

Identification for Mooney model: Hardness (50), Damping (Large), V=2

MSC.Marc

Mooney model

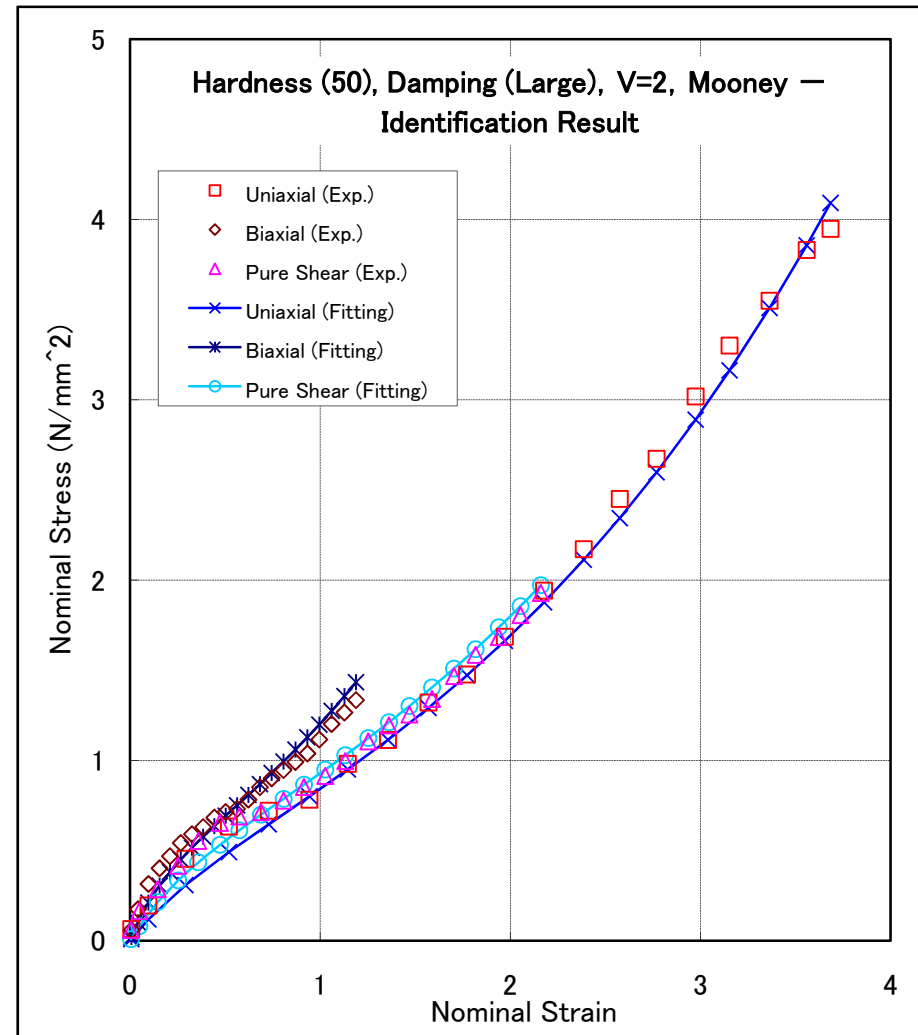
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient	
C10 (C1)	0.213436
C01 (C2)	0.00854625
C20 (C3)	0.00568846
C11 (C4)	0
C02 (C5)	—
C30 (C6)	4.83037E-06



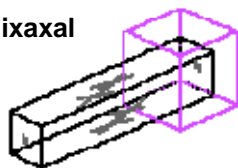
Identification result:
Stress-strain relationship

