

Identification for Mooney model: Hardness (65), Damping (Large), V=2

ABAQUS

Mooney model

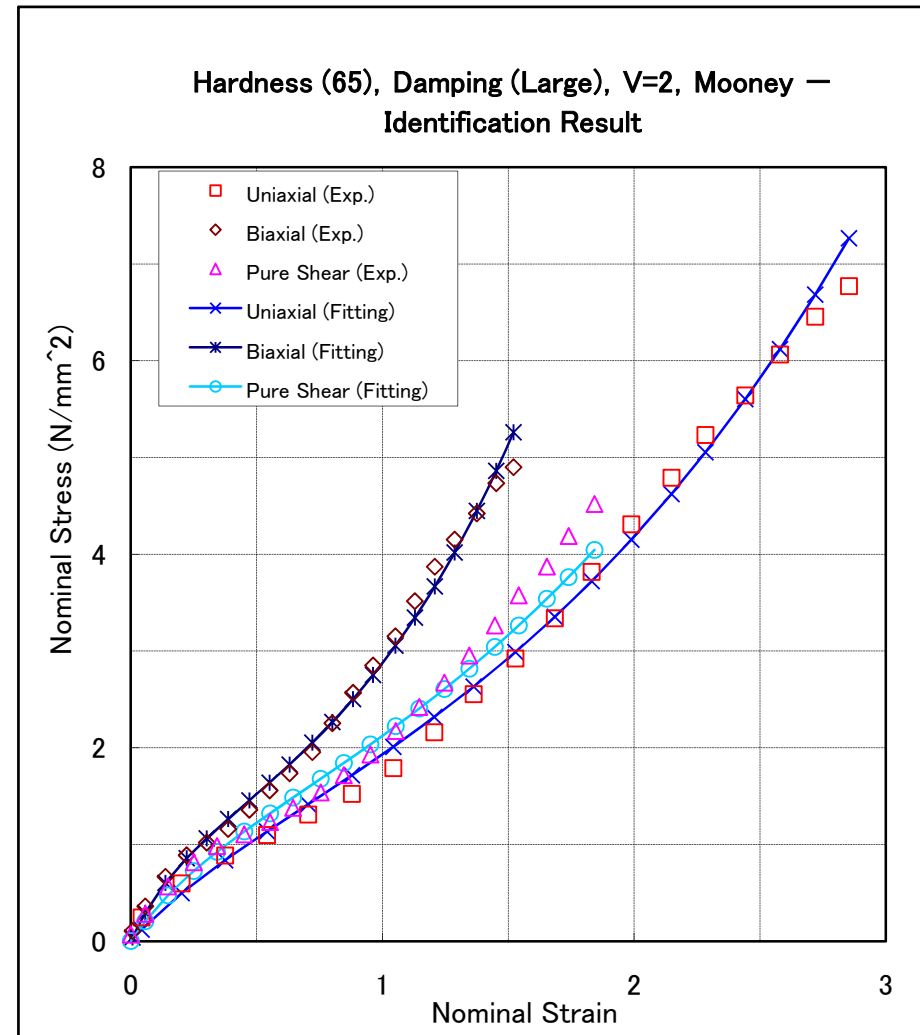
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient	
C10 (C1)	0.481078
C01 (C2)	0.00247050
C20 (C3)	0.0158050
C11 (C4)	0.00200127
C02 (C5)	
C30 (C6)	0.000154563
C21 (C7)	
C12 (C8)	
C03 (C9)	
C40 (C10)	



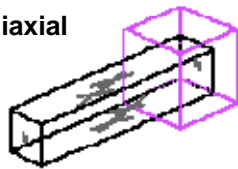
Identification result:
Stress-strain relationship

