



**Combined State Binder
Group**

Method of Acceptance for
Asphalt Binders

Round Robin 2006-3

Summary B

**COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
SUMMARY B**

PG 64-28P

Supplier Number	Rotational Viscosity (Pa.s) @135°C	DSR Original (kPa) @64°C	DSR Phase Angle @64°C	DSR RTFO (kPa) @64°C	Elastic Recovery (%) @25°C	DSR PAV (kPa) @22°C	Mass Loss (%) @163°C	BBR S-value (MPa) @-18°C	BBR m-value @-18°C
IADOT	0.623	1.31	79.5	2.85	65	2,627	-0.215	235	0.323
MIDOT	0.600	1.21	79.8	2.75	68	2,216	-0.275	202	0.321
MNDOT	0.587	1.20	79.9	3.10		2,663	-0.267	201	0.298
NCSPC	0.628	1.28	79.6	2.91		2,373	-0.236	230	0.316
NDDOT	0.580	1.22	80.4	2.65	64	2,478	-0.265	208	0.307
NEDOR	0.600	1.27	79.7	2.92	65	2,750	-0.269	245	0.315
SDDOT	0.679	1.29	79.7	2.78	69	2,898	-0.210	235	0.314
UW	0.555	1.10	79.2	3.17		2,910	-0.076	233	0.325
WISDOT	0.630	1.20	79.7	2.60		2,494	-0.221	204	0.314
07	0.657	1.20	80.2	2.63	63	2,957	-0.219	226	0.317
12	0.592	1.24	80.0	2.75	60	2,652	-0.295	230	0.326
16	0.625	1.23	79.6	2.76	65	2,808	-0.205	221	0.330
18	0.615	1.24	79.9	2.72	68	2,580	-0.253	212	0.322
22	0.598	1.24	80.0	2.63		1,622	-0.431	235	0.322
29	0.594	1.25	79.8	2.82	63	2,946	-0.307	237	0.317
35	0.690	1.47	78.9	3.25		2,604	-0.209	233	0.320
37	0.675	1.35	79.4	2.93	58	3,236	-0.218	201	0.330
42	0.647	1.26	78.2	2.69	70	2,433	-0.294	197	0.330
43	0.590	1.22	79.8	2.76	70	2,585	-0.231	234	0.332
46	0.633	1.35	80.0	2.94	66	2,868	-0.239	222	0.326
49	0.610	1.25	79.8	2.99	70	2,190	-0.330	223	0.325
61	0.613	1.28	78.9	2.71	68	4,552	-0.314	235	0.309
65	0.653	1.27	79.6	3.28		2,799	-0.157	220	0.310
69	0.678	1.26	80.0	2.56	64	2,775	-0.256	236	0.317
70	0.615	1.28	79.7	2.80		2,430	-0.290	220	0.329
77	0.643	1.51	79.1	3.34	75	2,790	-0.261	233	0.321
79	0.612	1.24	80.0	2.72	63	2,732	-0.326	235	0.321
95	0.628	1.31	79.8	2.96	73	2,226	-0.212	280	0.309
A	0.607	1.15	79.8	2.72	63	2,866	-0.378	244	0.324
B	0.546	1.18	79.9	2.90		3,031	-0.183	230	0.320
C	0.593	1.20	79.8	2.77	64	2,418	-0.248	239	0.314
E	0.613	1.27	79.8	2.80	64	2,540	-0.285	217	0.317
F	0.621	1.29	79.5	2.96	64	2,577	-0.232	240	0.317
J	0.638	1.26	79.8	2.74	65	2,558	-0.188	210	0.321
L	0.121	1.25	79.6	2.65	67	3,119	-0.360	228	0.323
M	0.537	1.31	79.8	2.82		2,810	-0.238	230	0.319
O	0.627	1.18	79.6	2.78	66	2,337	-0.200	227	0.321
P	0.589	1.22	80.3	2.70		2,509	-0.310	199	0.334
S	0.581	1.30	79.2	2.74		3,099	-0.278	231	0.316
T	0.608	1.22	79.8	2.85	63	2,718	-0.209	217	0.324
U	0.619	1.24	79.5	2.88	64	4,280	-0.220	221	0.329
Average	0.60	1.26	79.67	2.84	65.66	2,733	-0.254	226	0.320
Std. Dev.	0.0843	0.0731	0.3990	0.1832	3.6661	487.58	0.0627	15.70	0.0074
Coef. of Var.	13.972	5.814	0.501	6.460	5.584	17.840	24.696	6.955	2.315

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A	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
51	0.610	1.13	79.9	2.70	63	2,855	-0.393	253	0.324
97	0.608	1.15	79.8	2.76	63	2,945	-0.394	239	0.323
98	0.604	1.16	79.8	2.69	63	2,799	-0.347	239	0.324
Average	0.607	1.15	79.8	2.72	63	2,866	-0.378	244	0.324