Identification for Mooney model: Hardness (50), Damping (Large), $V=2$

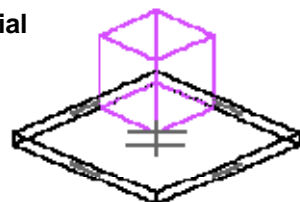
MSC.Marc

Input File: ys_nls_v2_marc_m.dat

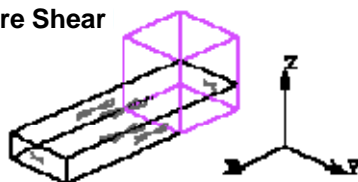
Uniaxial



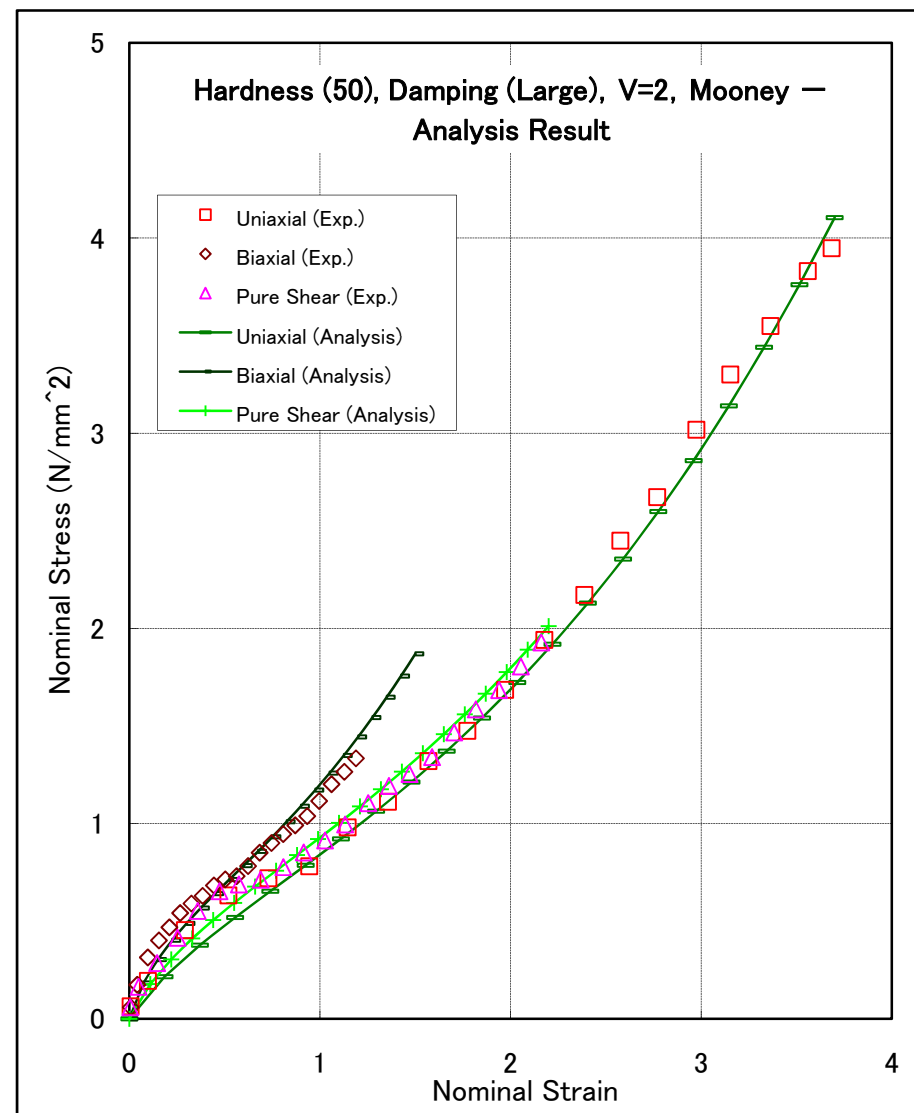
Biaxial



Pure Shear



Analysis model



Analysis result:
Stress-strain relationship

Identification for Mooney model: Hardness (50) Damping (Large), V=20

MSC.Marc

Mooney model

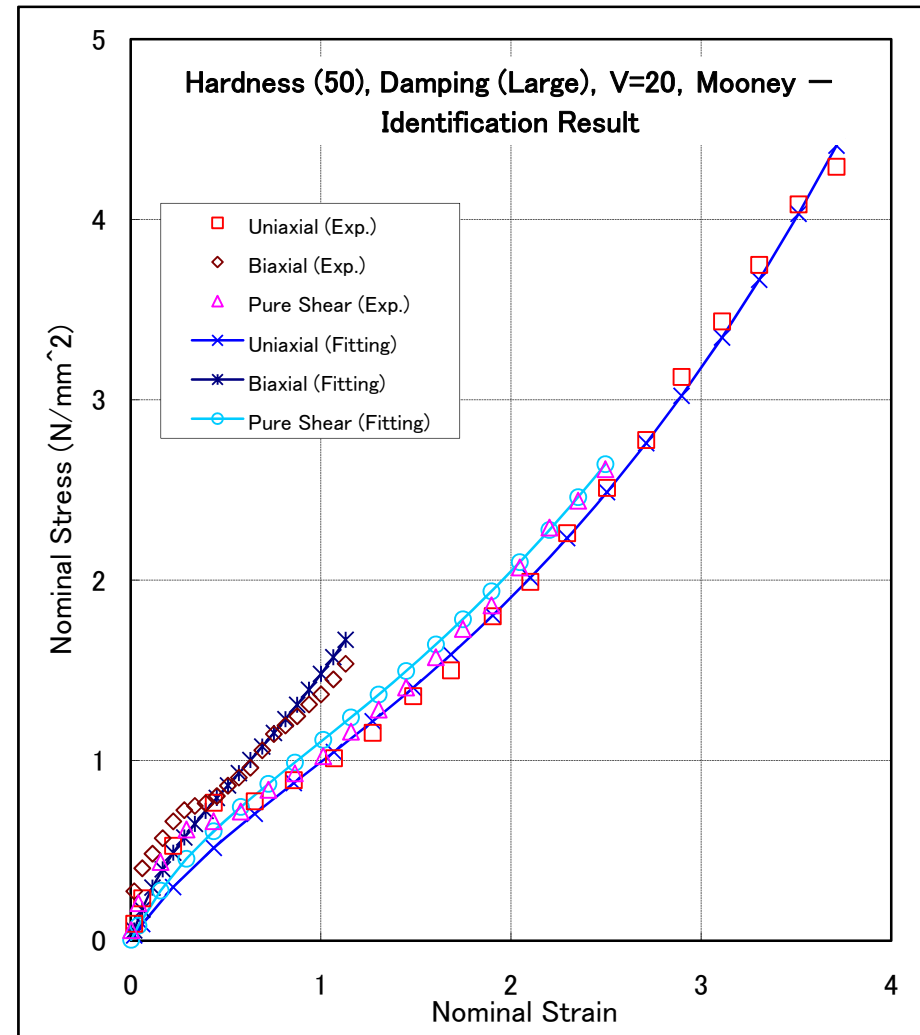
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient		
C10 (C1)		0.253599
C01 (C2)		0.0171543
C20 (C3)		0.00514676
C11 (C4)		0
C02 (C5)		—
C30 (C6)		1.12561E-05