Analysis with Mooney model: Hardness (65), Damping (Large), V=2

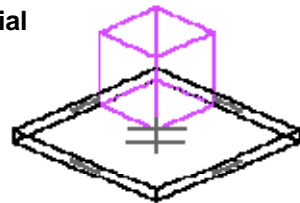
ABAQUS

Input File: ys_nll_v2_abaqus_m.inp

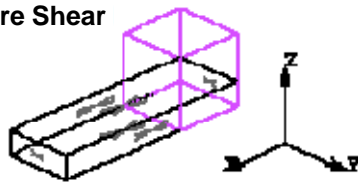
Uniaxial



Biaxial

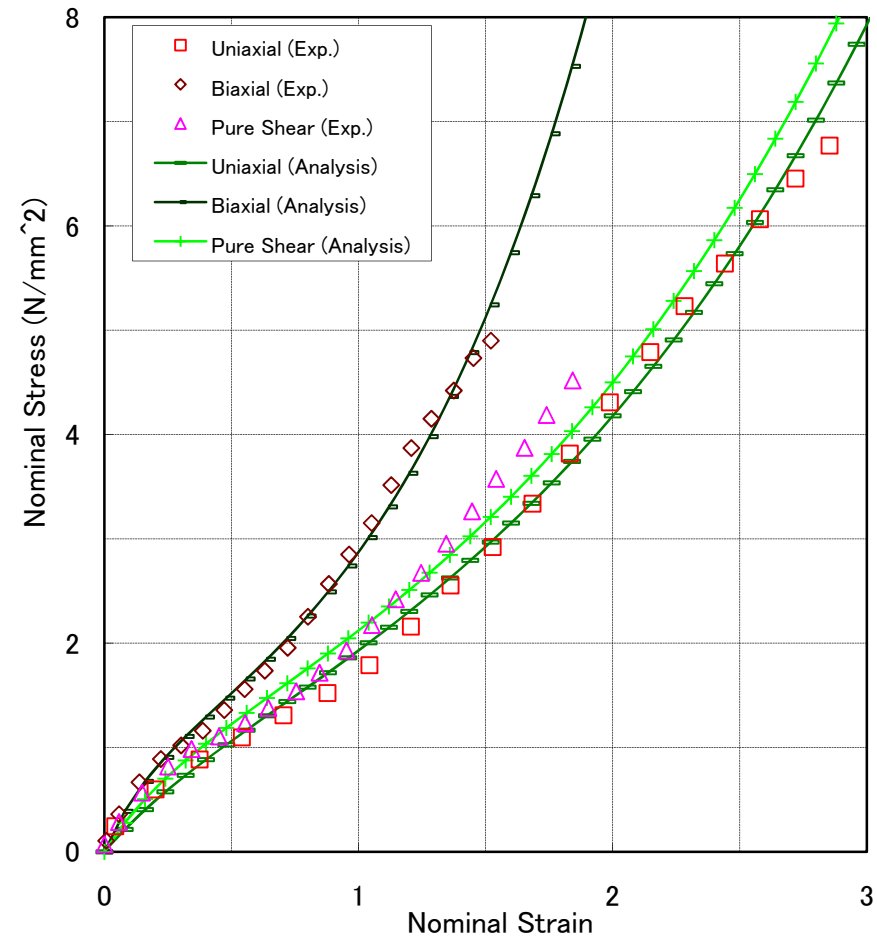


Pure Shear



Analysis model

Hardness (65), Damping (Large), V=2, Mooney —
Analysis Result



Analysis result:
Stress-strain relationship

Identification for Mooney model: Hardness (65) Damping (Large), V=20

ABAQUS

Mooney model

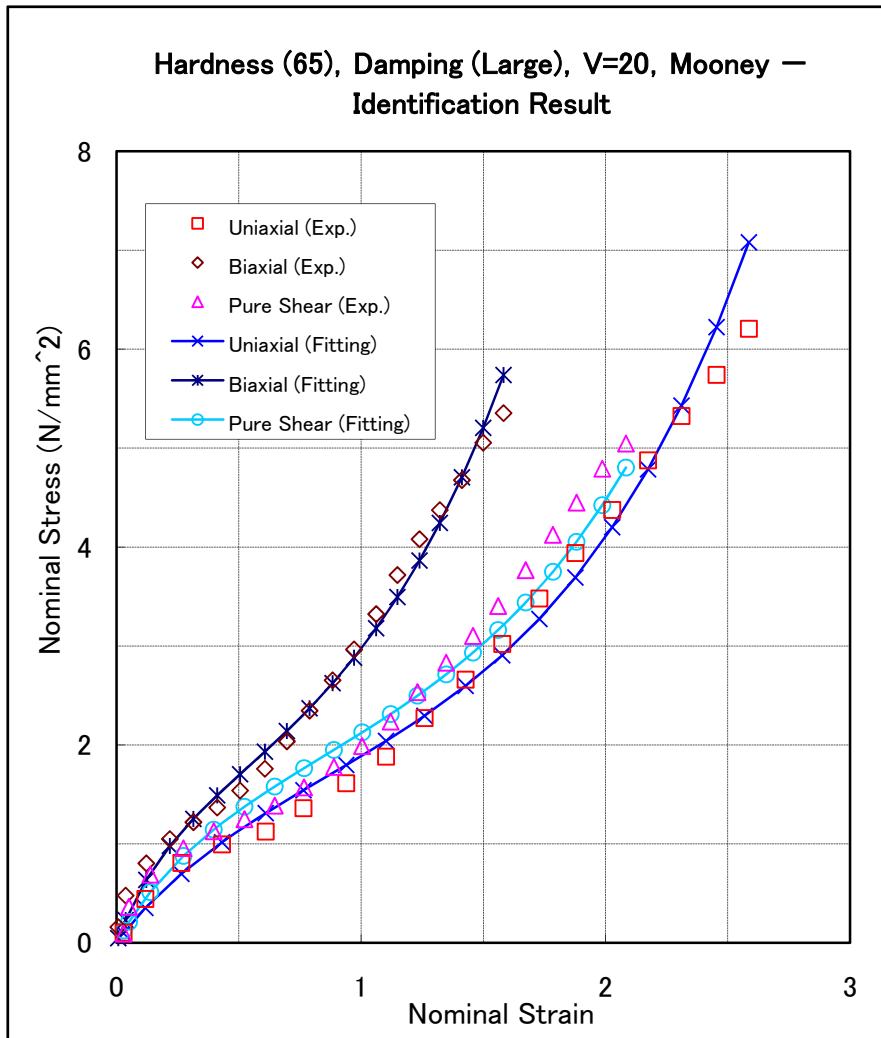
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient	
C10 (C1)	0.502440
C01 (C2)	0.0539857
C20 (C3)	-0.00138148
C11 (C4)	-0.00225179
C02 (C5)	
C30 (C6)	0.00164740
C21 (C7)	
C12 (C8)	
C03 (C9)	
C40 (C10)	



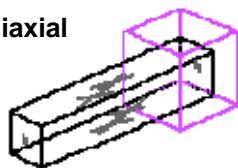
Identification result:
Stress-strain relationship

