

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

ADINA

Mooney model

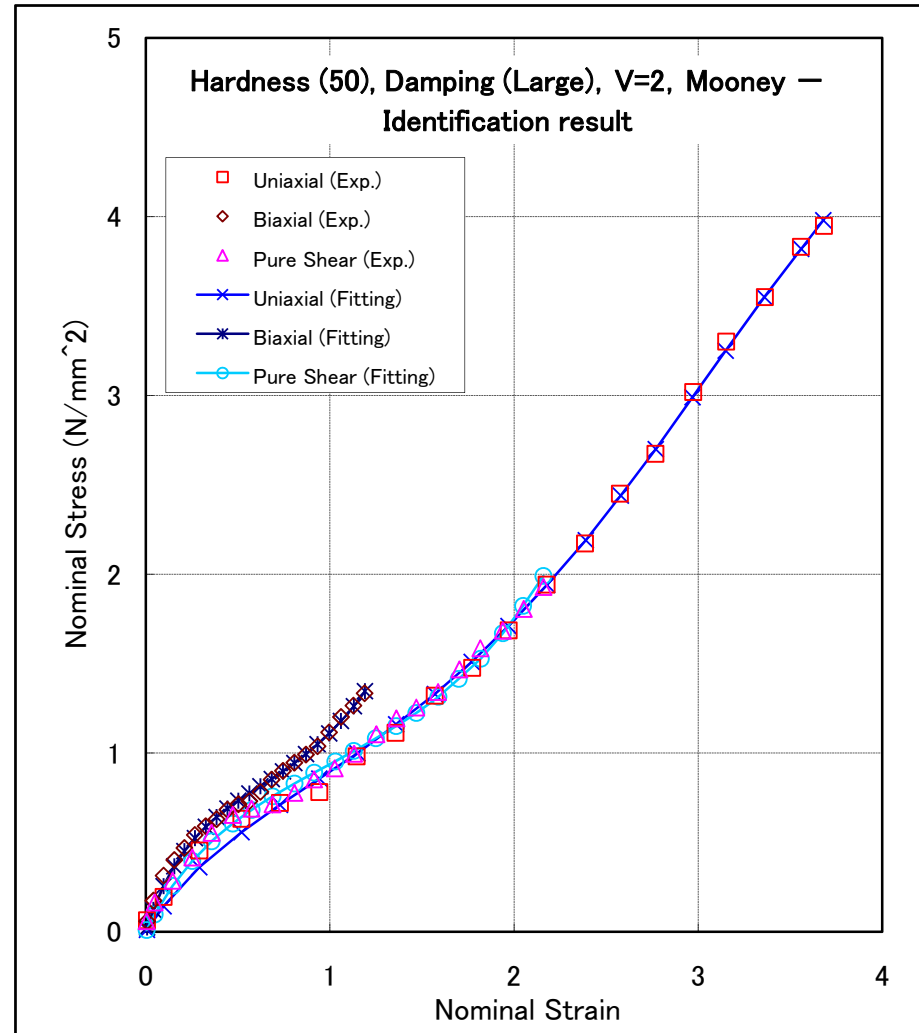
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient	
C10 (C1)	0.2425233
C01 (C2)	0.026161069
C20 (C3)	0.08935193
C11 (C4)	-0.021263148
C02 (C5)	0.005457728
C30 (C6)	-0.000551309
C21 (C7)	0.02316678
C12 (C8)	-0.0010525859
C03 (C9)	0.000104841
C40 (C10)	



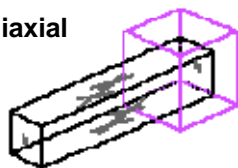
Identification result:
Stress-strain relationship

Analysis with Mooney model: Hardness (50), Damping (Large), $\nu=2$

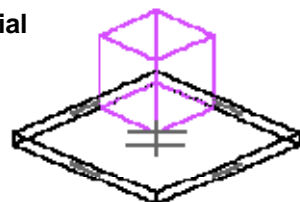
ADINA

Input File: nls_v1_uni_m.in (Uniaxial)
nls_v1_bi_m.in (Biaxial)
nls_v1_shear_m.in (Pure shear)

