

# Identification for Mooney model: $\alpha_{gel}$ , $\theta=6$ , $V=1.25$

MSC.Marc

Mooney model

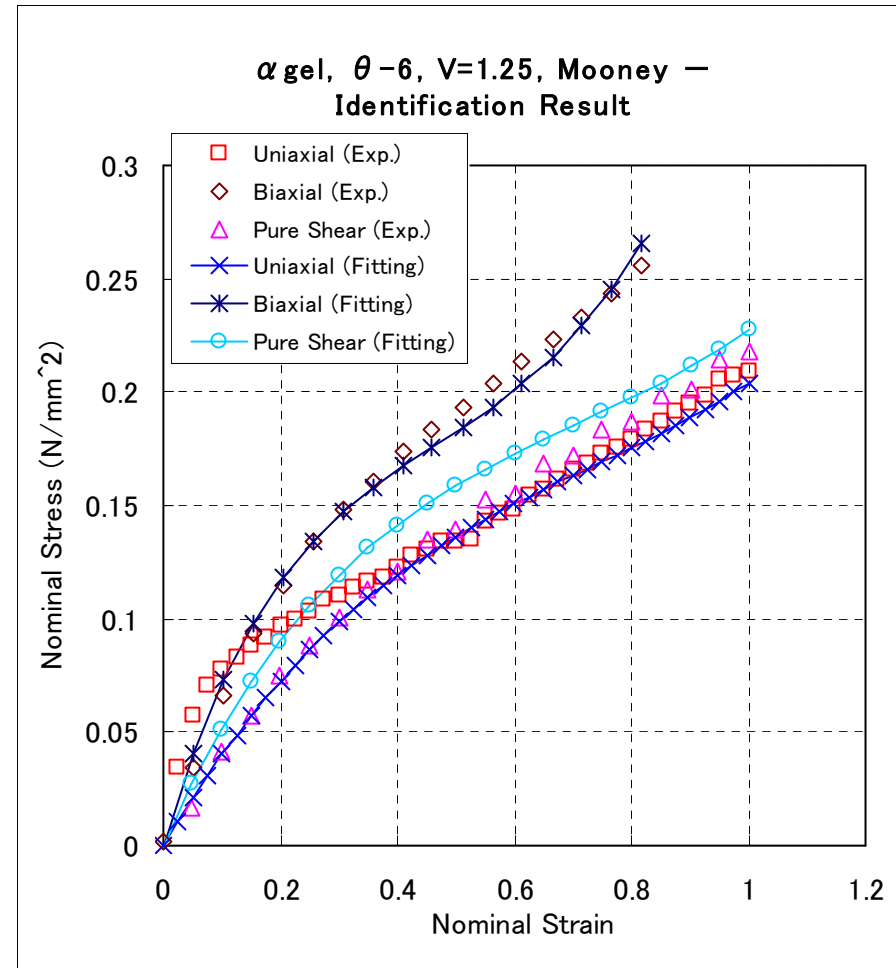
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

1.25 mm/s

Coefficient

Coefficient	
C10 (C1)	0.06561
C01 (C2)	0.00915809
C20 (C3)	-0.0062655
C11 (C4)	-0.00150172
C02 (C5)	—
C30 (C6)	0.00138108