B	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
01	0.592	1.20	79.9	2.88		2,432	-0.186	235	0.320
17	0.595	1.22	79.9	2.88		4,143	-0.163	225	0.318
45	0.450	1.13	79.8	2.95		2,519	-0.199	230	0.321
Average	0.546	1.18	79.9	2.90		3,031	-0.183	230	0.320

C	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
21	0.592	1.18	79.9	2.56	64	2,159	-0.237	241	0.315
28	0.589	1.20	79.5	2.75	65	2,423	-0.286	239	0.318
66	0.594	1.19	79.9	2.71	64	2,421	-0.232	234	0.315
90	0.593	1.21	80.0	2.90	64	2,366	-0.267	240	0.311
99	0.598	1.20	79.9	2.91	64	2,722	-0.220	242	0.309
Average	0.593	1.20	79.8	2.77	64	2,418	-0.248	239	0.314

E	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
15	0.613	1.29	79.8	2.73	64	2547	-0.317	211	0.318
89	0.613	1.24	79.7	2.86	64	2533	-0.253	222	0.315
Average	0.613	1.27	79.8	2.80	64	2,540	-0.285	217	0.317

F	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
02	0.620	1.29	79.5	3.09	64	2,840	-0.230	241	0.311
11	0.639	1.29	79.3	3.02	64	2,699	-0.233	250	0.314
34	0.629	1.28	79.7	2.89	64	2,617	-0.233	237	0.317
48	0.608	1.27	79.8	2.83	64	2,465	-0.236	233	0.321
56	0.612	1.27	79.4	2.95	64	2,340	-0.237	247	0.316
62	0.616	1.33	79.4	2.98	65	2,501	-0.223	231	0.320
Average	0.621	1.29	79.5	2.96	64	2,577	-0.232	240	0.317

J	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
05	0.633	1.24	79.9	2.74	67	2,579	-0.191	206	0.323
08	0.644	1.31	79.7	2.70	66	2,589	-0.174	206	0.314
10	0.638	1.22	79.7	2.65	65	2,573	-0.182	214	0.325
31	0.637	1.27	79.8	2.80	66	2,619	-0.199	214	0.320
38	0.640	1.23	79.7	2.90	65	2,708	-0.195	215	0.320
41	0.641	1.30	79.5	2.66	65	2,405	-0.176	220	0.324
44	0.637	1.27	79.8	2.64	65	2,708	-0.193	205	0.324
52	0.638	1.26	79.9	2.66	65	2,511	-0.190	186	0.316
74	0.638	1.27	79.8	2.92	65	2,330	-0.192	221	0.322
Average	0.638	1.26	79.8	2.74	65	2,558	-0.188	210	0.321

L	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
25	0.123	1.24	79.6	2.75	67	3,197	-0.274	235	0.323
59	0.118	1.25	79.6	2.55	67	3,040	-0.445	221	0.323
Average	0.121	1.25	79.6	2.65	67	3,119	-0.360	228	0.323

M	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
04	0.540	1.33	79.7	2.81		2,774	-0.232	231	0.315
47	0.535	1.28	79.8	2.81		2,818	-0.243	228	0.326
57	0.537	1.31	80.0	2.85		2,837	-0.239	230	0.316
Average	0.537	1.31	79.8	2.82		2,810	-0.238	230	0.319

O	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
76	0.629	1.15	79.7	2.88	66	2645	-0.205	236	0.32
85	0.625	1.2	79.5	2.68	66	2028	-0.195	218	0.322
Average	0.627	1.18	79.6	2.78	66	2,337	-0.200	227	0.321

P	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
71	0.588	1.23	80.1	2.76		2,599	-0.387	198	0.328
73	0.590	1.21	80.4	2.63		2,419	-0.233	200	0.340
Average	0.589	1.22	80.3	2.70		2,509	-0.310	199	0.334

S	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
53	0.581	1.34	79.1	2.64		2971	-0.259	228	0.315
64	0.581	1.26	79.2	2.84		3226	-0.297	233	0.316
Average	0.581	1.3	79.2	2.74		3099	-0.278	231	0.316

