

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

ADINA

Mooney model

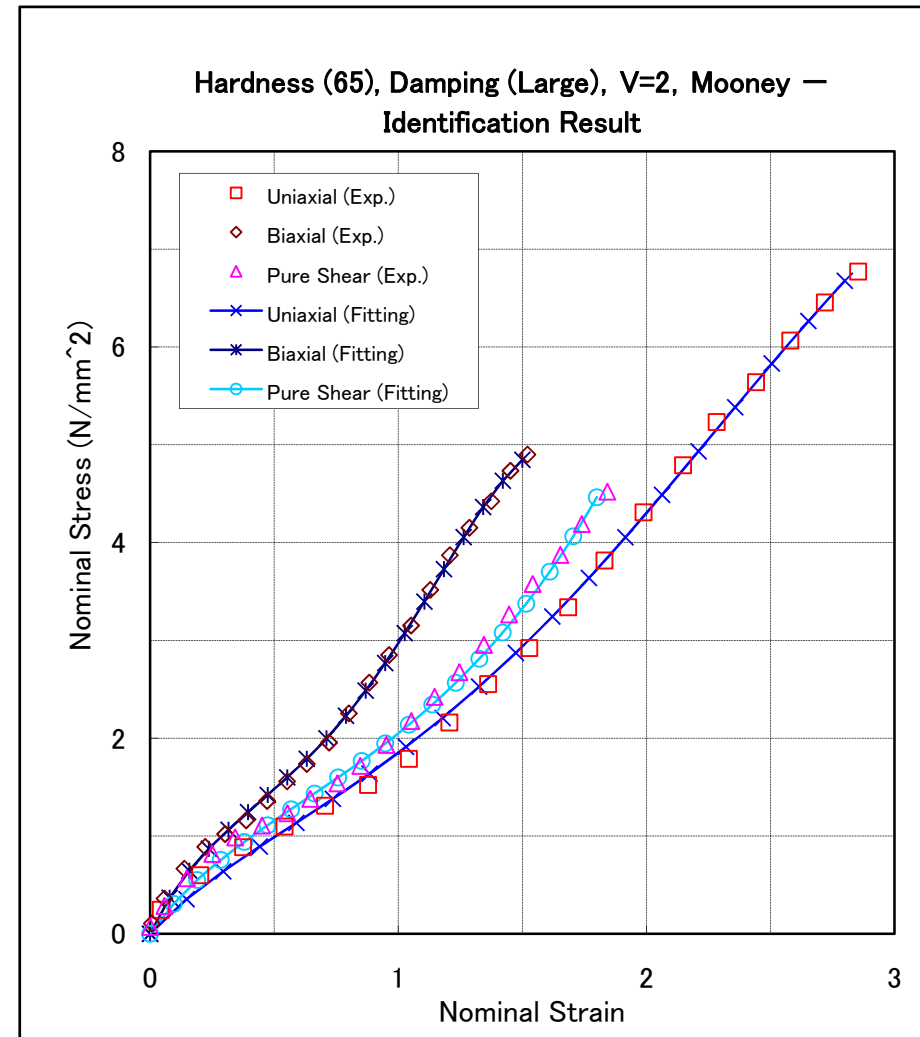
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient	
C10 (C1)	0.4207
C01 (C2)	0.037363
C20 (C3)	0.031085
C11 (C4)	-0.020296
C02 (C5)	0.0030342
C30 (C6)	-0.0018482
C21 (C7)	0.0049359
C12 (C8)	-0.0014495
C03 (C9)	0.00011178
C40 (C10)	—



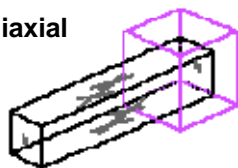
Identification result:
Stress-strain relationship

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

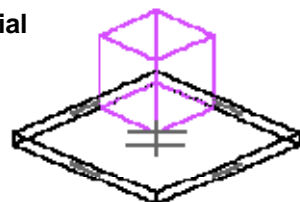
ADINA

Input File: v2_uni_m.in (Uniaxial)
v2_shear_m.in (Biaxial)
v2_bi_m.in (Pure shear)