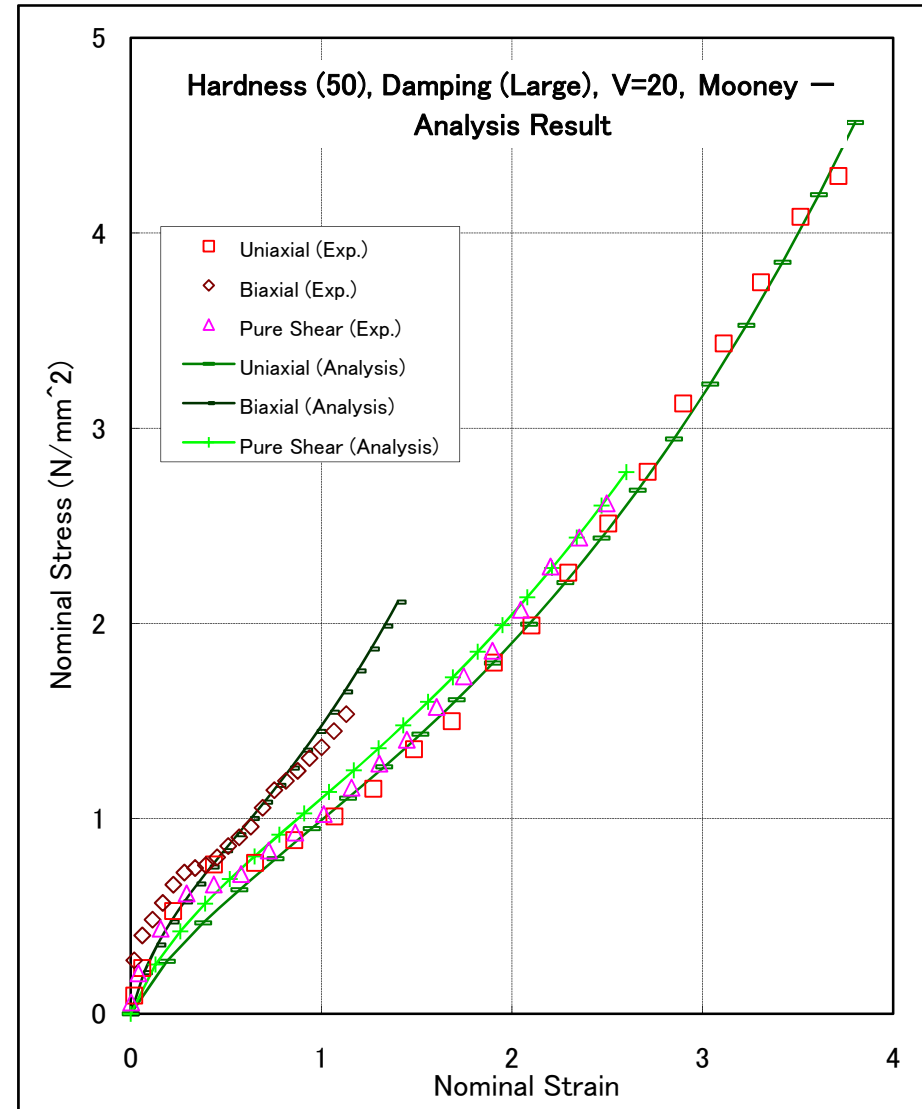
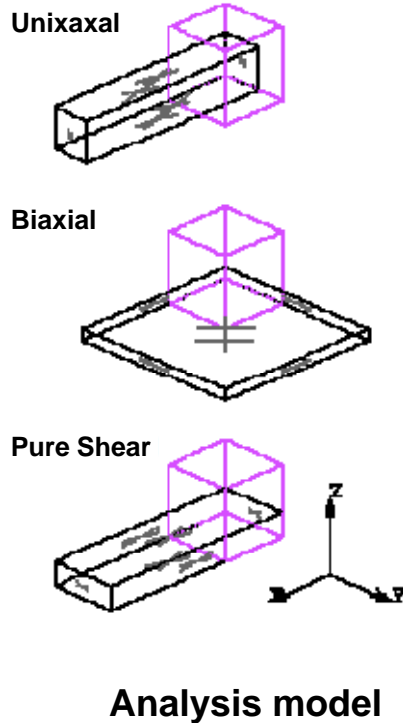