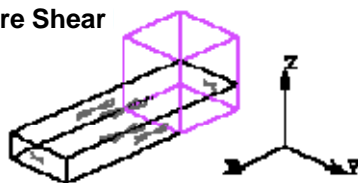
Uniaxial



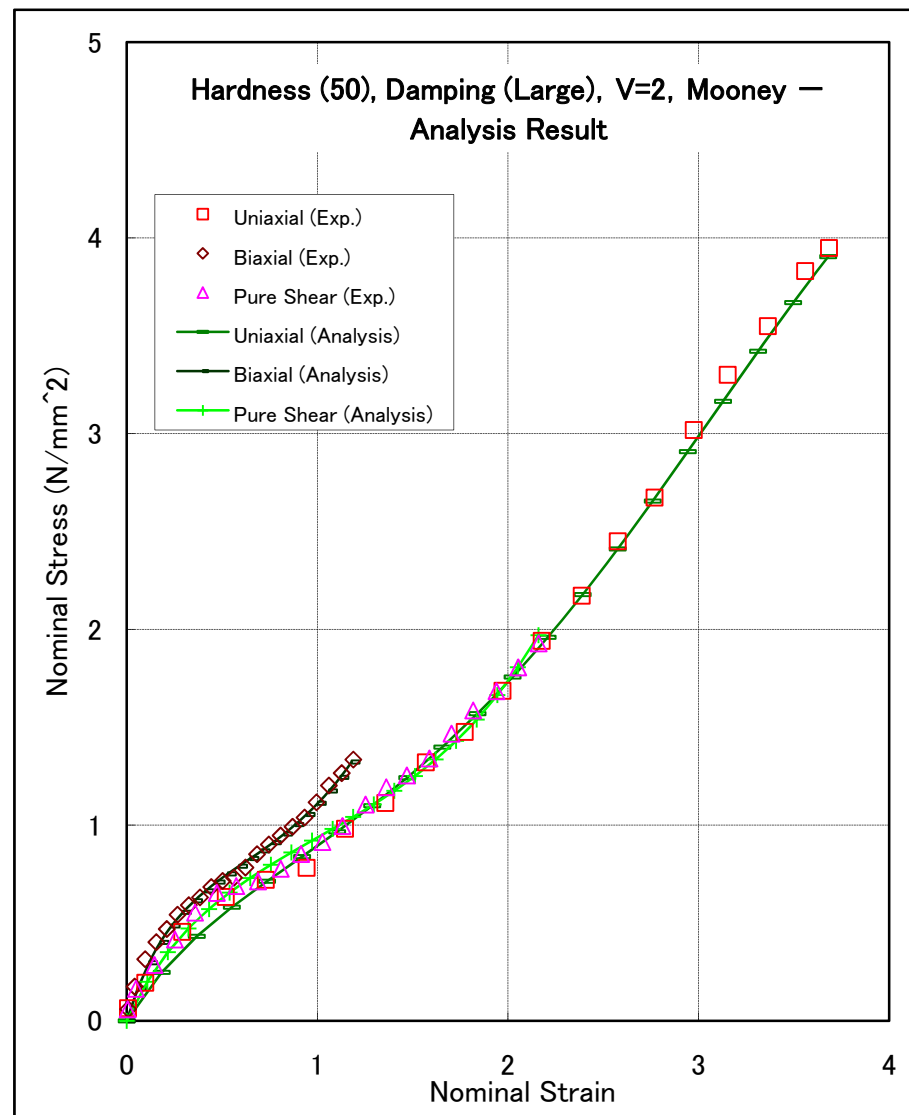
Biaxial



Pure Shear



Analysis model



**Analysis Result:
Stress-strain relationship**

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

ADINA

Mooney model

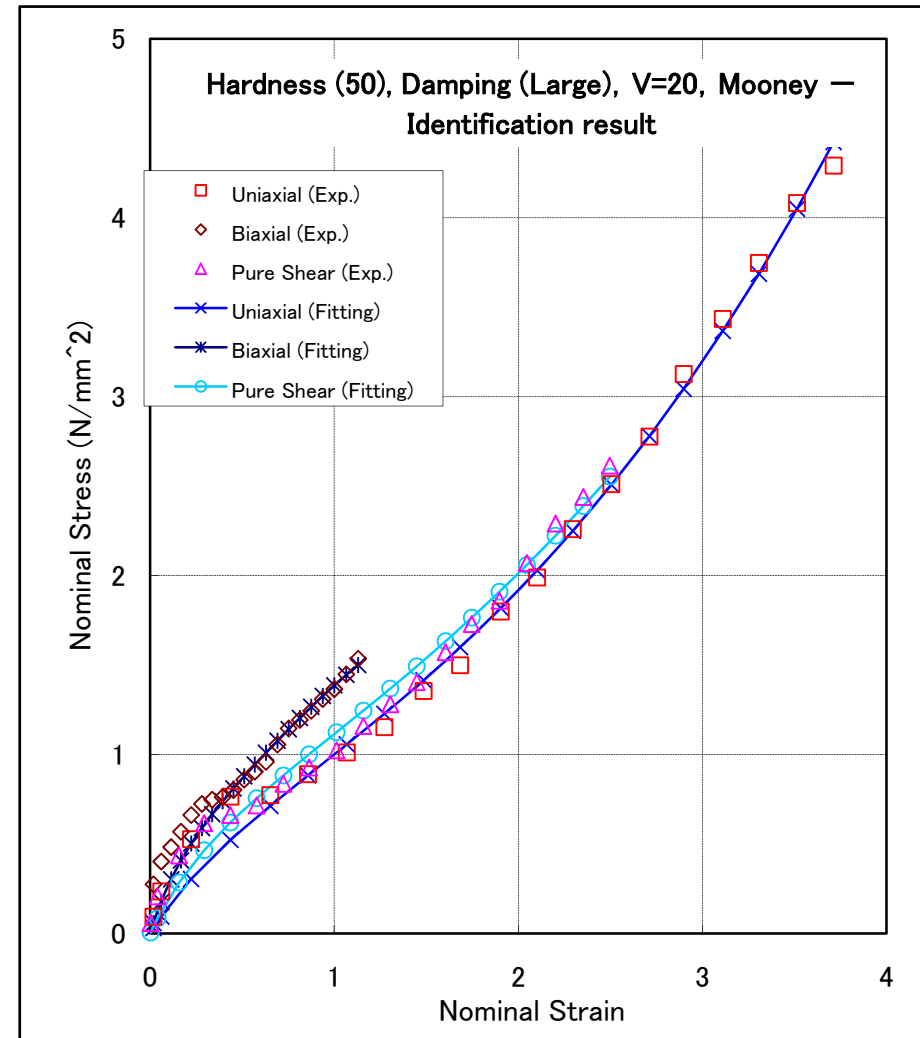
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient	
C10 (C1)	0.253568069
C01 (C2)	0.023714274
C20 (C3)	0.0058699093
C11 (C4)	-0.001415997
C02 (C5)	-7.53163E-05
C30 (C6)	
C21 (C7)	
C12 (C8)	
C03 (C9)	
C40 (C10)	



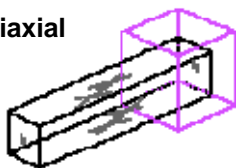
Identification result:
Stress-strain relationship

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

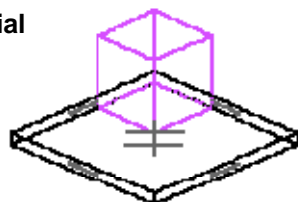
ADINA

Input File: nls_v10_uni_m.in (Uniaxial)
nls_v10_bi_m.in (Biaxial)
nls_v10_shear_m.in (Pure shear)