Analysis with Mooney model: Hardness (65), Damping (Large), V=20

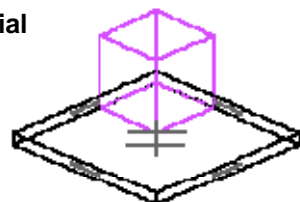
ABAQUS

Input File: ys_nll_v20_abaqus_m.inp

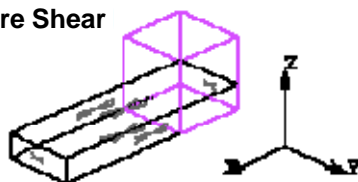
Uniaxial



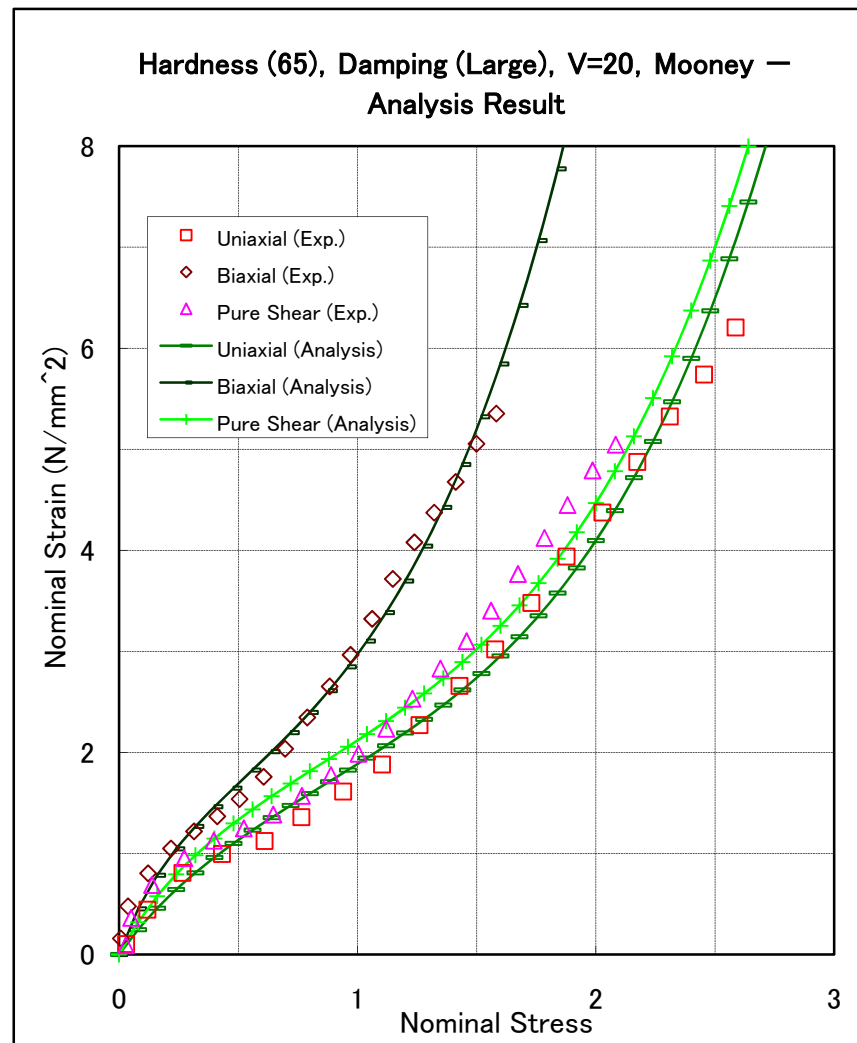
Biaxial



Pure Shear



Analysis model



Analysis result:
Stress-strain relationship