Identification result:
Stress-strain relationship

Analysis with Mooney model: Hardness (50), Damping (Large), V=20

MSC.Marc

Input File: ys_nls_v20_marc_m.dat



Analysis result:
Stress-strain relationship

Identification for Ogden model: Hardness (50), Damping (Large), V=2

MSC.Marc

Ogden model

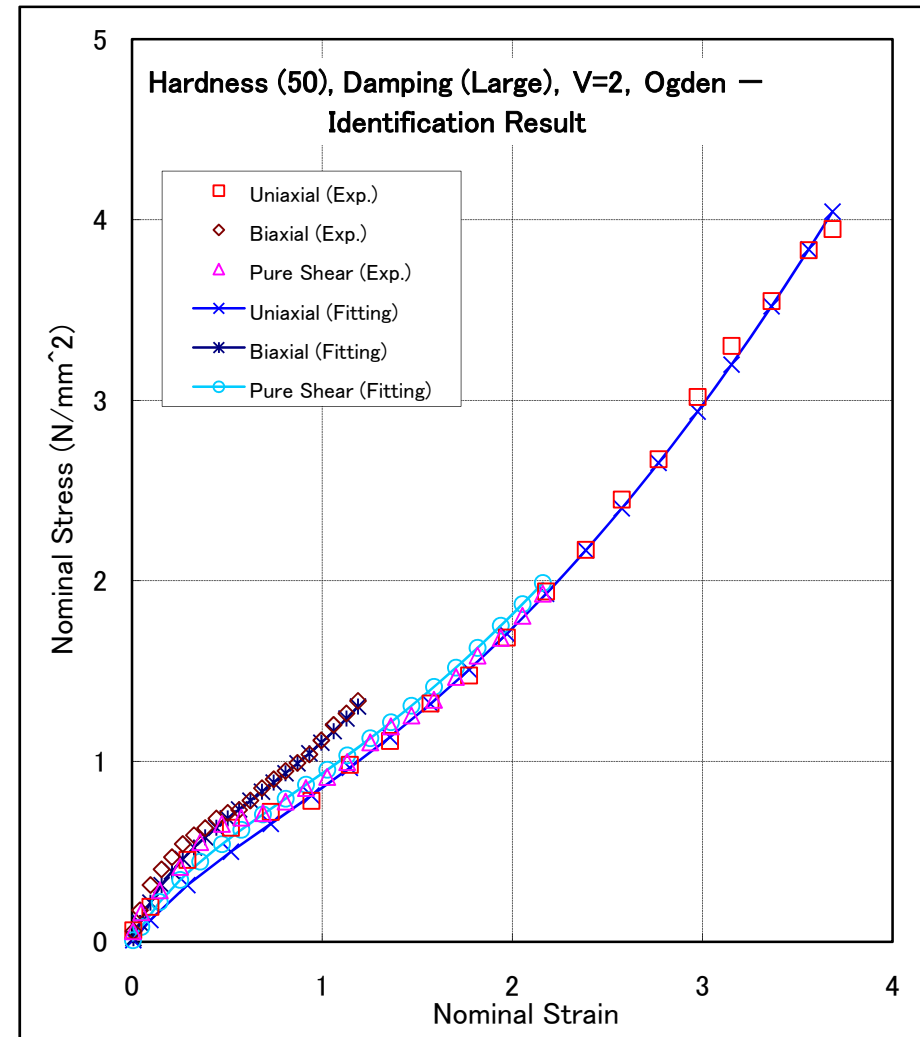
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[J^{\frac{\alpha_n}{3}} (\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient		
Order	μ	α
1	-145.066	2.20051
2	-0.00409465	-2.92099
3	91.4554	2.24712
4	54.2206	2.11376