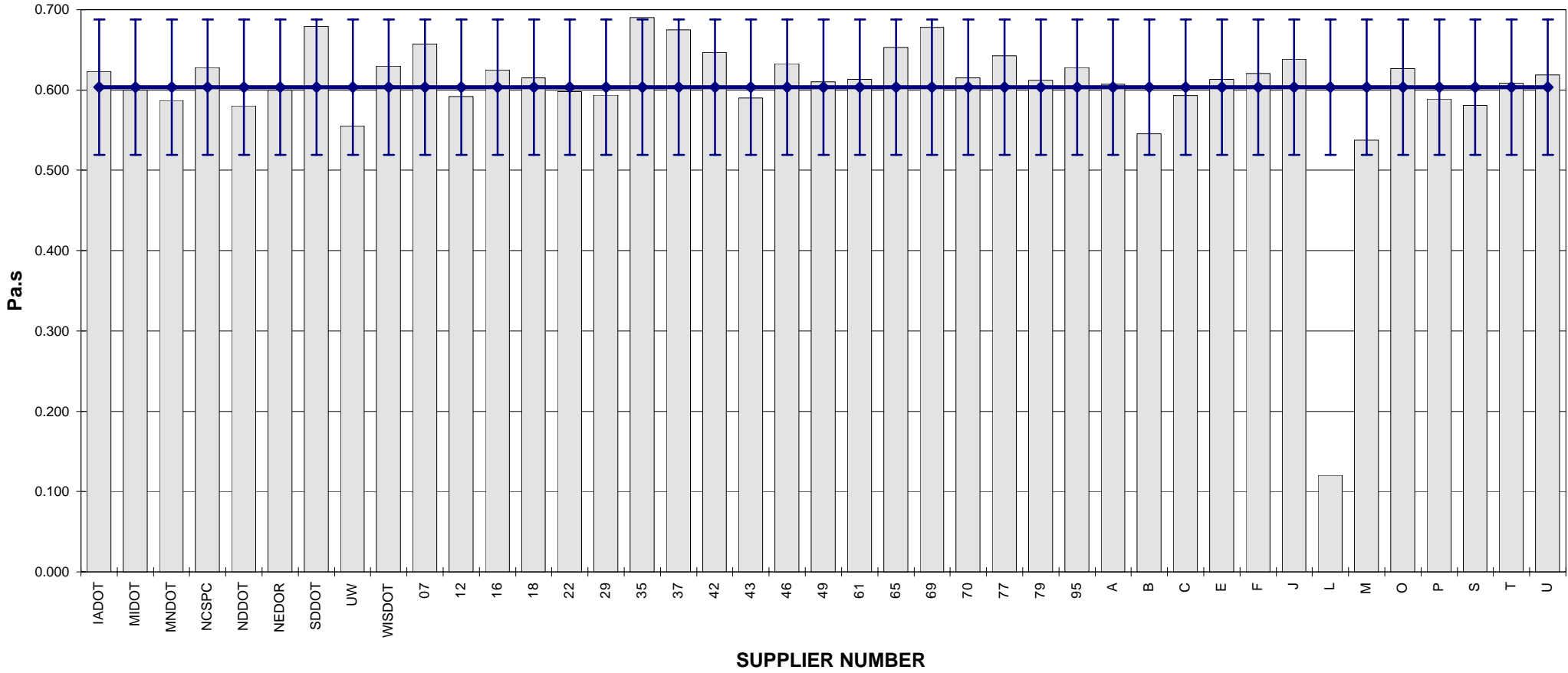
T	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
39	0.612	1.24	79.8	2.84	63	2669	-0.232	208	0.328
54	0.608	1.20	79.8	2.87	63	2726	-0.235	214	0.325
87	0.603	1.22	79.8	2.80	63	2804	-0.177	224	0.320
88	0.610	1.22	79.7	2.87	63	2672	-0.191	222	0.322
Average	0.608	1.22	79.8	2.85	63	2718	-0.209	217	0.324

U	Rot. Visc.	ODSR	Phase An	RTFO DSR	Elas Rec	PAVDSR	Mass Loss	S-value	m-value
13	0.615	1.22	79.4	2.96	65	4228	-0.197	224	0.316
24	0.620	1.29	79.5	2.94	63	4379	-0.233	228	0.325
33	0.620	1.29	79.5	2.90	63	4343	-0.227	216	0.342
93	0.620	1.17	79.7	2.71	65	4171	-0.223	214	0.331
Average	0.619	1.24	79.5	2.88	64	4280	-0.220	221	0.329

COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
SUMMARY B

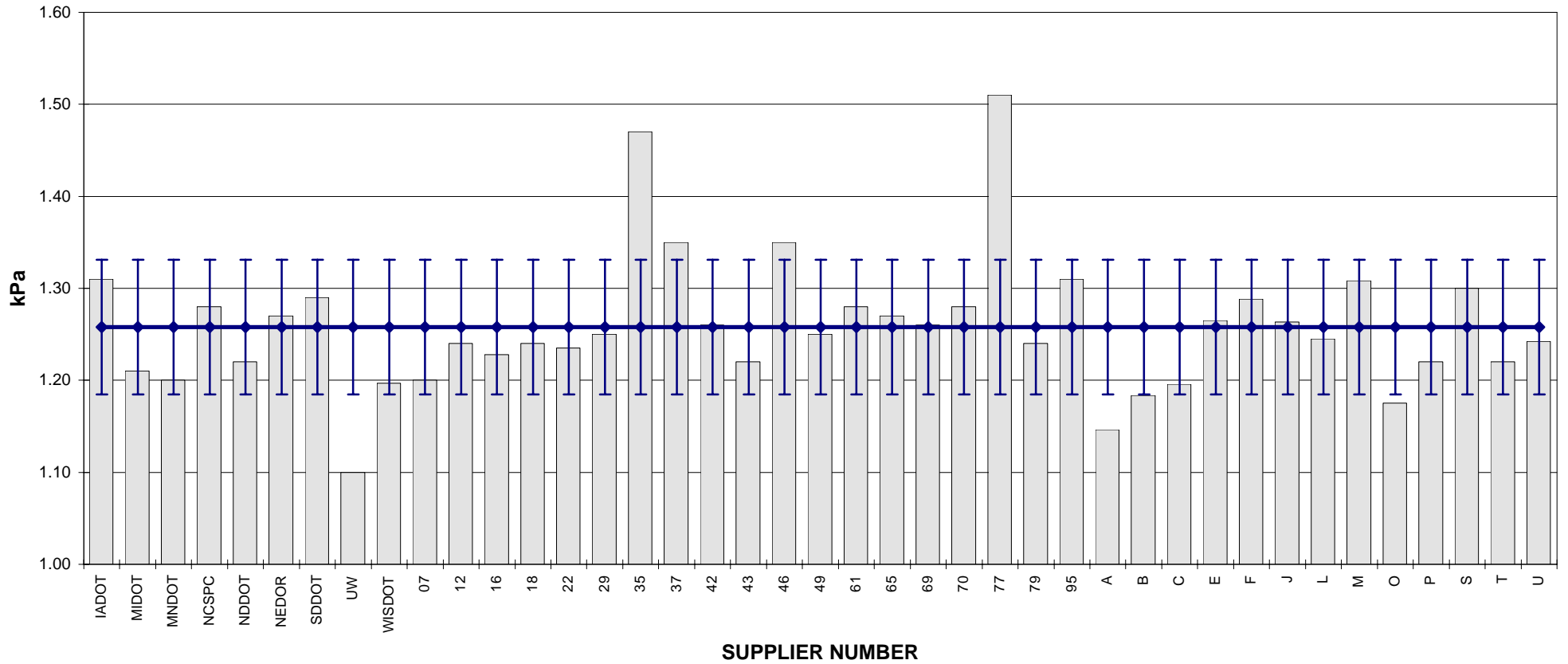
PG 64-28P

ROTATIONAL VISCOSITY



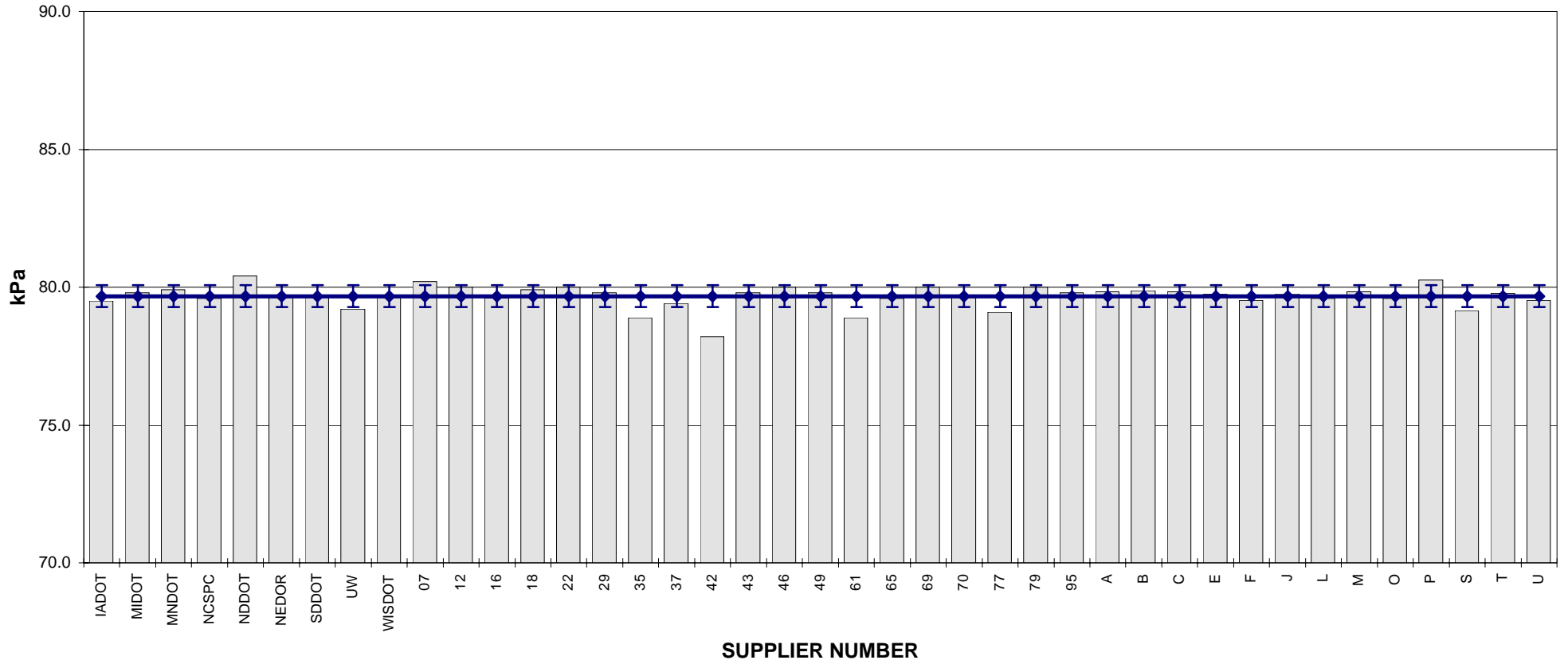
**COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
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DSR - ORIGINAL