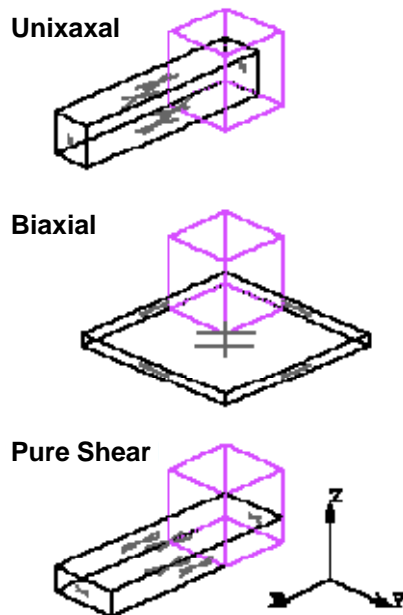


Identification result:  
Stress-strain relationship

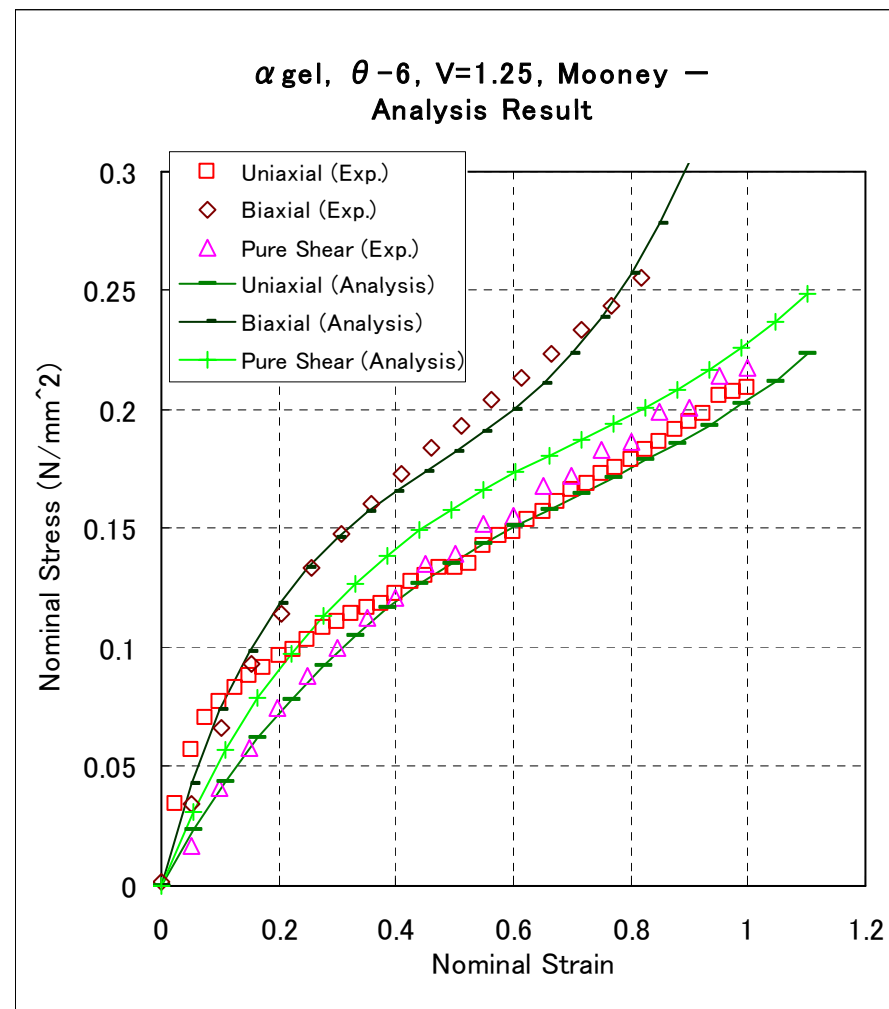
# Analysis with Mooney model $\alpha_{gel}$ , $\theta=6$ , $V=1.25$

MSC.Marc

Input File: gel6\_v125\_marc\_m.dat



Analysis Model



Analysis result:  
 Stress-strain relationship

# Identification for Ogden model: $\alpha_{gel}$ , $\theta=6$ , $V=1.25$

MSC.Marc

Ogden model

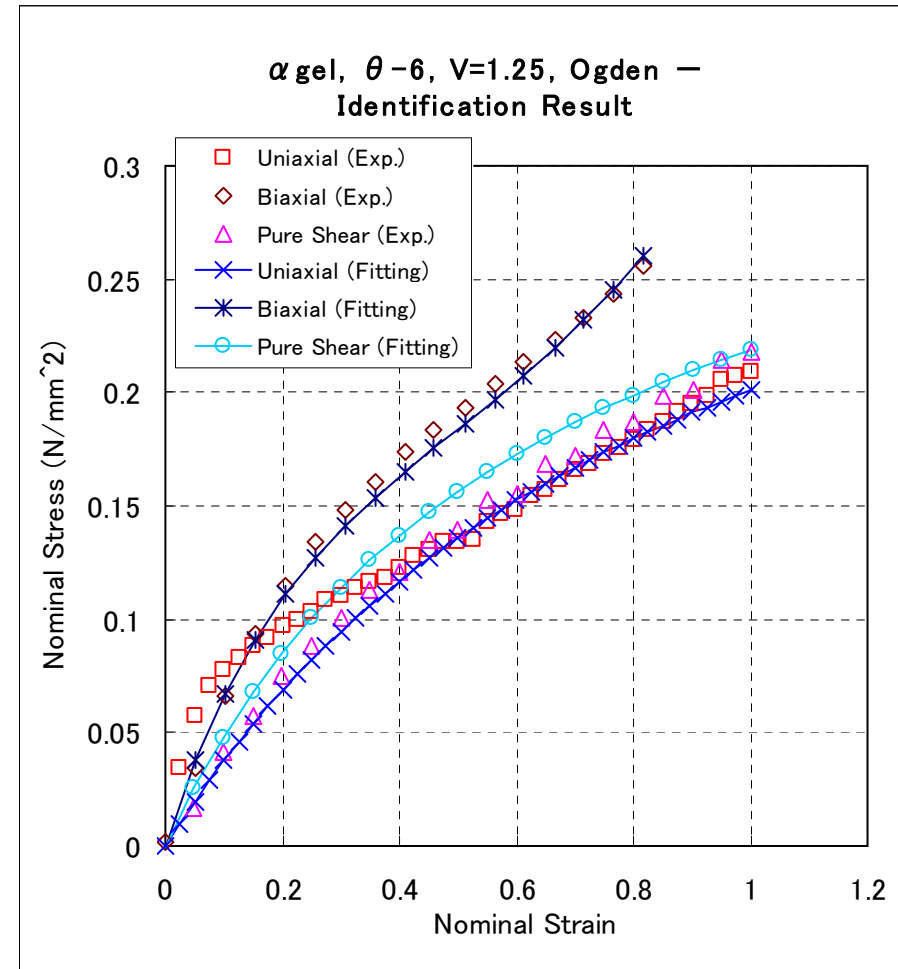
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[ J^{\frac{\alpha_n}{3}} (\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