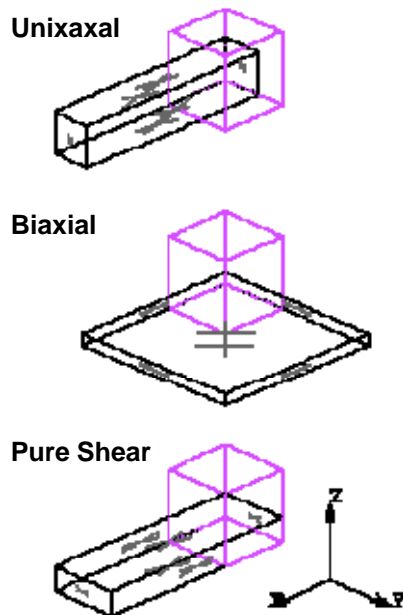


Identification result:
Stress-strain relationship

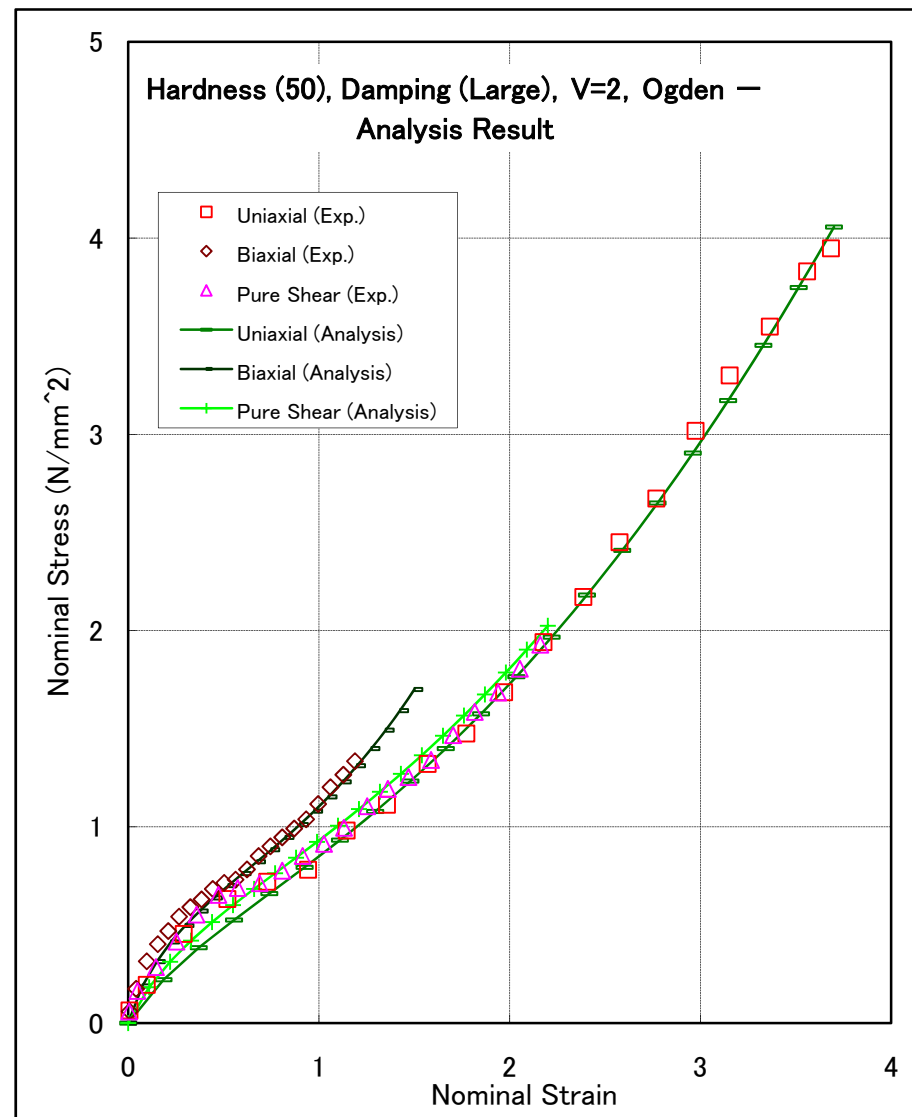
Analysis with Ogden model: Hardness (50), Damping (Large), V=2