Identification for Ogden model: Hardness (65), Damping (Large), V=2

ABAQUS

Ogden model

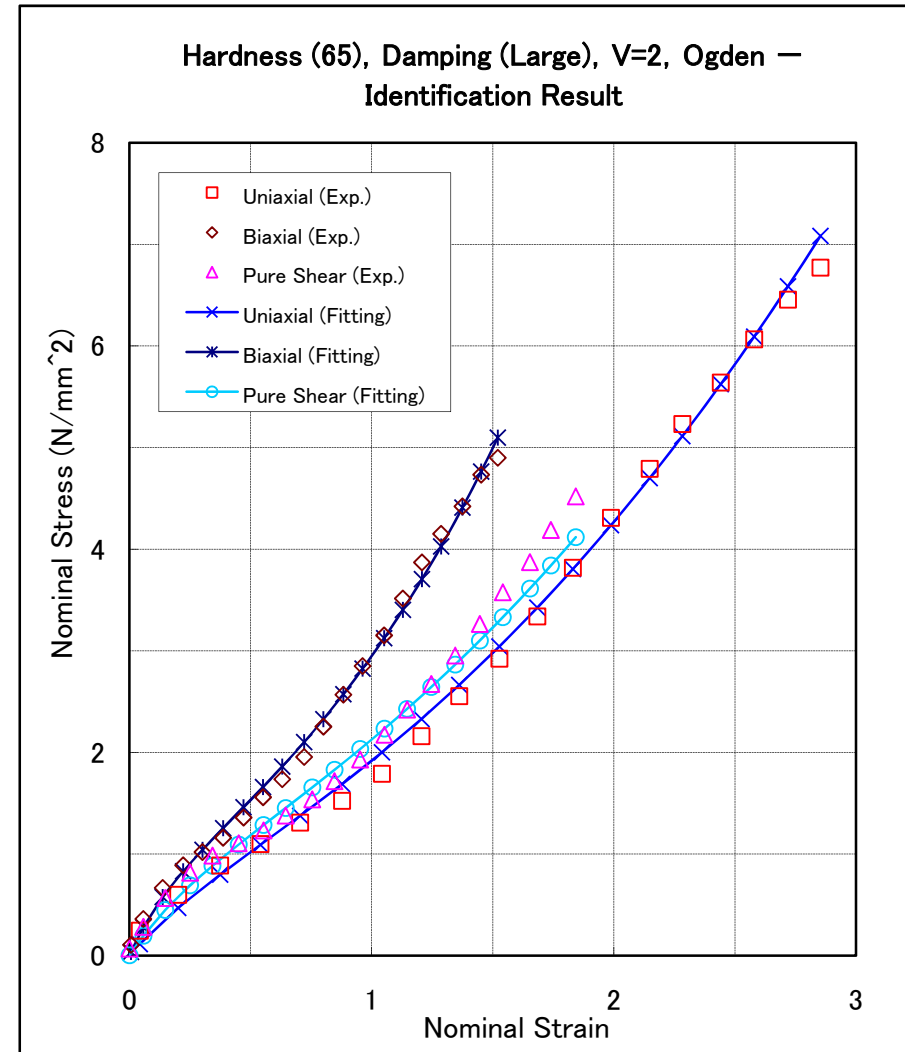
$$W = \sum_{n=1}^N \frac{2\mu_n}{\alpha_n^2} [(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3]$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient		
Order	μ	α
1	0.0000646979	2.96280
2	0.550090	3.19101
3	0.0929181	-2.21001
4	0.270347	0.623810