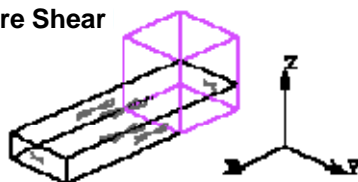
Uniaxial



Biaxial

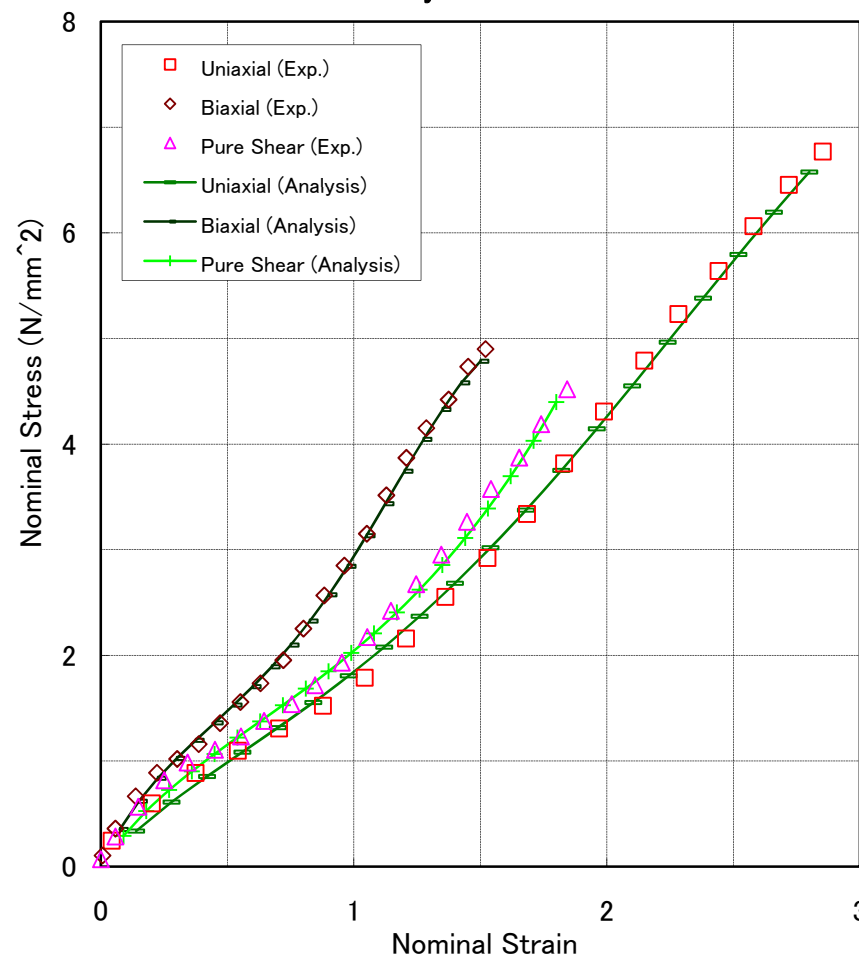


Pure Shear



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

ADINA

Mooney model

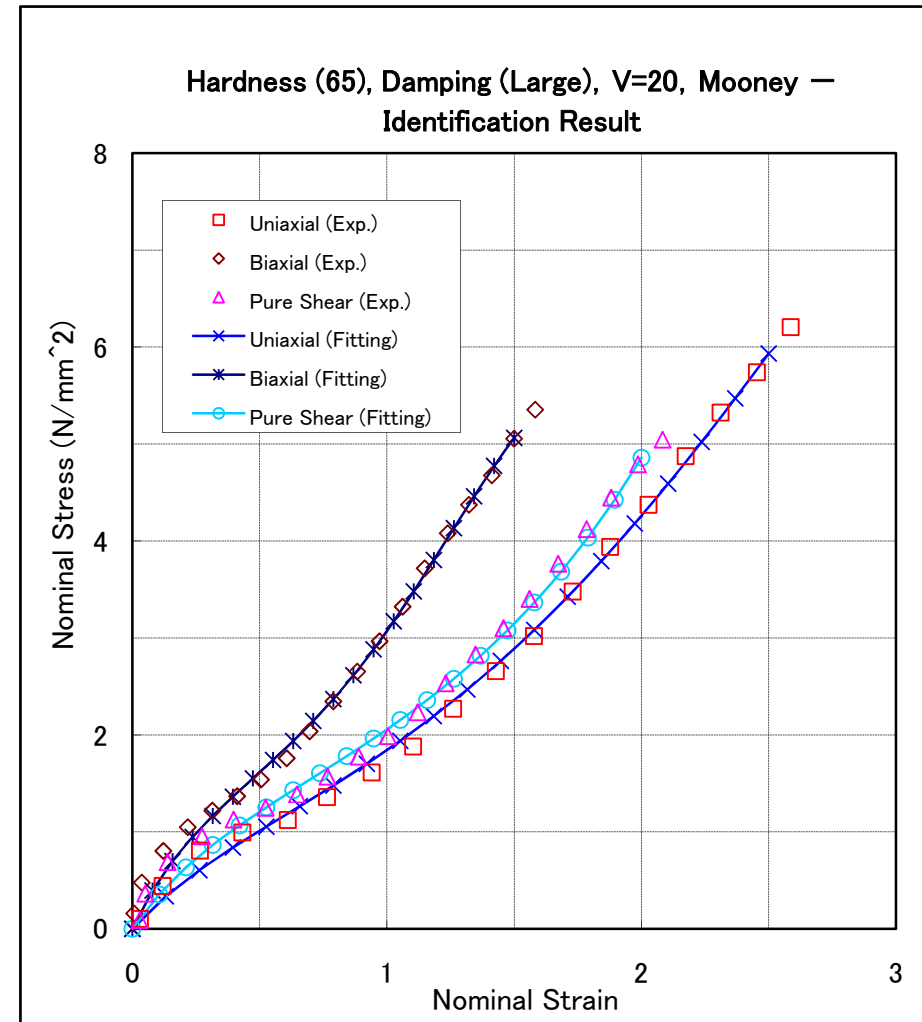
$$W = \sum_{m=1}^N \sum_{n=1}^N C_{mn} (I_1 - 3)^m (I_2 - 3)^n$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient	
C10 (C1)	0.409638437
C01 (C2)	0.077090402
C20 (C3)	0.032400818
C11 (C4)	-0.028535741
C02 (C5)	0.005422042
C30 (C6)	-0.001280409
C21 (C7)	0.00371864
C12 (C8)	-0.001203862
C03 (C9)	9.07E-05
C40 (C10)	—



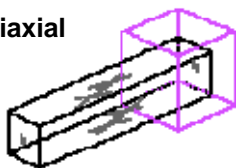
Identification result:
Stress-strain relationship

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

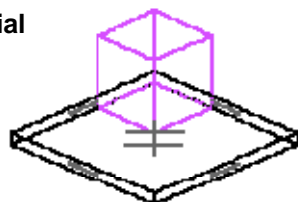
ADINA

Input File: v20_uni_m.in (Uniaxial)
v20_bi_m.in (Biaxial)
v20_shear_m.in (Pure shear)