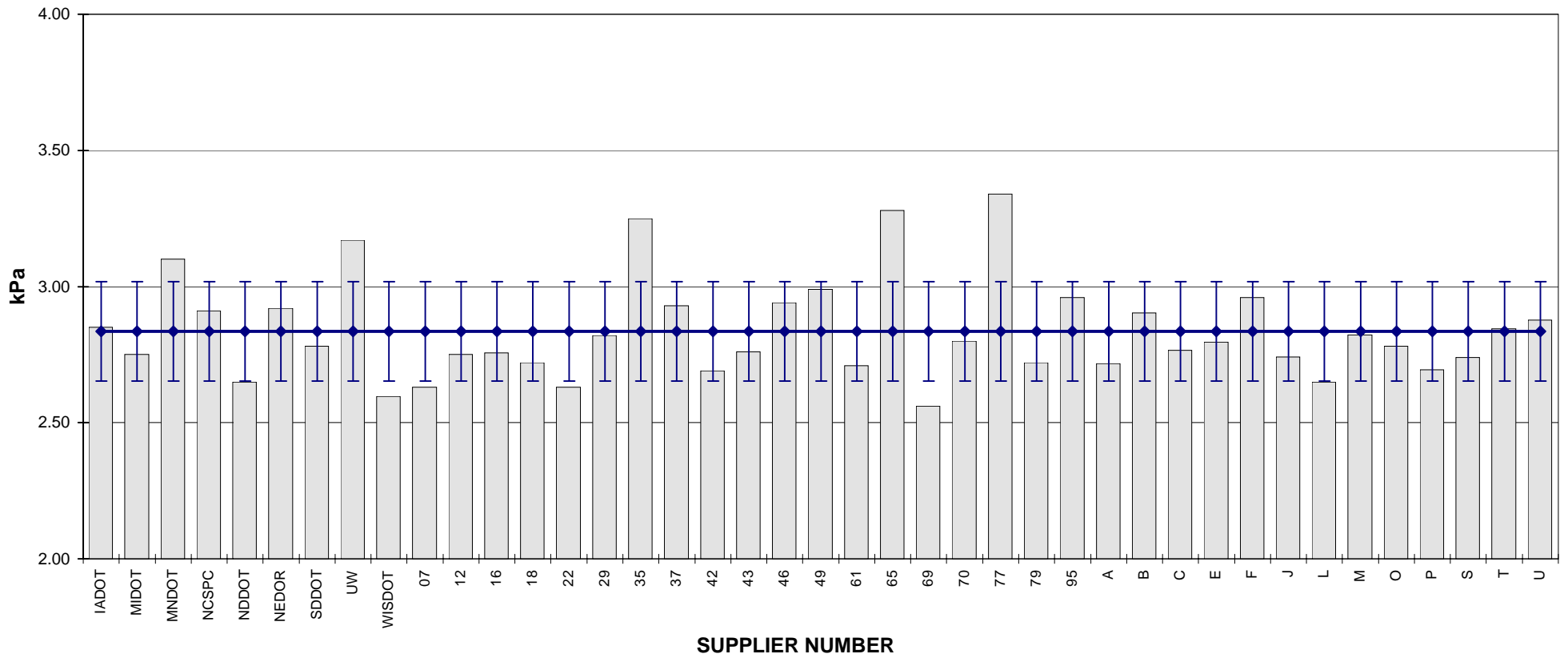
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DSR - PHASE ANGLE