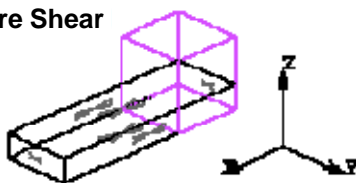
Uniaxial



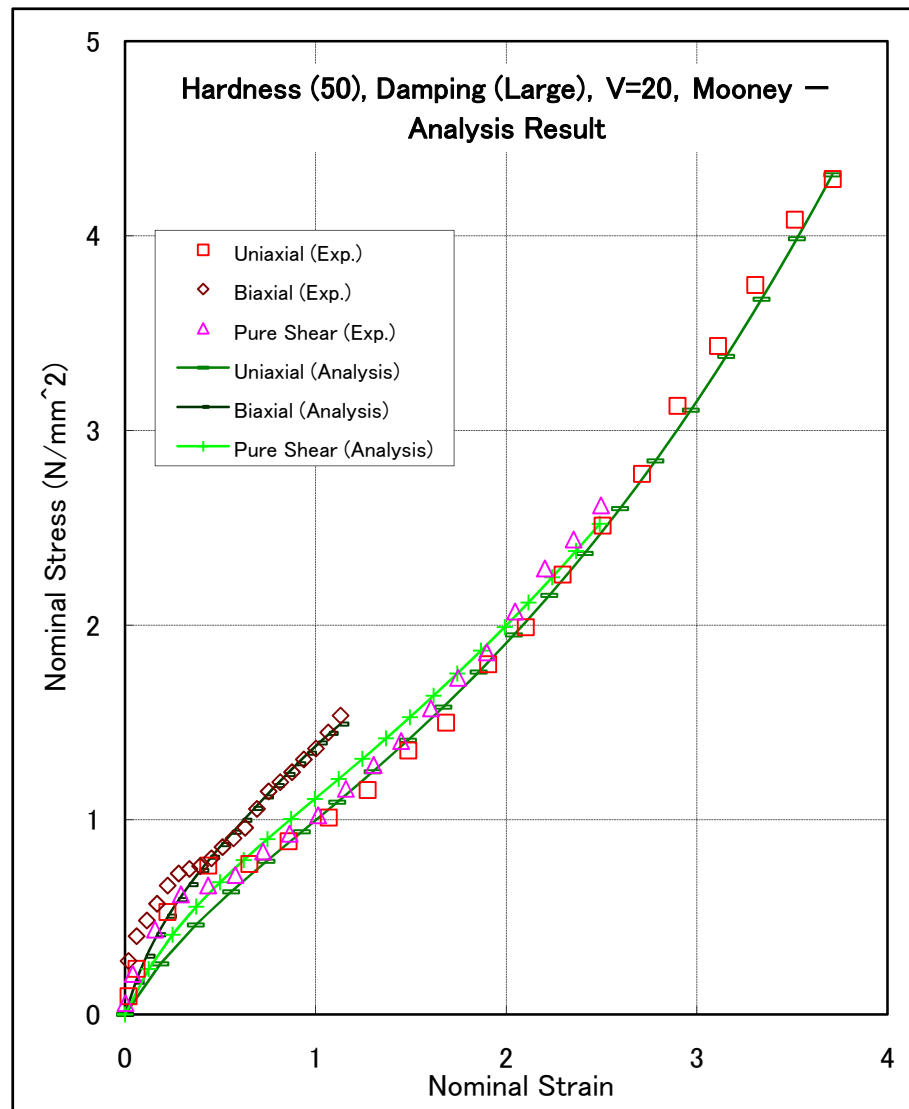
Biaxial



Pure Shear



Analysis model



**Analysis Result:
Stress-strain relationship**

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

ADINA

Ogden model

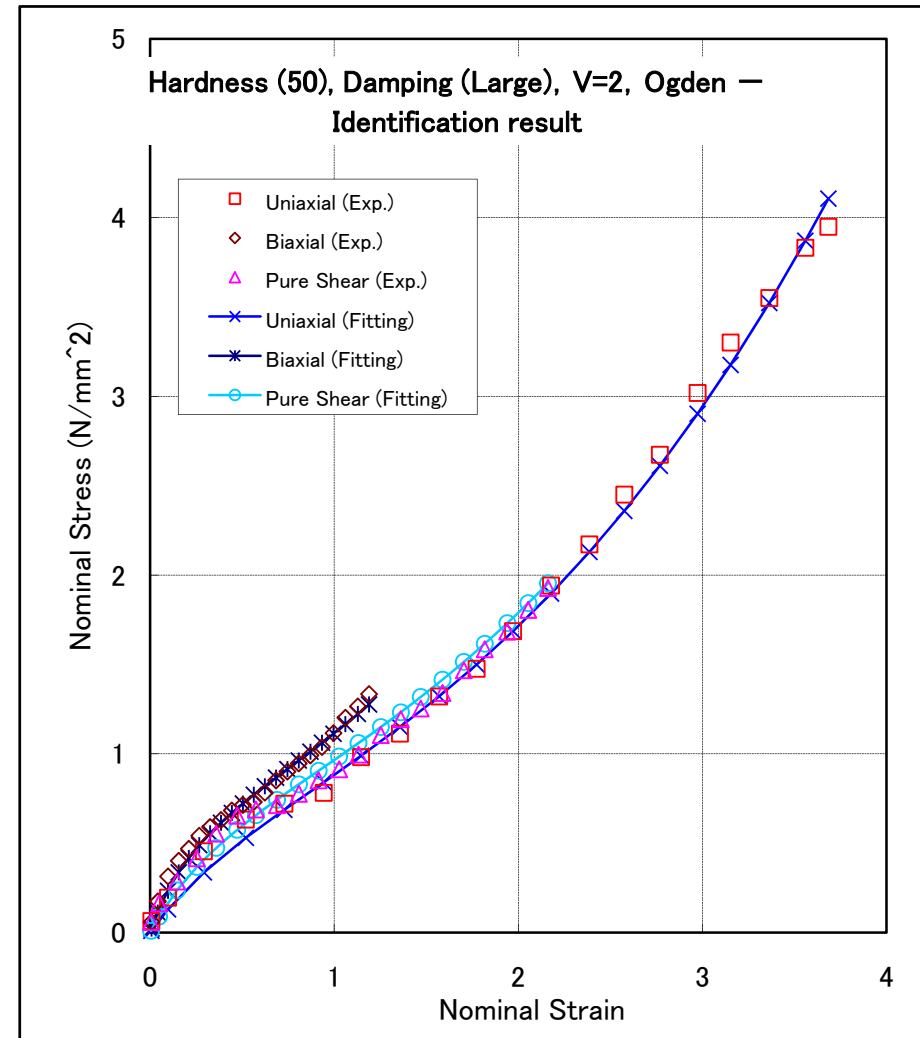
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient		
Order	μ	α
1	-0.014001626	-2
2	0.329216794	1
3	0.262675304	2
4	0.025077813	4



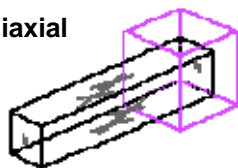
Identification result:
Stress-strain relationship

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

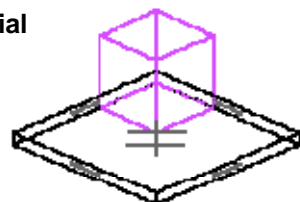
ADINA

Input File: nls_v1_uni_og.in (Uniaxial)
nls_v1_bi_og.in (Biaxial)
nls_v1_shear_og.in (Pure Shear)