MSC.Marc

Input File: ys_nls_v2_marc_o.dat



Analysis model



Analysis result:
Stress-strain relationship

Identification for Ogden model: Hardness (50), Damping (Large), V=20

MSC.Marc

Ogden model

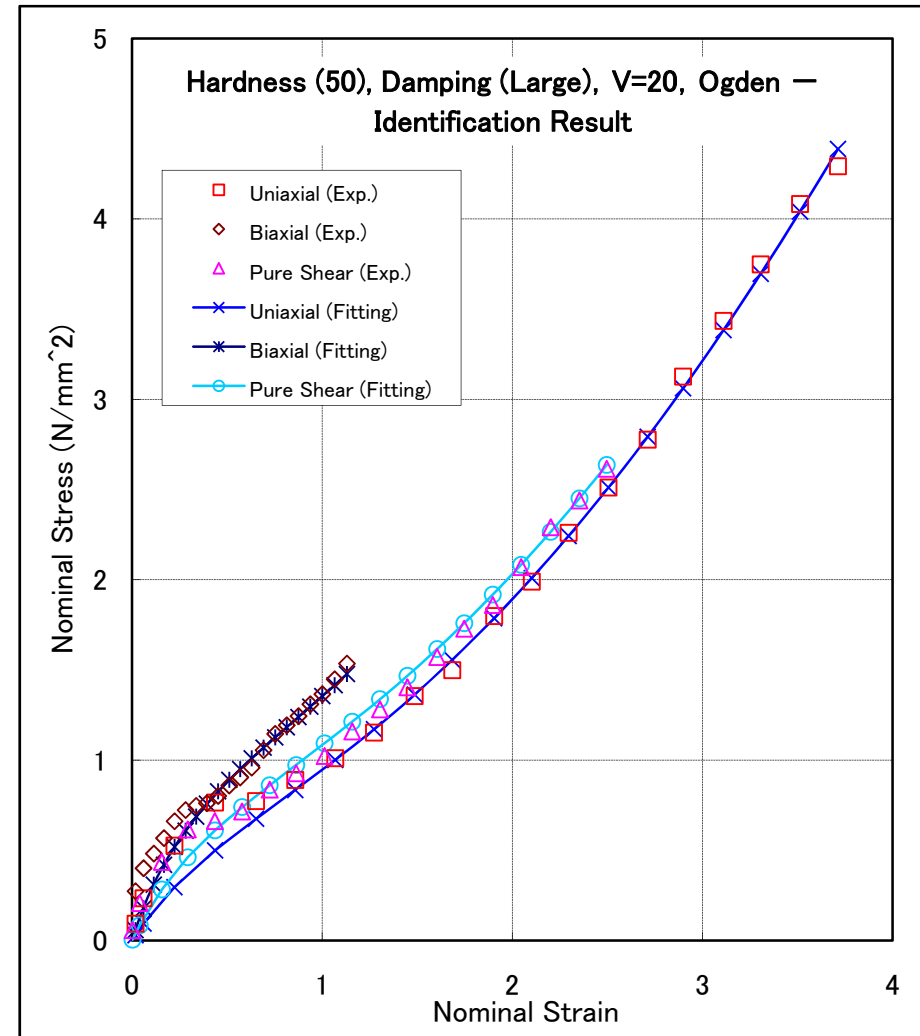
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[J^{-\frac{\alpha_n}{3}} (\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient		
Order	μ	α
1	41.9706	2.13399
2	-0.0369021	-1.61117
3	3.91464	1.37818
4	-44.7235	2.09973



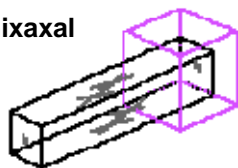
Identification result:
Stress-strain relationship