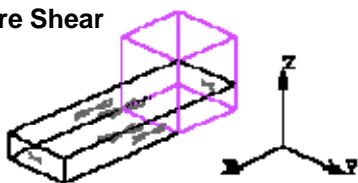
Uniaxial



Biaxial

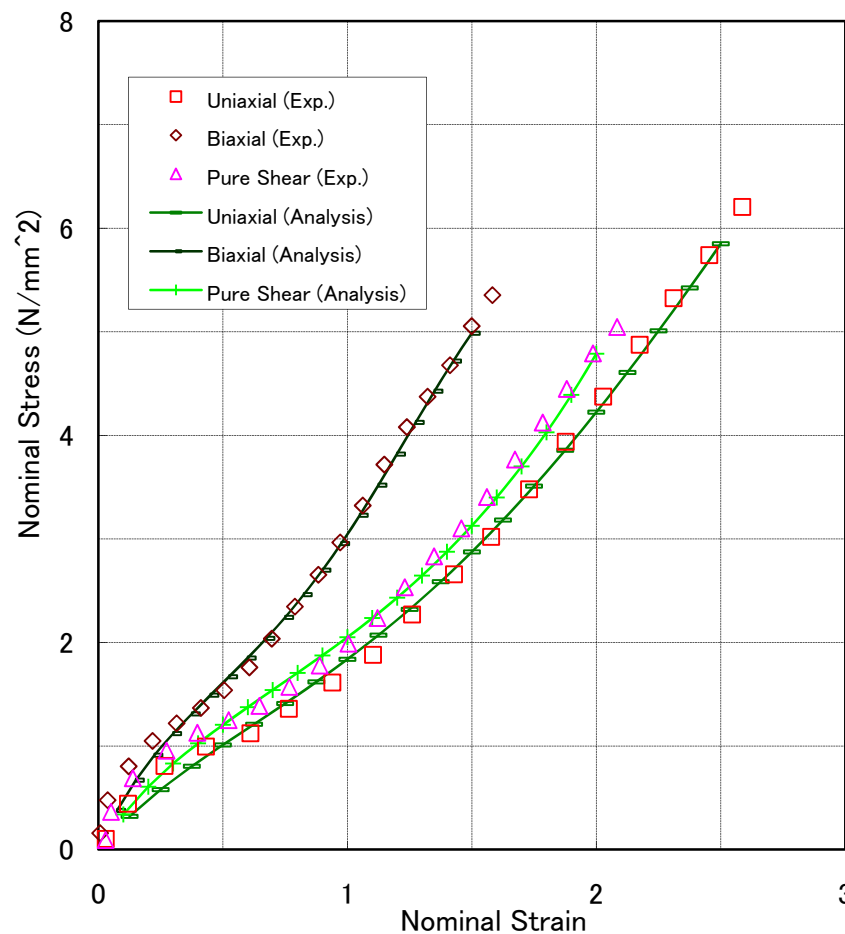


Pure Shear



Analysis model

Hardness (65), Damping (Large), V=20, Mooney —
Analysis Result



Analysis result:
Stress-strain relationship

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

ADINA

Ogden model

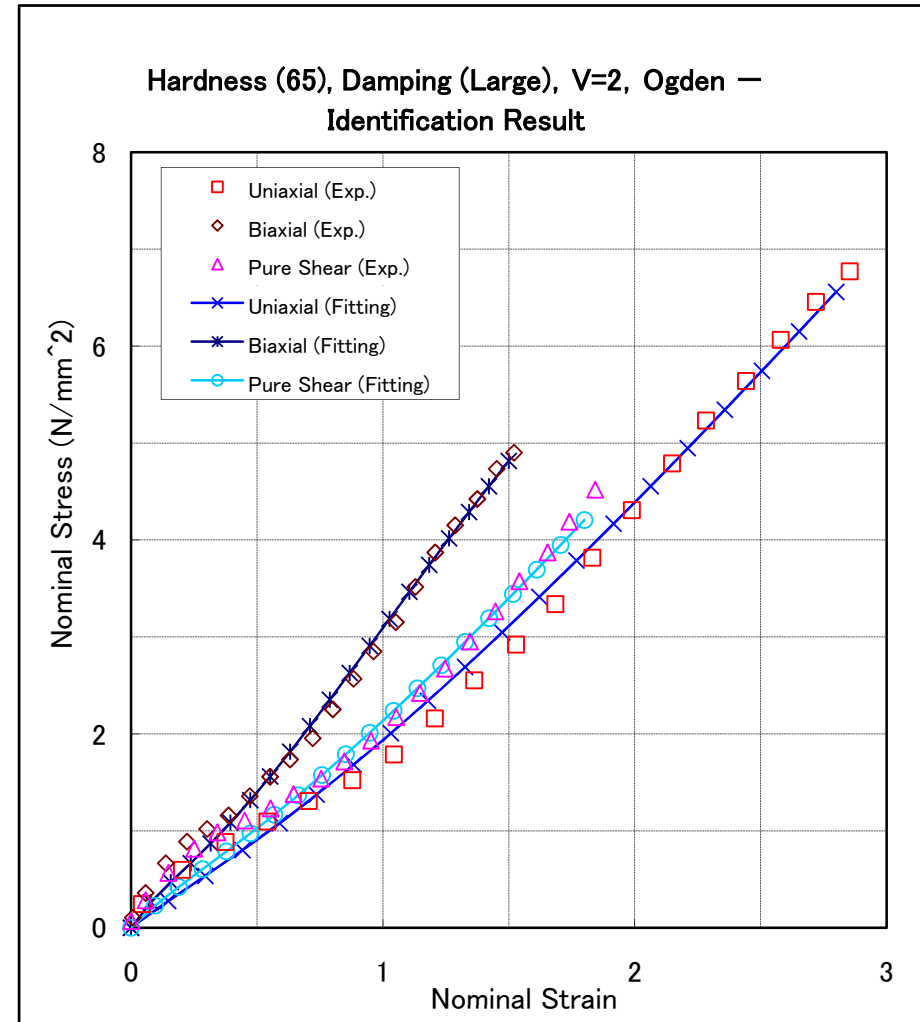
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

