

YIELD LOCUS OF: Eskal300-1.5kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA_{pre,m} = 1528 Pa

Raw data:

N_{pre} = 3,4592 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	2677,0	11,640	0,5202	2,1458	1,0530
4	1	2677,0	11,760	0,5202	2,1935	1,0649
2	1	2677,0	11,690	1,6412	2,1776	1,6133
3	1	2677,0	11,730	2,7674	2,1895	2,0345

Stresses:

Tau_{pre,m} = 1521 PaSIGMA_{pre,m} = 1528 Pa

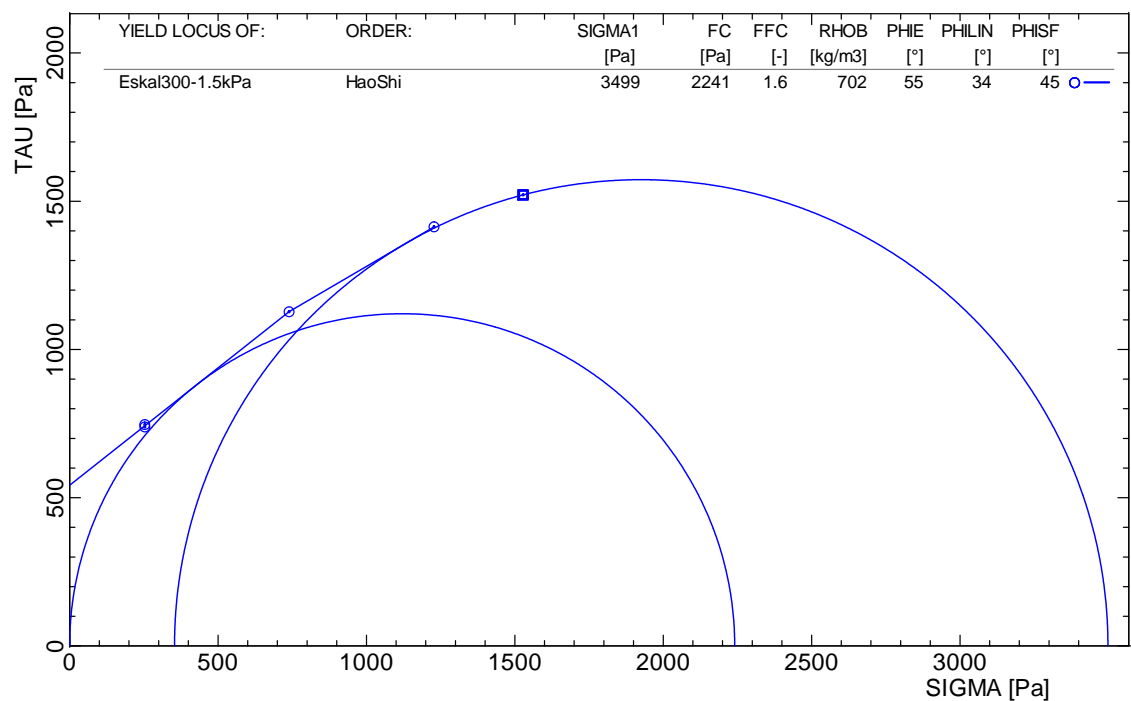
No.	SIGMA _{sh} [Pa]	TAU _{pre} [Pa]	TAU _{sh} [Pa]	TAU _{sh,pr} [Pa]	RHOB [kg/m3]
1	253	1500	736	747	701
4	253	1533	744	739	704
2	739	1522	1128	1127	702
3	1228	1530	1422	1414	703

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU _C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
3499	2241	1,56	1,10	542	702	54,7	34,1	44,9

Approximation of the yield locus: Straight sections

Prorating: on



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Mean normal stress at preshear: SIGMA_{pre,m} = 1528 Pa

Raw data:

N_{pre} = 3,4592 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	2679,5	11,290	0,6918	2,0941	1,1325
5	1	2679,5	11,480	0,6918	2,1855	1,1603
2	1	2679,5	11,360	1,3837	2,1418	1,4822
3	1	2679,5	11,410	2,0755	2,1617	1,7723
4	1	2679,5	11,440	2,7674	2,1815	2,0345