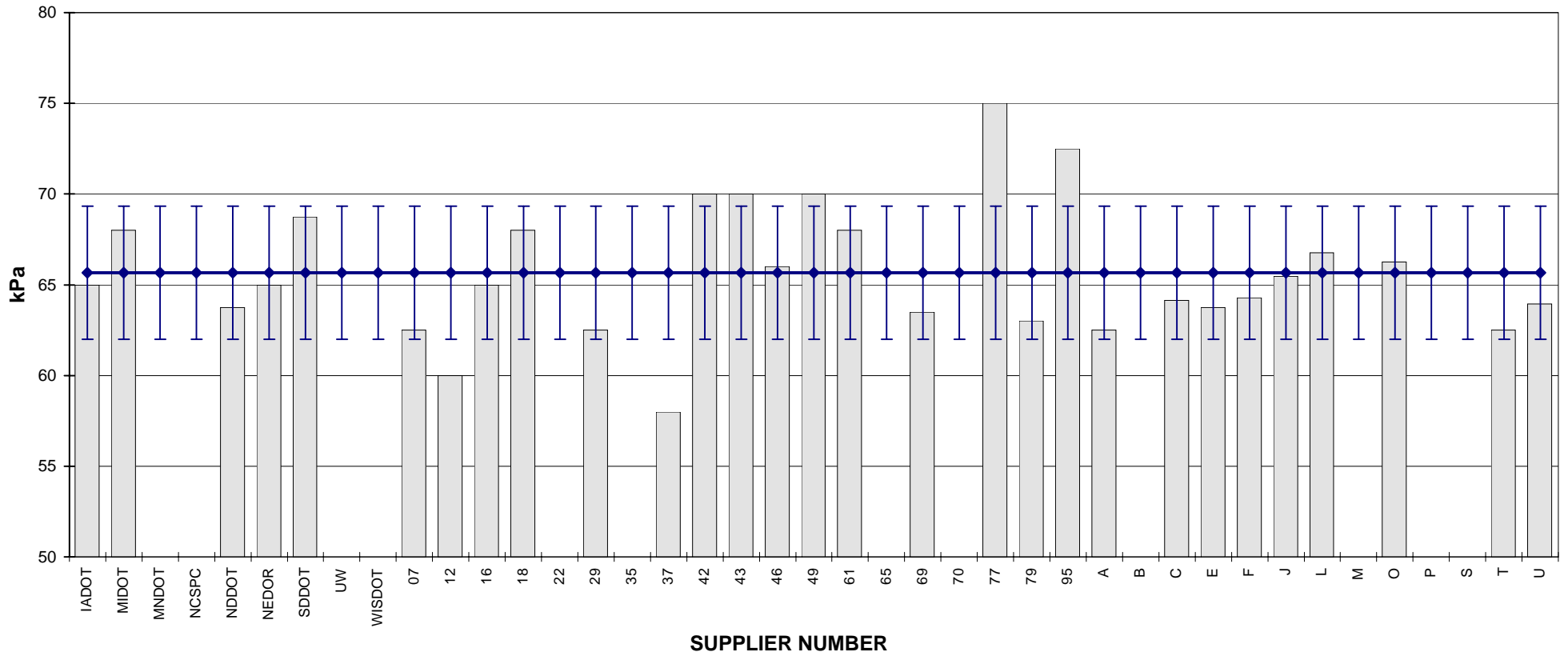
COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
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DSR - RTFO