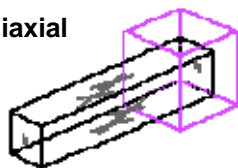
Identification result:
Stress-strain relationship

Analysis with Ogden model: Hardness (65), Damping (Large), V=2

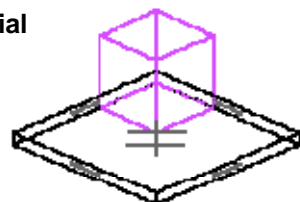
ABAQUS

Input File: ys_nll_v2_abaqus_o.inp

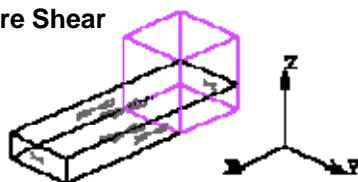
Uniaxial



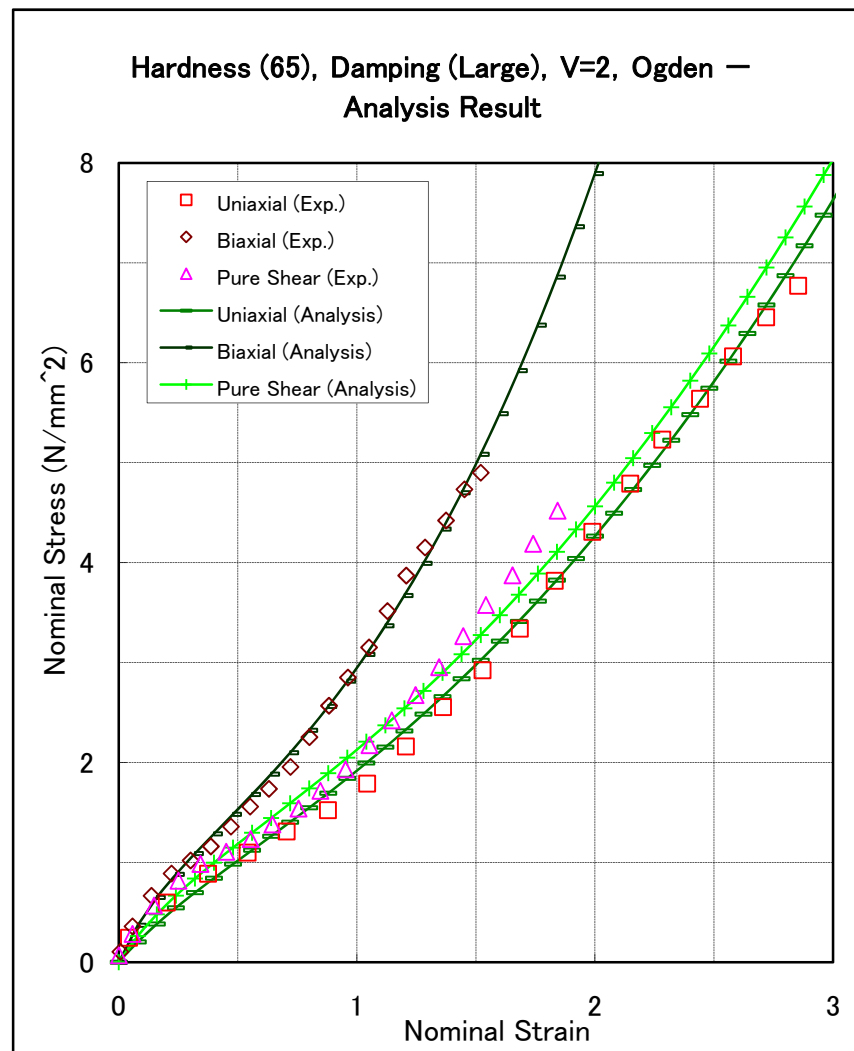
Biaxial



Pure Shear



Analysis model