Stresses:

Tau_{pre,m} = 1505 PaSIGMA_{pre,m} = 1528 Pa

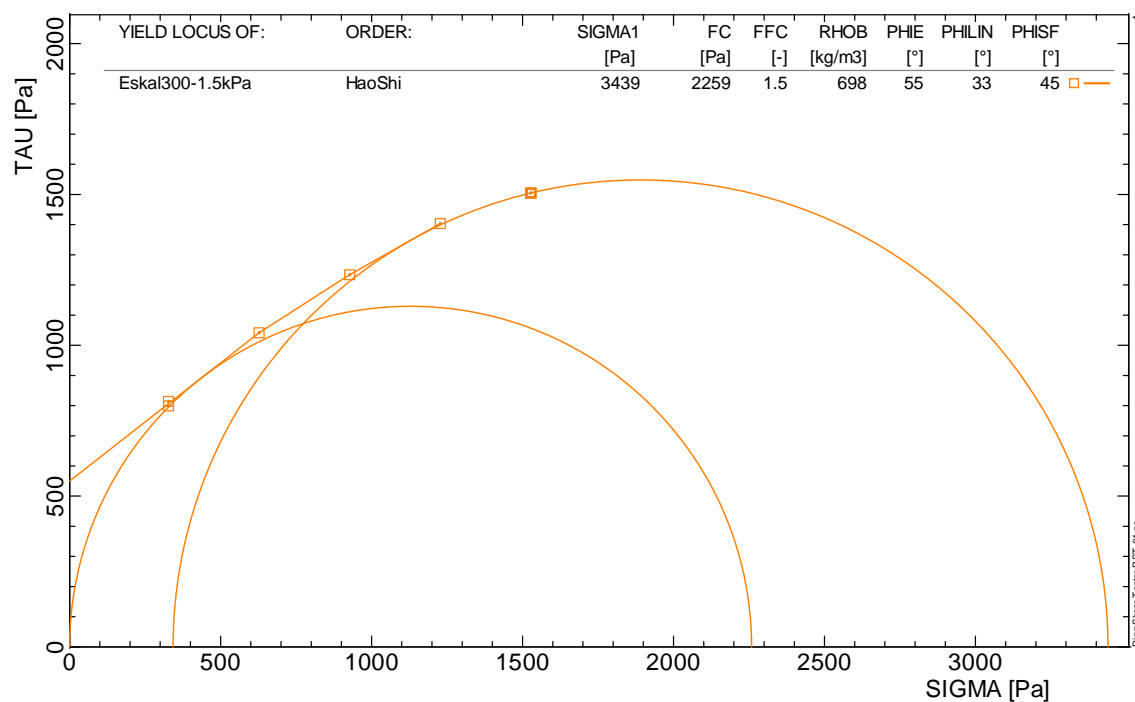
No.	SIGMA _{sh} [Pa]	TAU _{pre} [Pa]	TAU _{sh} [Pa]	TAU _{sh,pr} [Pa]	RHOB [kg/m3]
1	327	1464	792	814	696
5	328	1528	811	799	700
2	627	1497	1036	1041	697
3	928	1511	1239	1234	699
4	1228	1525	1422	1403	699

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU _C [Pa]	RHOB [kg/m3]	PHIE [°]	PHILIN [°]	PHISF [°]
3439	2259	1,52	1,06	550	698	55,0	33,4	44,6

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal300-1.5kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA_{pre,m} = 1528 Pa

Raw data:

N_{pre} = 3,4592 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	2692,1	10,720	0,6918	2,1140	1,1285
5	1	2692,1	10,860	0,6918	2,1577	1,1524
2	1	2692,1	10,780	1,3837	2,1458	1,4862
3	1	2692,1	10,810	2,0755	2,1537	1,7564
4	1	2692,1	10,830	2,7674	2,1498	1,9988