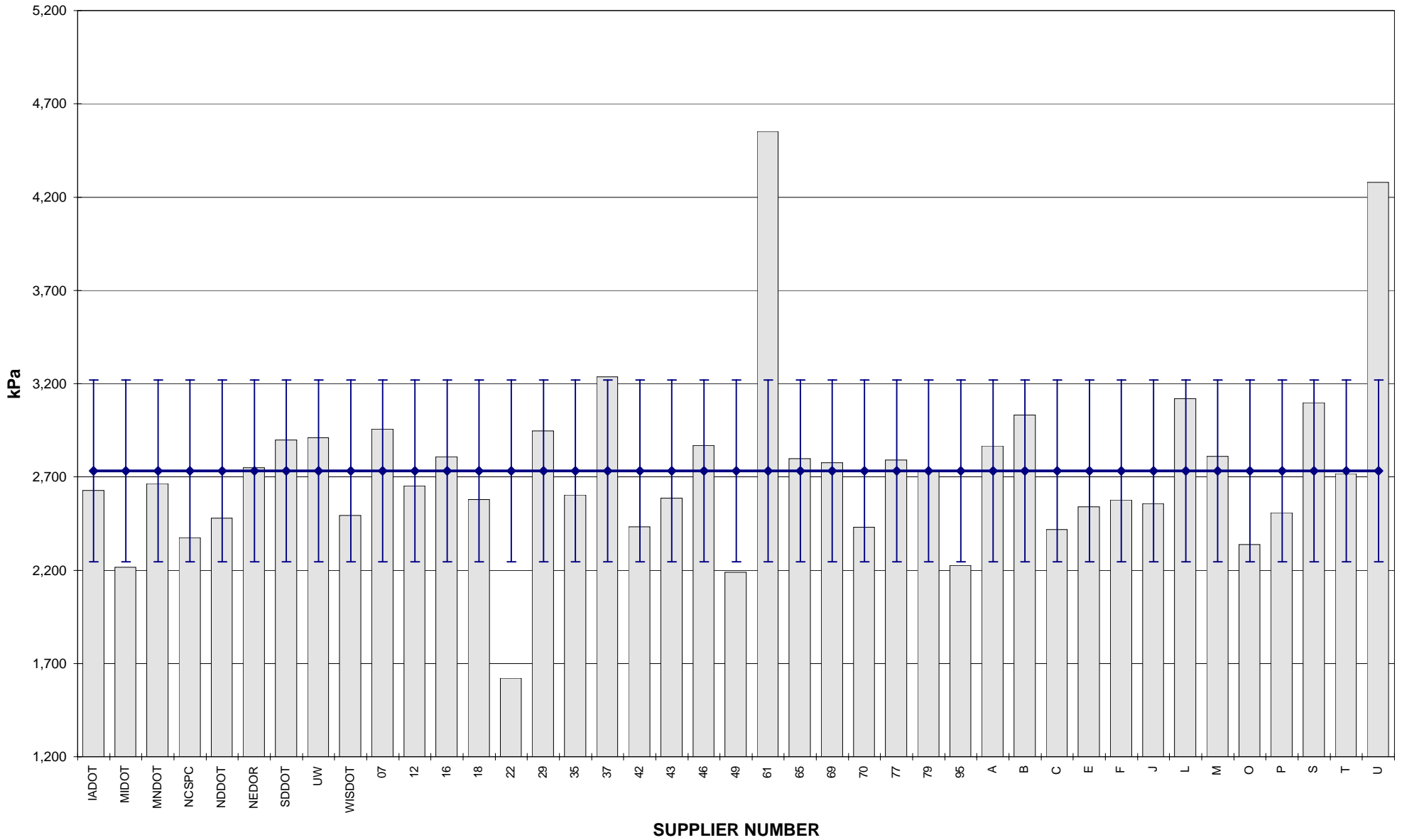


**COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
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PG 64-28P**