Analysis result:
Stress-strain relationship

Identification for Ogden model: Hardness (65), Damping (Large), V=20

ABAQUS

Ogden model

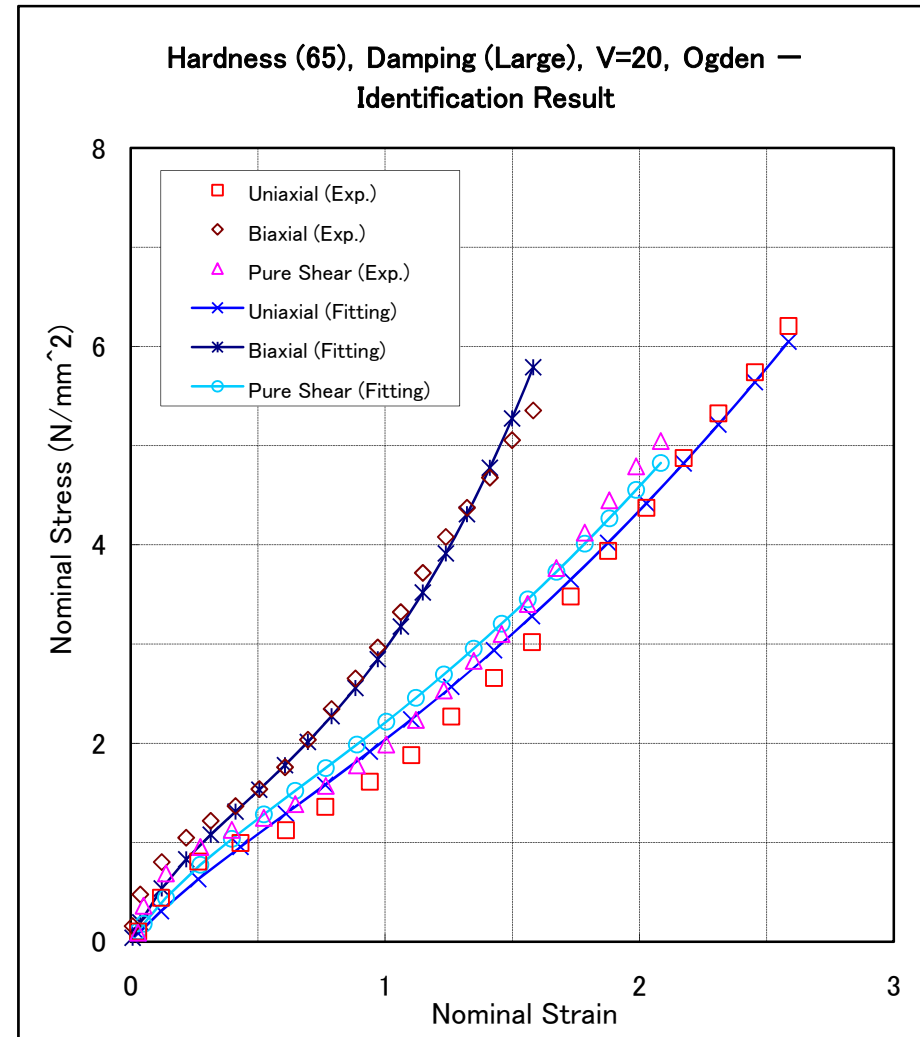
$$W = \sum_{n=1}^N \frac{2\mu_n}{\alpha_n^2} \left[(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient		
Order	μ	α
1	0.690417	2.95991
2	0.198209	0.728887
3	0.0444301	-2.77098
4	0.0217895	0.283368