Analysis with Ogden model: Hardness (50), Damping (Large), V=20

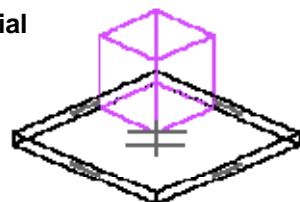
MSC.Marc

Input File: ys_nls_v20_marc_o_dat

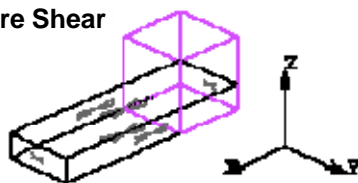
Uniaxial



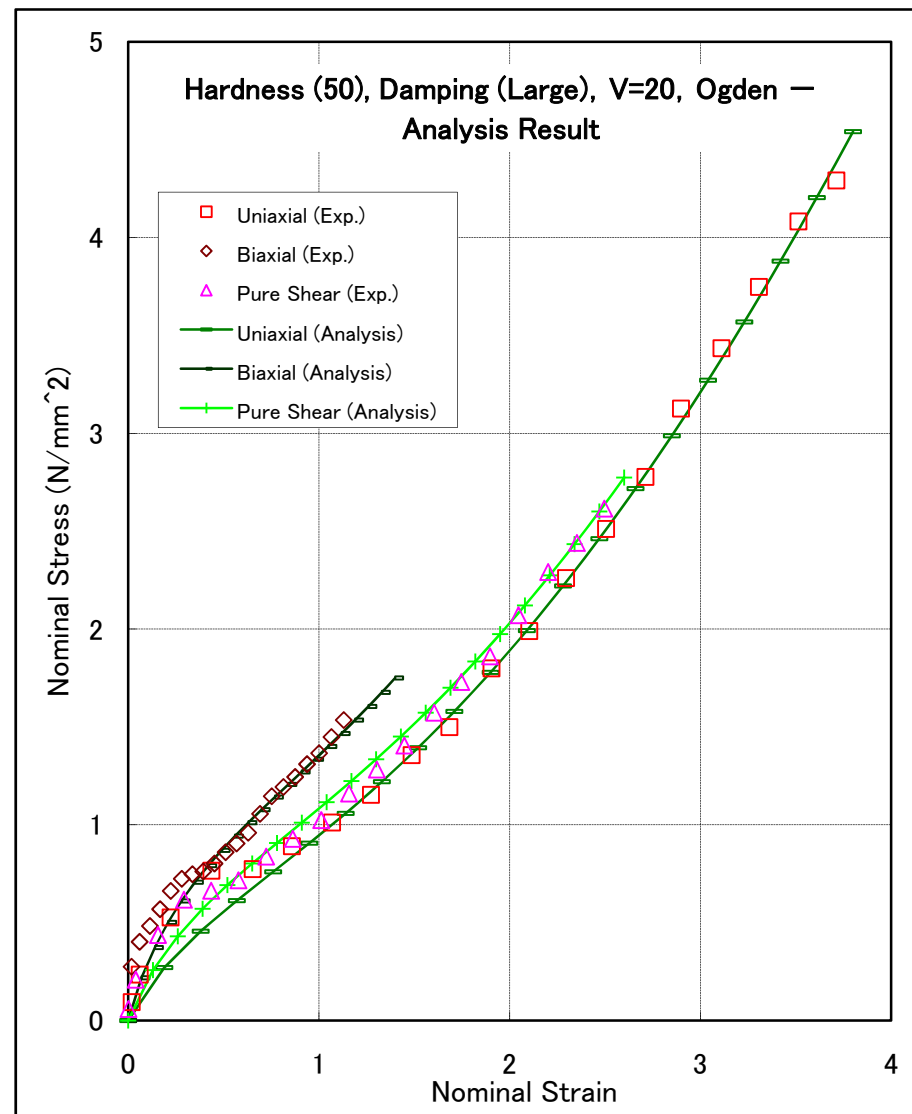
Biaxial



Pure Shear



Analysis model



Analysis result:
Stress-strain relationship