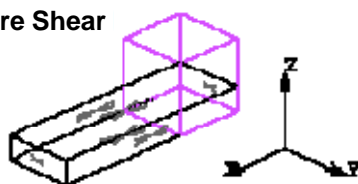
Uniaxial



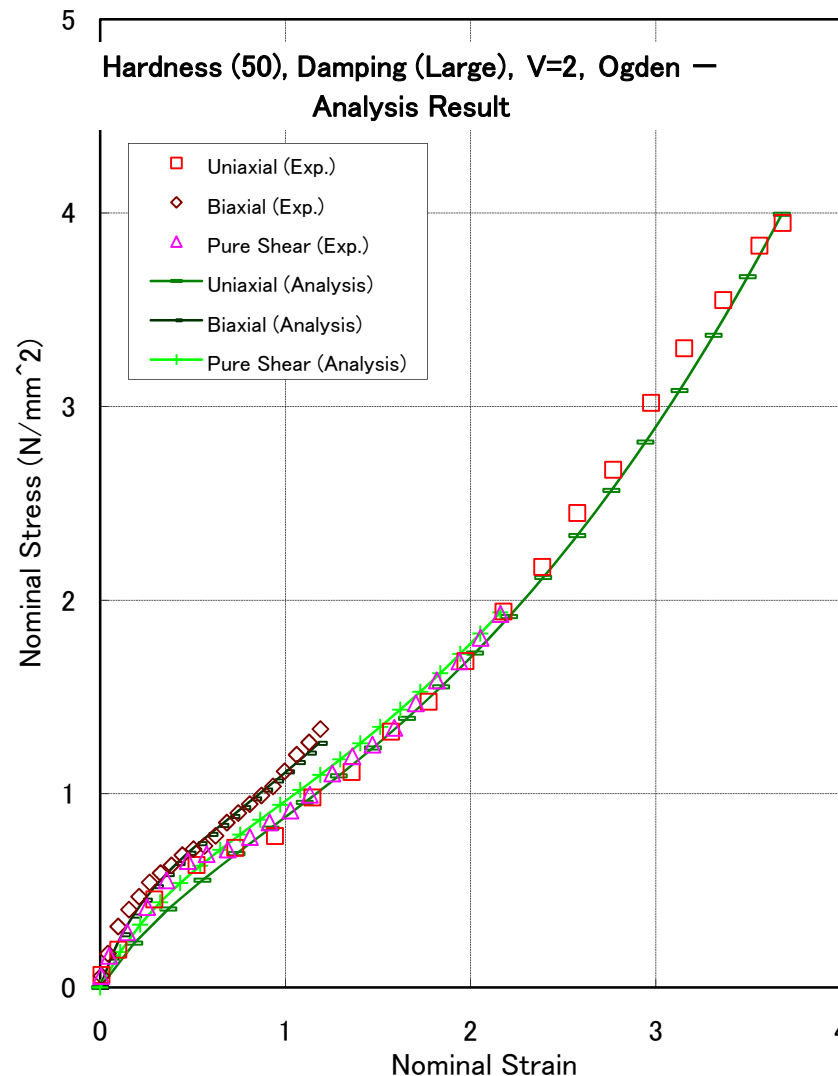
Biaxial



Pure Shear



Analysis model



Analysis Result:
Stress-strain relationship

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

ADINA

Ogden model

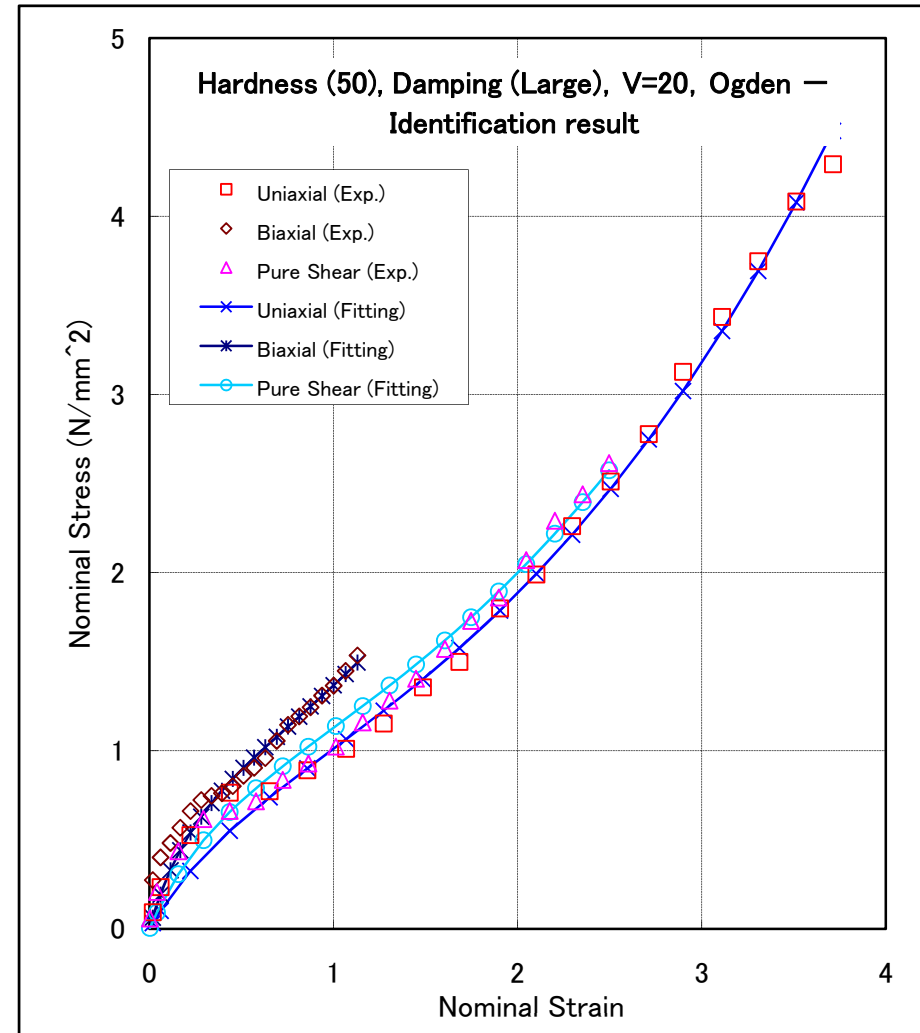
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient		
Order	μ	α
1	-0.02337895	-2
2	0.624034886	1
3	0.21059533	2
4	0.027799312	4