Stresses:

Tau_{pre,m} = 1499 PaSIGMA_{pre,m} = 1528 Pa

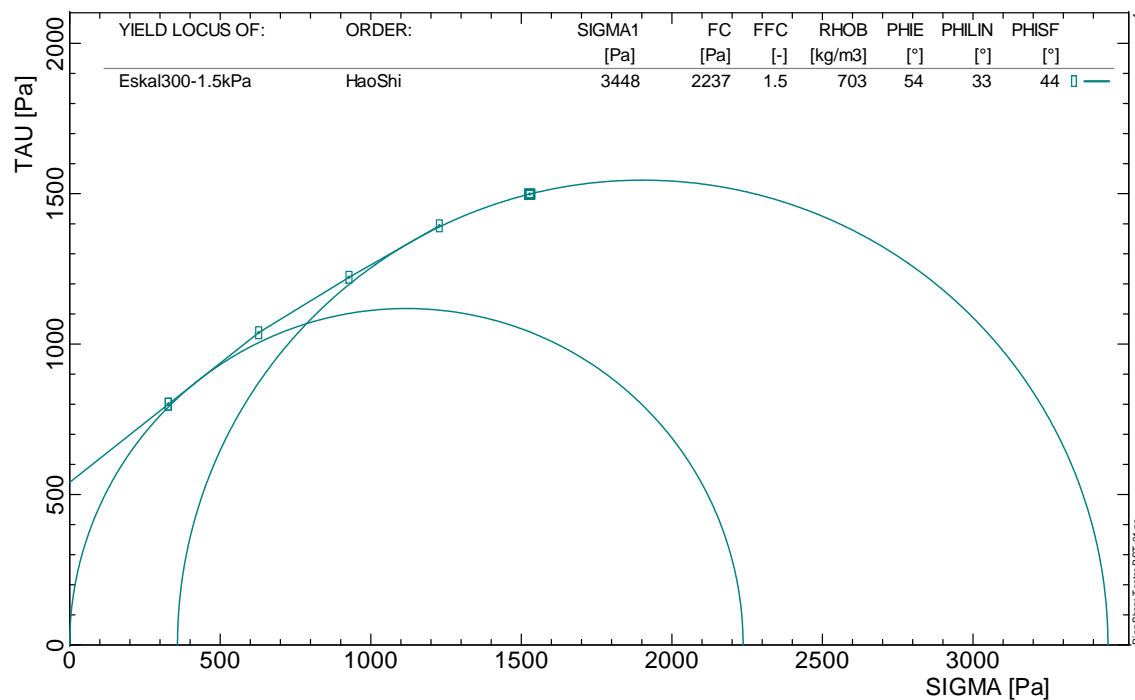
No.	SIGMA _{sh} [Pa]	TAU _{pre} [Pa]	TAU _{sh} [Pa]	TAU _{sh,pr} [Pa]	RHOB [kg/m ³]
1	328	1478	789	800	701
5	328	1508	805	800	704
2	628	1500	1039	1038	702
3	928	1505	1228	1222	703
4	1228	1503	1397	1393	703

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU _C [Pa]	RHOB [kg/m ³]	PHIE [°]	PHILIN [°]	PHISF [°]
3448	2237	1,54	1,08	541	703	54,3	32,9	44,4

Approximation of the yield locus: Straight sections

Prorating: on



YIELD LOCUS OF: Eskal300-2kPa

ORDER: HaoShi

Mean normal stress at preshear: SIGMA_{pre,m} = 2028 Pa

Raw data:

N_{pre} = 4,6106 kg

No.	Shear cell	m,tot [g]	Dh [mm]	N,sh [kg]	S,pre [kg]	S,sh [kg]
1	1	2671,0	12,310	0,6918	2,7935	1,3312
5	1	2671,0	12,450	0,6918	2,8610	1,3352
2	1	2671,0	12,380	1,6917	2,8531	1,8517
3	1	2671,0	12,410	2,6917	2,8571	2,2809
4	1	2671,0	12,430	3,6915	2,8571	2,6465