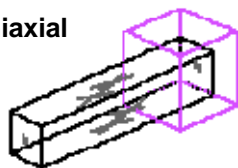
**Identification result:
Stress-strain relationship**

Analysis with Ogden model: Hardness (65), Damping (Large), V=20

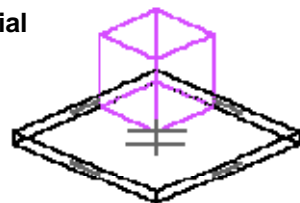
ABAQUS

Input File: ys_nll_v20_abaqus_o.inp

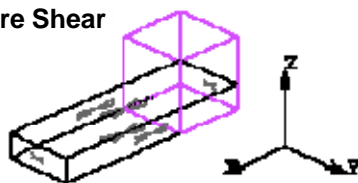
Uniaxial



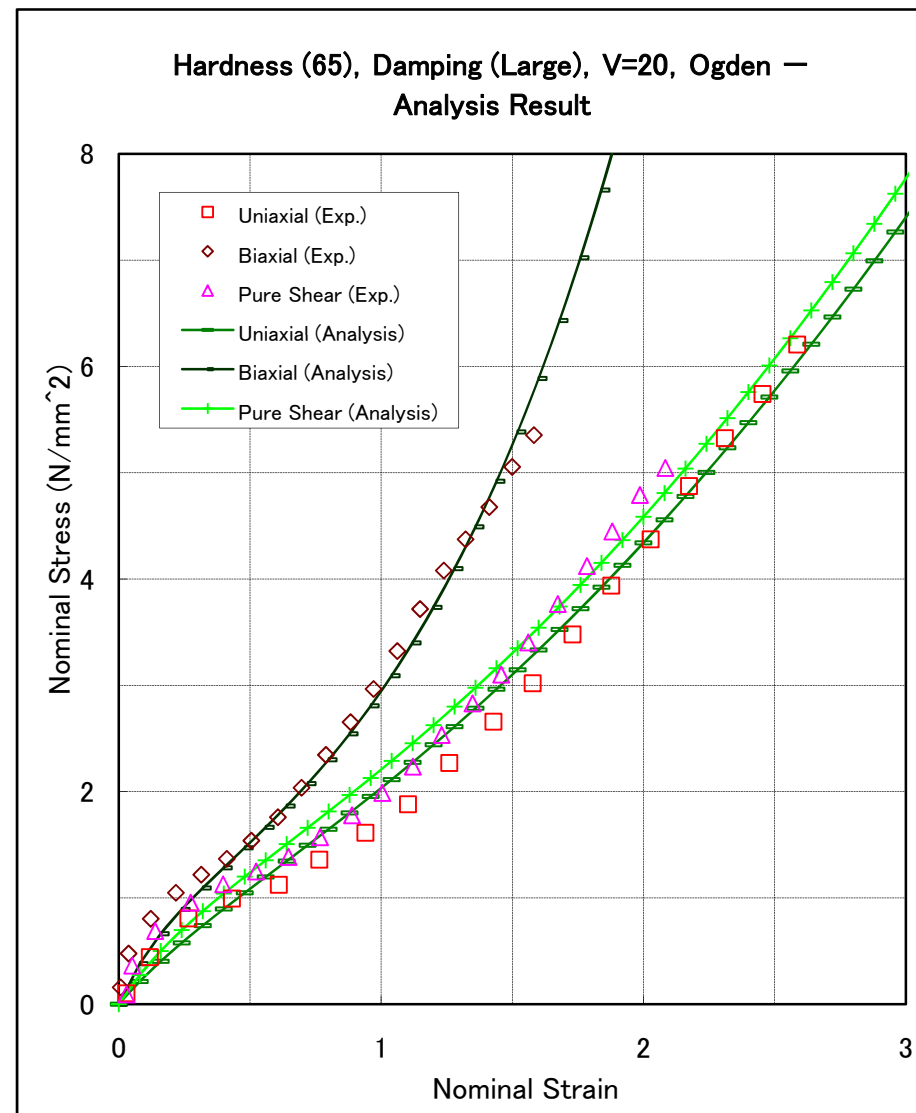
Biaxial



Pure Shear



Analysis model



Analysis result:
Stress-strain relationship