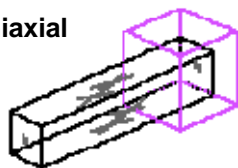
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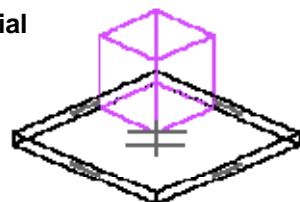
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Input File: nls_v10_uni_og.in (Uniaxial)
nls_v10_bi_og.in (Biaxial)
nls_v1_shear_og.in (Pure shear)

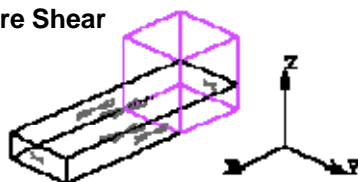
Uniaxial



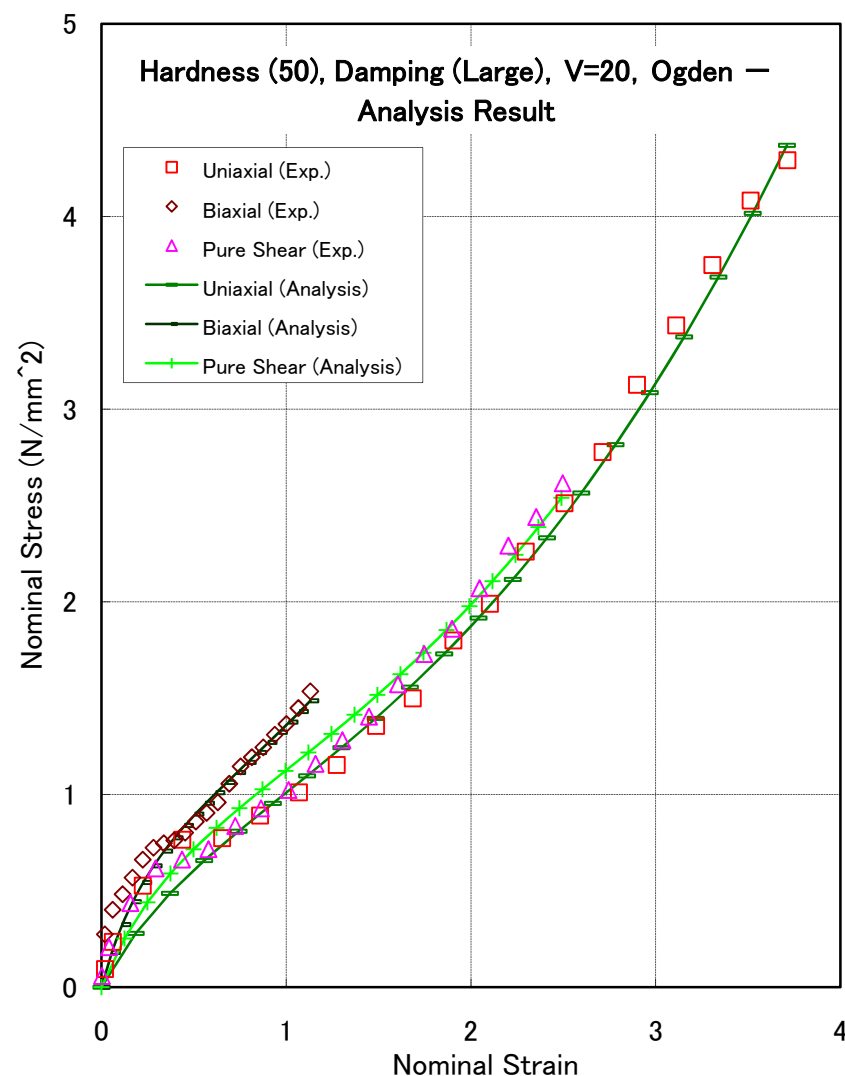
Biaxial



Pure Shear



Analysis model



**Analysis Result:
Stress-strain relationship**