2 mm/s

Coefficient

Coefficient		
Order	μ	α
1	0.088780568	-2
2	-2.036799133	-1
3	-6.693789758	1
4	3.09096573	2

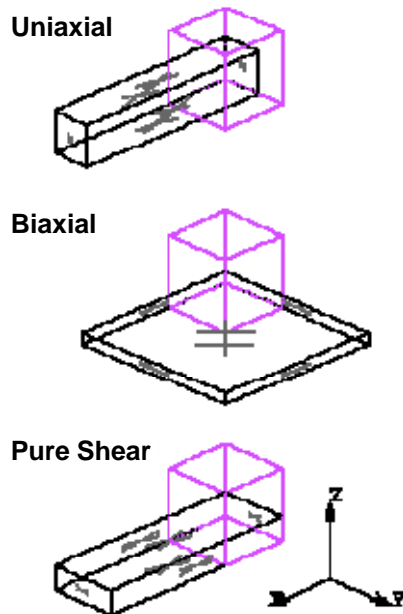


Identification result:
Stress-strain relationship

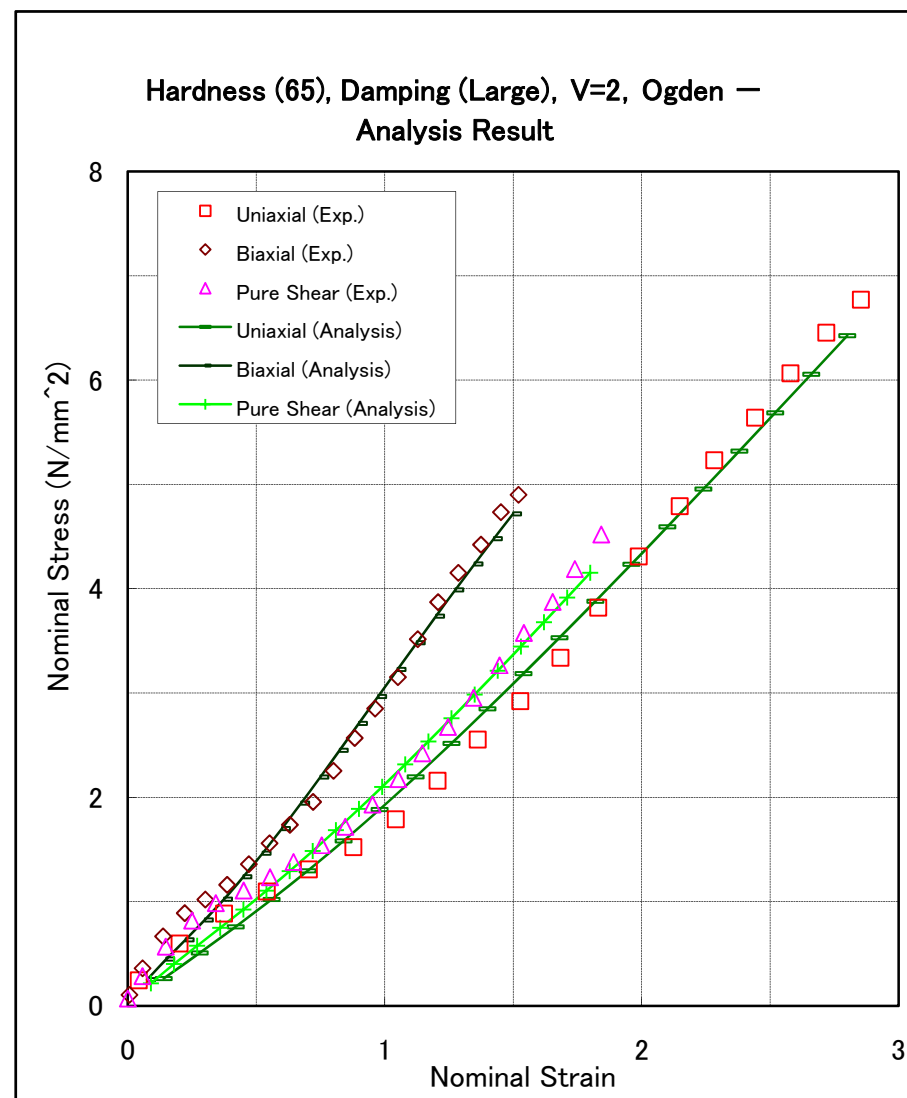
Analysis with Ogden model: Hardness (65), Damping (Large), V=2