1.25 mm/s

Coefficient

Coefficient		
Order	$\mu$	$\alpha$
1	0.803762	0.544839
2	0.401989	-1.05442
3	0.0742953	1.29625
4	-0.0864807	-1.9265

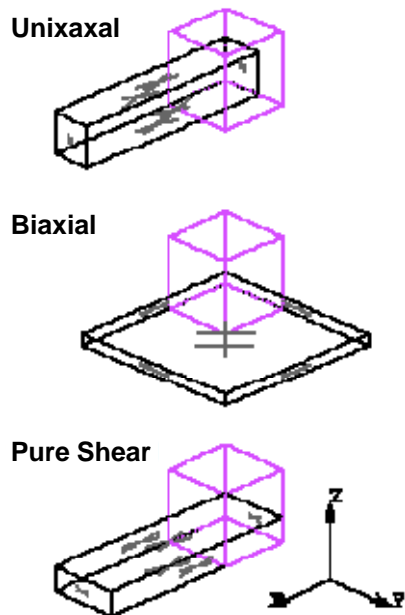


Identification result:  
Stress-strain relationship

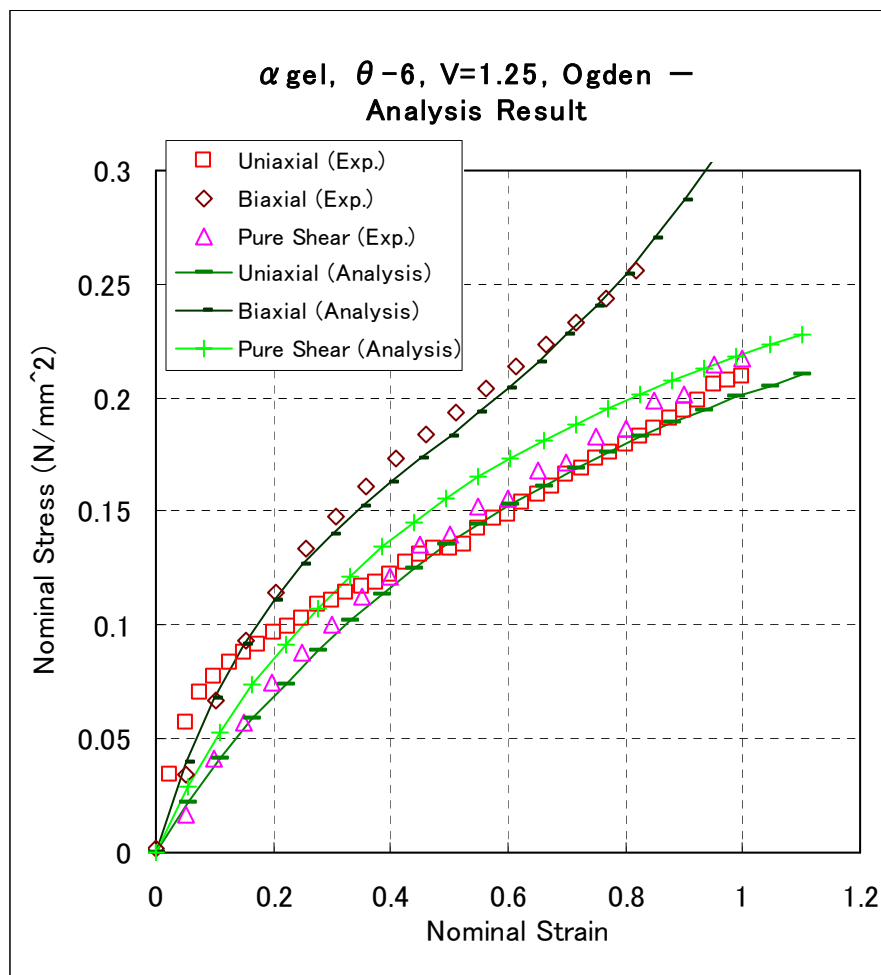
# Analysis with Ogden model: $\alpha_{gel}$ , $\theta=6$ , $V=1.25$

MSC.Marc

Input File: gel6\_v125\_marc\_o.dat



Analysis Model



Analysis result:  
Stress-strain relationship