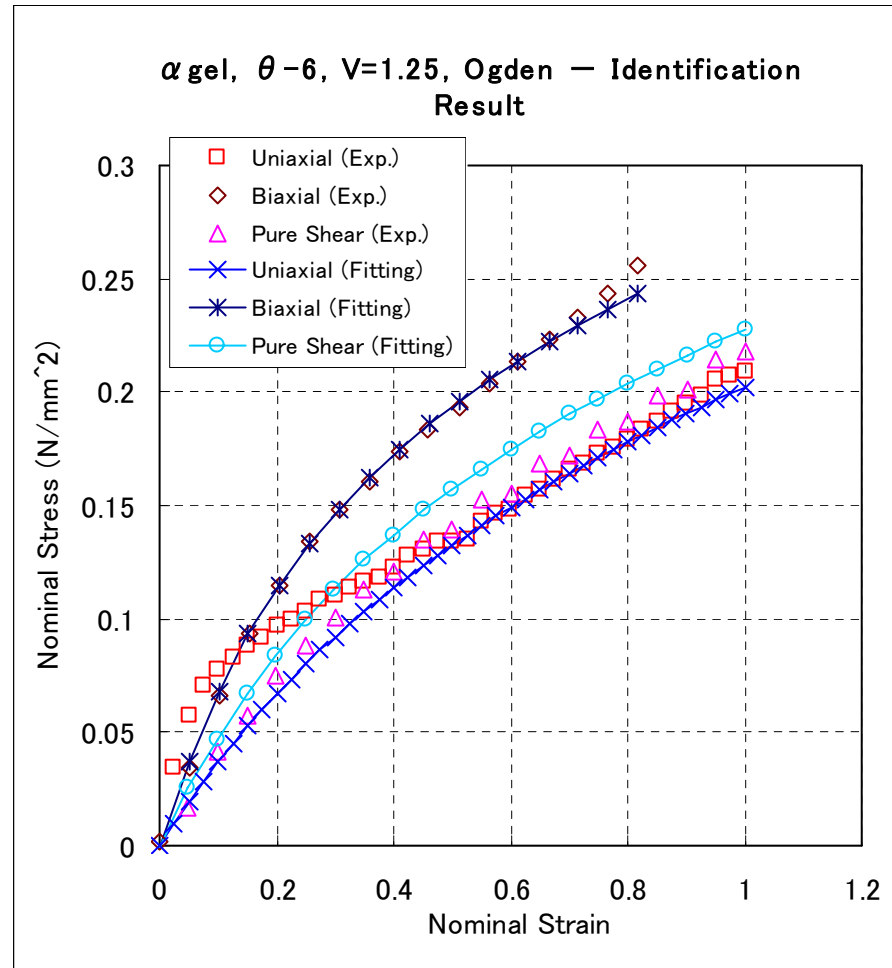
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

1.25 mm/s

Coefficient

Coefficient		
Order	μ	α
1	-2.36E-03	-2.00E+00
2	1.51E-01	1.00E+00
3	5.86E-02	2.00E+00
4		

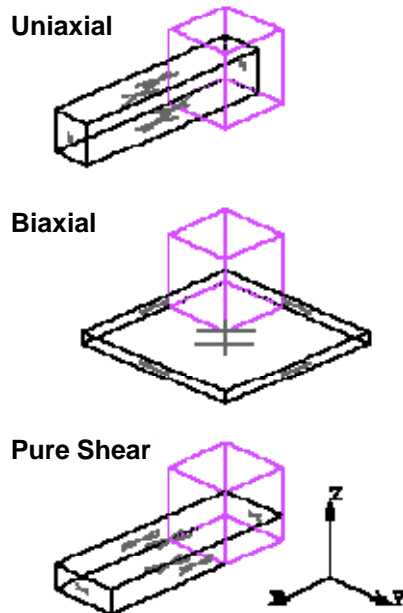


Identification result:
Stress-strain relationship

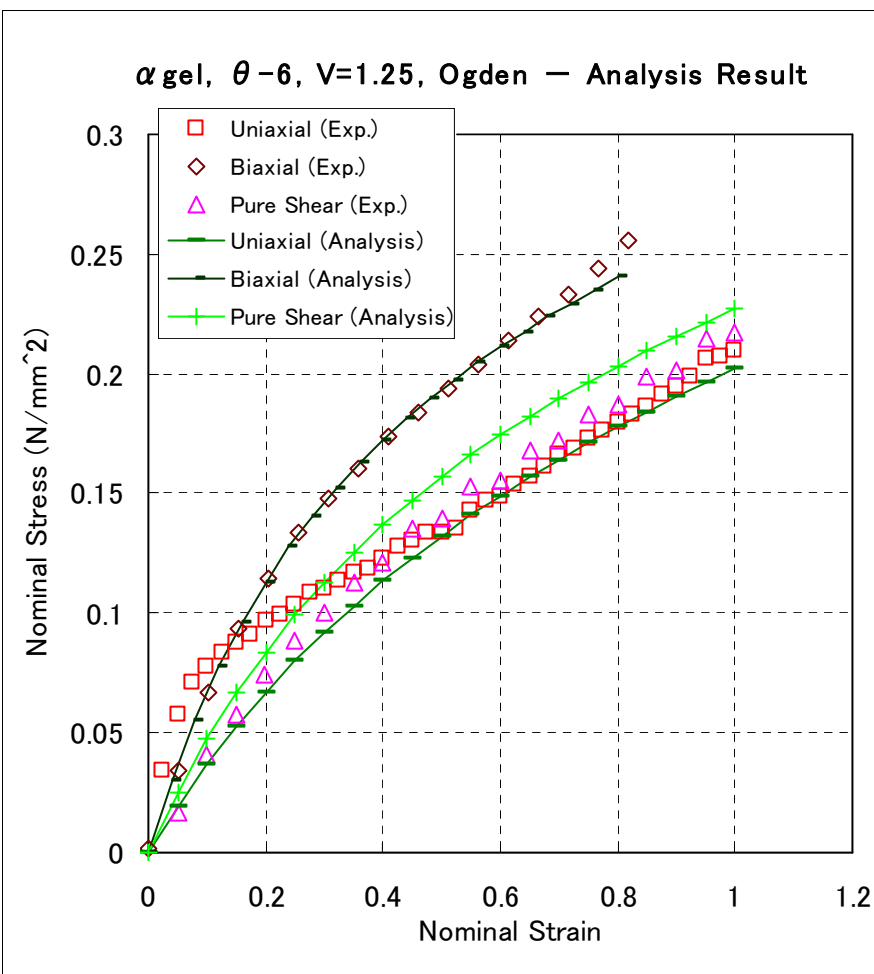
Analysis with Ogden model: α gel, $\theta=6$, $V=1.25$

ADINA

Input File: gel6_v1_25_uni_og.in
gel6_v1_25_shear_og.in
gel6_v1_25_bi_og.in



Analysis model



Analysis result:
Stress-strain relationship