ADINA

Input File: v2_uni_og.in (Uniaxial)
v2_bi_og.in (Biaxial)
v2_shear_og.in (Pure Shear)



Analysis model



Analysis result:
Stress-strain relationship

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

ADINA

Ogden model

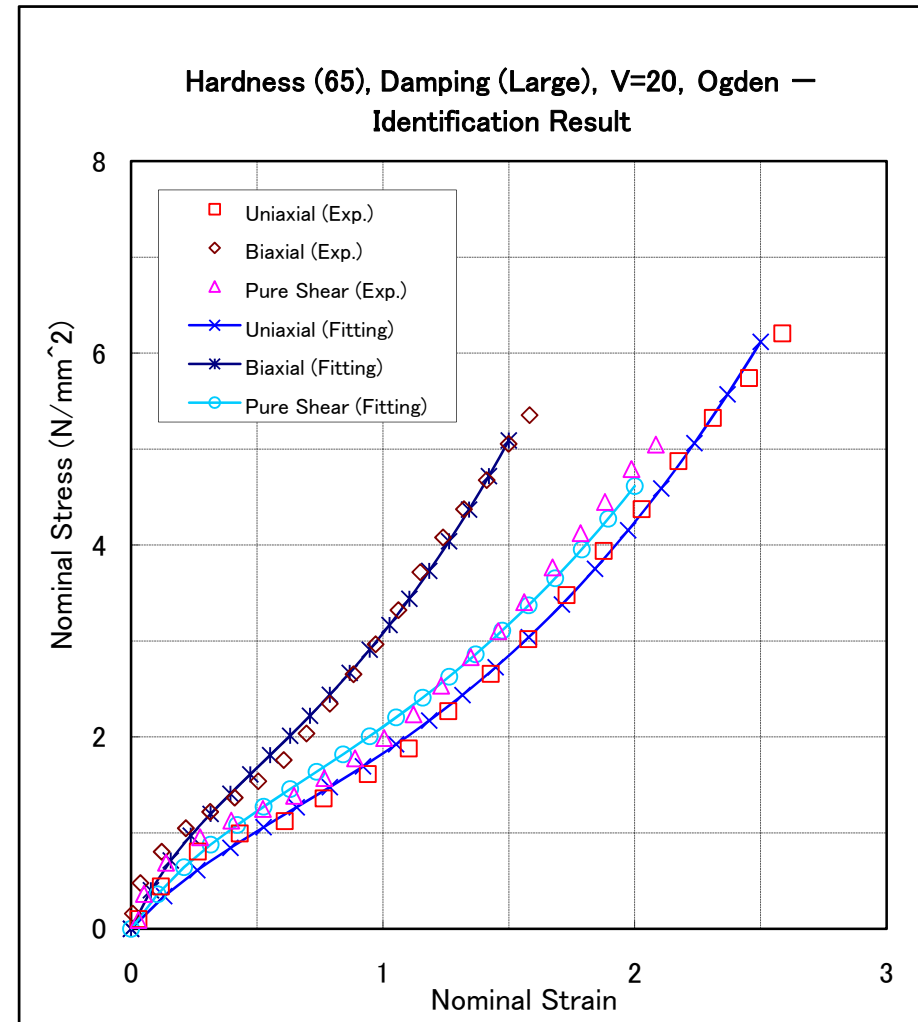
$$W = \sum_{n=1}^N \frac{\mu_n}{\alpha_n} \left[(\lambda_1^{\alpha_n} + \lambda_2^{\alpha_n} + \lambda_3^{\alpha_n}) - 3 \right]$$

Rate of Loading in Tension Test(s)

20 mm/s

Coefficient

Coefficient		
Order	μ	α
1	-0.138903014	-2
2	0.017908193	-1
3	1.253926591	1
4	0.114976036	4