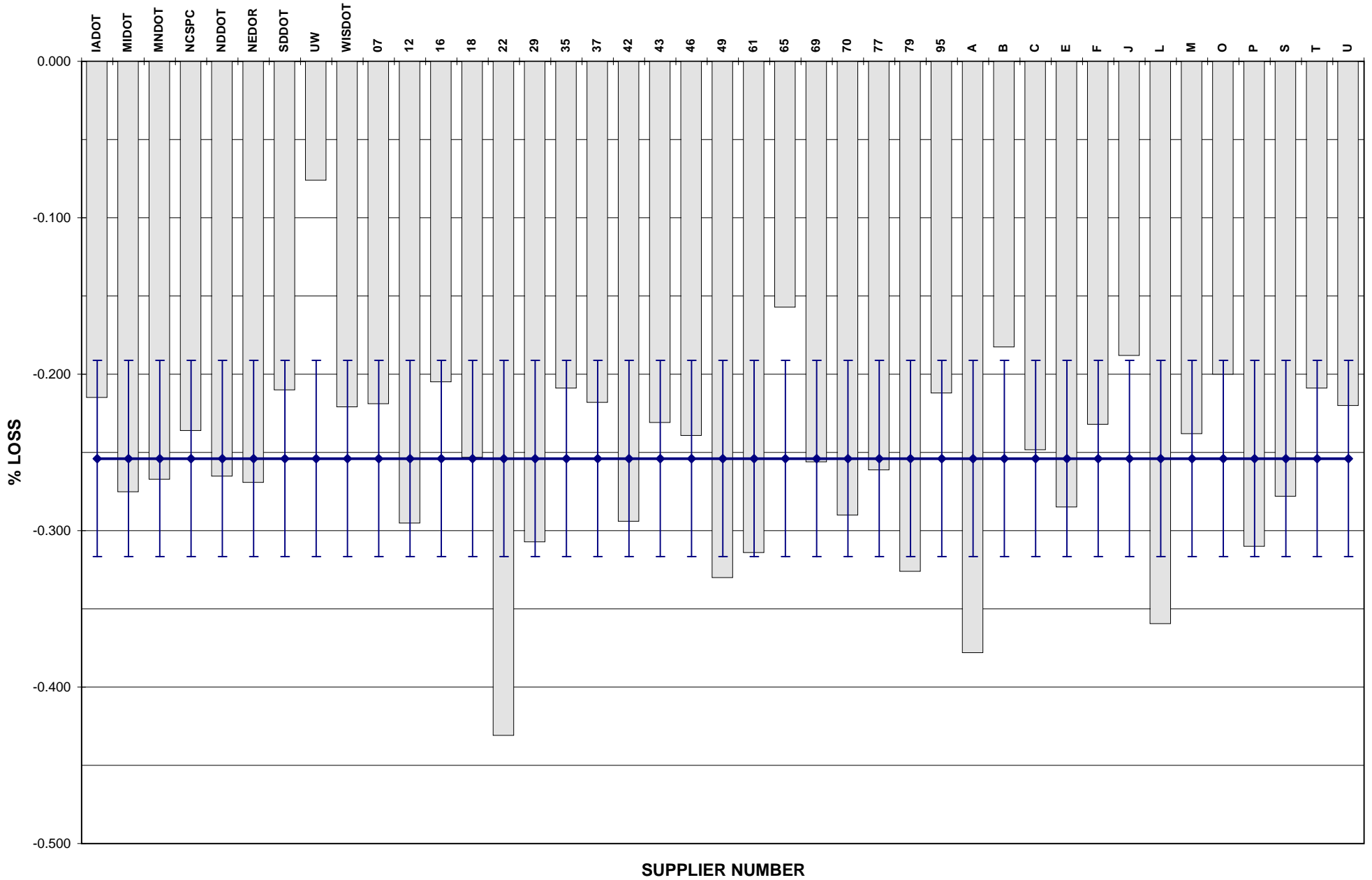
ELASTIC RECOVERY



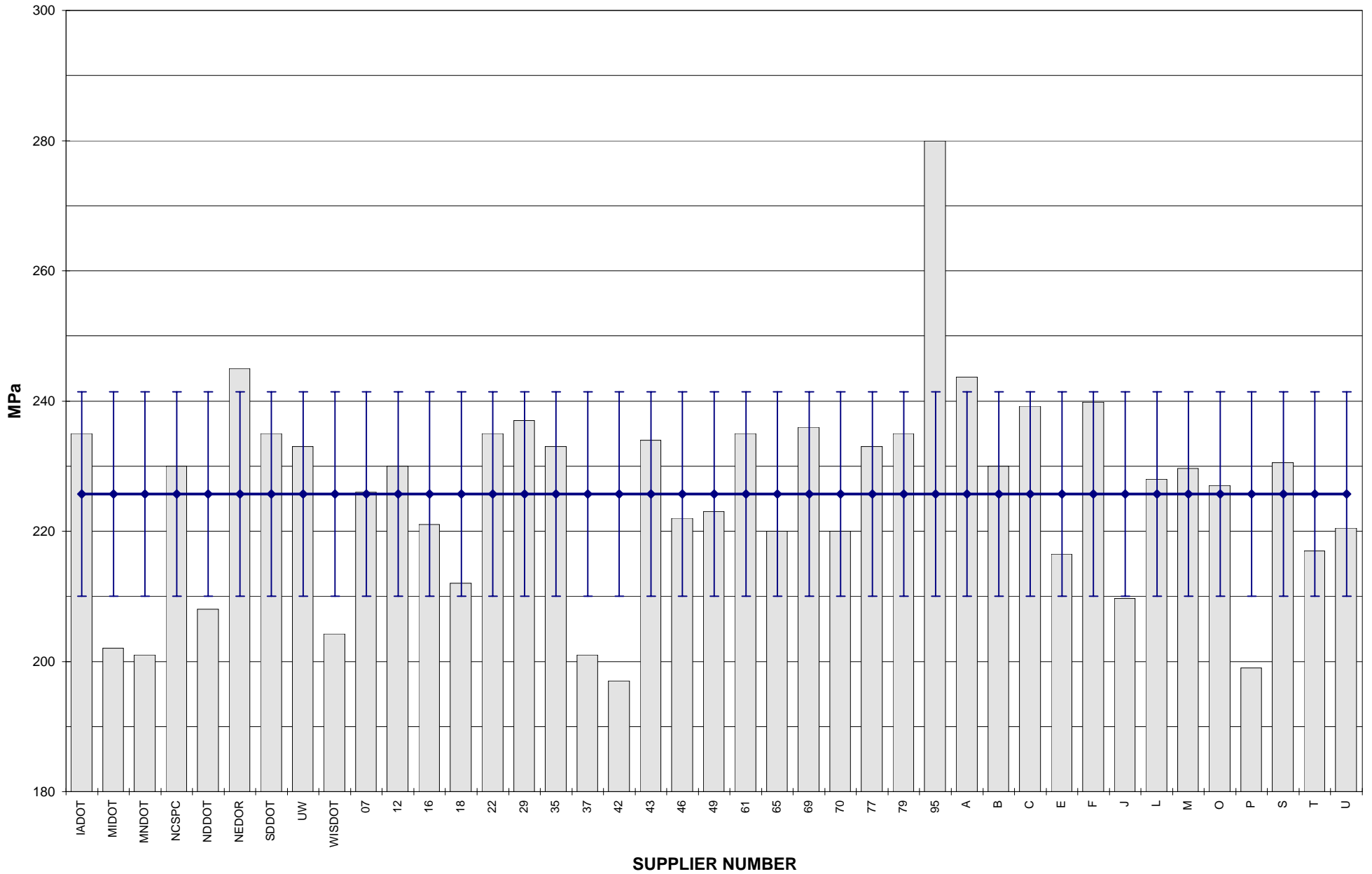
**COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
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DSR - PAV**



COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
SUMMARY B
PG 64-28P
RTFO MASS LOSS



COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
SUMMARY B
PG 64-28P
BBR STIFFNESS



COMBINED STATE BINDER GROUP ROUND ROBIN 2006-3
SUMMARY B
PG 64-28P
BBR m-VALUE