Stresses:

Tau_{pre,m} = 1988 PaSIGMA_{pre,m} = 2028 Pa

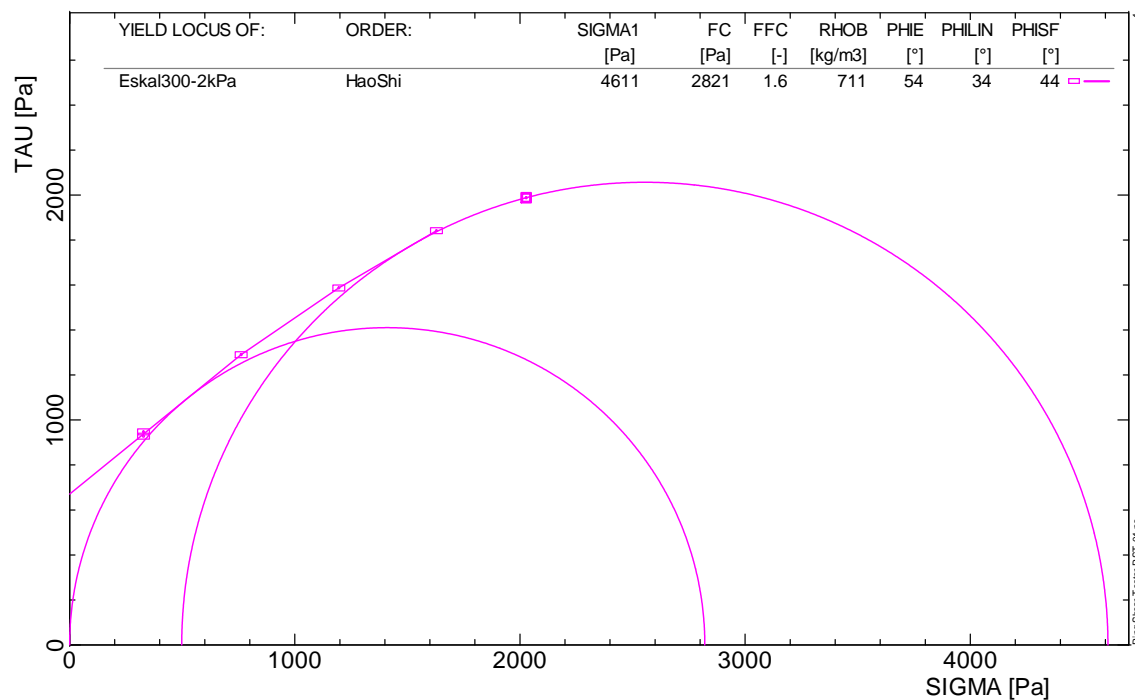
No.	SIGMA _{sh} [Pa]	TAU _{pre} [Pa]	TAU _{sh} [Pa]	TAU _{sh,pr} [Pa]	RHOB [kg/m ³]
1	328	1953	930	947	709
5	328	2000	933	928	713
2	762	1994	1294	1290	711
3	1195	1997	1594	1587	712
4	1629	1997	1850	1842	712

Parameters of yield locus (flow properties):

SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	TAU _C [Pa]	RHOB [kg/m ³]	PHIE [°]	PHILIN [°]	PHISF [°]
4611	2821	1,63	1,16	671	711	53,6	34,4	44,4

Approximation of the yield locus: Straight sections

Prorating: on



Flowability (summary of test results for yield loci)

Bulk solid	Order	SIGMA1 [Pa]	FC [Pa]	FFC [-]	FFRHO [-]	RHOB [kg/m3]
Eskal300-1.5kPa	HaoShi	3499	2241	1,56	1,10	702
Eskal300-1.5kPa	HaoShi	3439	2259	1,52	1,06	698
Eskal300-1.5kPa	HaoShi	3448	2237	1,54	1,08	703
Eskal300-2kPa	HaoShi	4611	2821	1,63	1,16	711

Approximation of the yield loci: Straight sections

Prorating: on