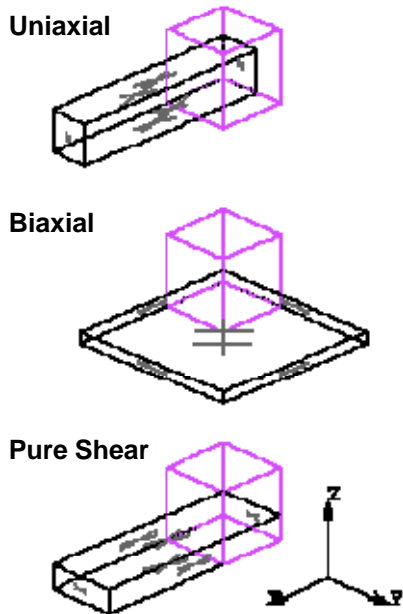


Identification result:
Stress-strain relationship

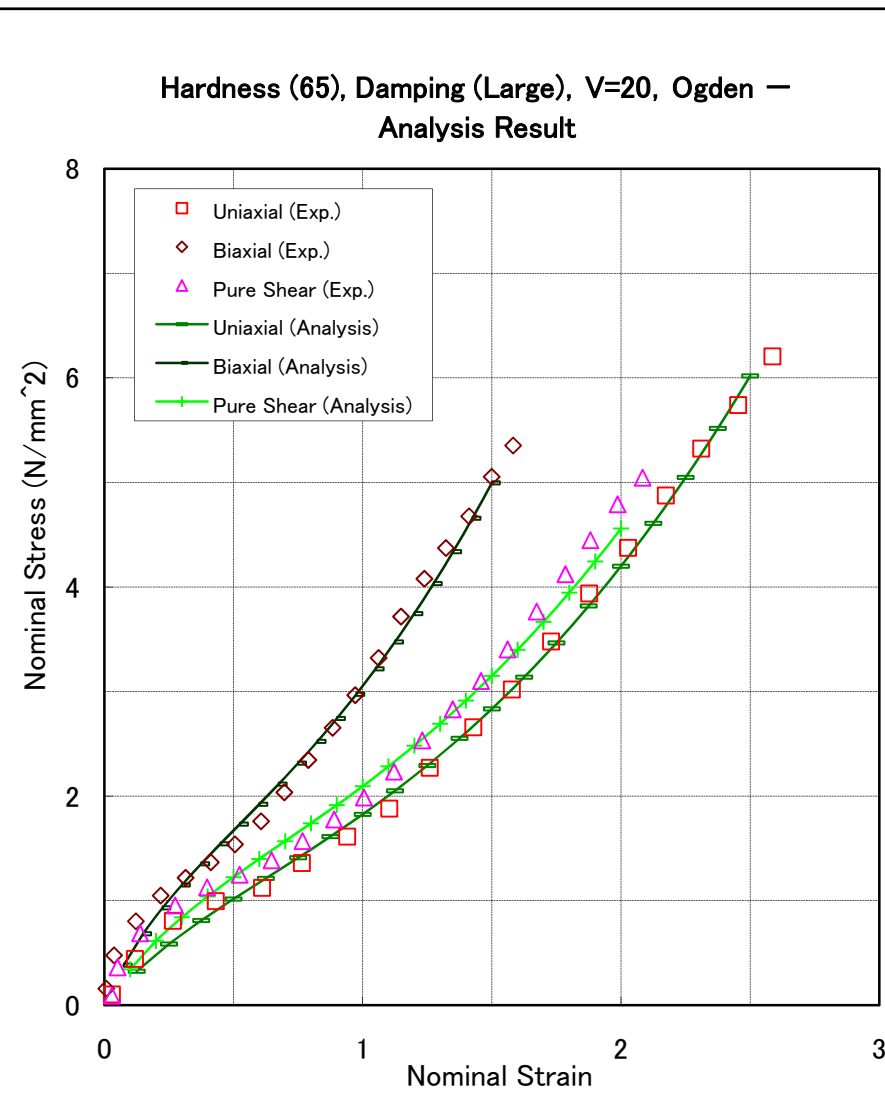
Analysis with Ogden model: Hardness (65), Damping (Large), V=20

ADINA

Input File: v20_uni_og.in (Uniaxial)
v20_bi_og.in (Biaxial)
v20_shear_og.in (Pure shear)



Analysis model



Analysis result:
Stress-strain relationship