

**COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3 SUMMARY B
PG 70-28**

Supplier Number	Rotational Viscosity (Pa.s) @135°C	DSR Original (kPa) @64°C	DSR RTFO (kPa) @64°C	DSR PAV (kPa) @22°C	Mass Loss (%) @163°C	BBR S-value (MPa) @-18°C	BBR m-value @-18°C
IADOT	0.923	1.44	3.06	1550	-0.273	181	0.322
MNDOT	0.837	1.49	3.45	1455	-0.349		0.318
NCSPC	0.941	1.45	3.22	1730	-0.351	172	0.325
NDDOT	0.880	1.47	3.20	1478	-0.296	175	0.331
NEDOR	0.968	1.51	3.42	1691	-0.258	194	0.324
SDDOT	0.946	1.47	3.40	1615	-0.288	178	0.309
UW	0.969	1.43	3.35	1980	-0.454	220	0.313
WISDOT	0.943	1.37	2.81	1871	-0.136	171	0.334
07	0.906	1.45	2.93	1649	-0.285	180	0.326
12	0.904	1.53	3.14	1550	-0.300	173	0.326
35	0.947	1.52	3.42	1260	-0.319	186	0.327
37	0.960	1.56	3.17	1879	-0.276	192	0.323
42							
43	0.912	1.46	3.33	1710	-0.300	192	0.321
49	0.905	1.49	3.31	1730	-0.374	190	0.333
60	0.970	1.41	2.87	1700	-0.334	192	0.328
65	0.948	1.62	3.49	1899	-0.373	152	0.323
69	0.913	1.44	2.93	1636	-0.300	191	0.323
70	0.890	1.50	3.61	1775	-0.285	186	0.328
77	0.860	1.54	3.81	1980	-0.398	191	0.322
83	0.945	1.52	3.26	1549	-0.287	182	0.333
95	0.925	1.51	3.43	1524	-0.235	178	0.325
A	0.880	1.47	3.23	1453	-0.283	194	0.331
B	0.891	1.40	3.40	1567	-0.253	176	0.325
C	1.288	1.31	3.00	1374	-0.529	248	0.328
E	0.986	1.34	3.16	1630	-0.305	174	0.327
F	1.395	1.43	3.08	1,692	-0.607	229	0.341
J	0.940	1.43	3.24	1662	-0.338	175	0.318
L	1.460	1.25	2.75	1455	-0.637	222	0.342
M	1.454	1.35	2.93	1305	-0.563	223	0.337
O	0.927	1.55	3.64	1,620	-0.210	176	0.319
P	1.289	1.38	2.67	1221	-0.526	212	0.352
S	1.001	1.49	3.56	1676	-0.385	200	0.323
U	0.944	1.42	3.33	1510	-0.281	179	0.331
V	1.257	1.33	2.94	1483	-0.686	213	0.347
Average	1.003	1.45	3.22	1,613	-0.355	191	0.327
Std. Dev.	0.1735	0.0784	0.2699	186.99	0.1268	20.32	0.0089
Coef. of Var.	17.300	5.407	8.377	11.589	35.722	10.650	2.707

COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B

A	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
19	0.878	1.44	3.21	1473	-0.294	200	0.330
51	0.882	1.47	3.28	1459	-0.285	189	0.332
97	0.878	1.47	3.16	1428	-0.295	192	0.332
98	0.880	1.49	3.28	1452	-0.256	196	0.331
Average	0.880	1.47	3.23	1,453	-0.283	194	0.331

B	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
01	0.885	1.37	3.36	1441	-0.238	180	0.328
17	0.887	1.42	3.42	1710	-0.275	182	0.324
45	0.902	1.42	3.42	1550	-0.246	166	0.322
Average	0.891	1.40	3.40	1,567	-0.253	176	0.325

C	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
28	1.295	1.33	3.19	1353	-0.541	241	0.328
66	1.285	1.29	3.43	1162	-0.549	245	0.330
90	1.276	1.31	2.72	1480	-0.528	250	0.330
99	1.296	1.32	2.67	1501	-0.499	255	0.325
Average	1.288	1.31	3.00	1374	-0.529	248	0.328

E	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
15	0.975	1.33	3.18	1628	-0.301	174	0.327
89	0.996	1.35	3.14	1631	-0.309	173	0.327
Average	0.986	1.34	3.16	1630	-0.305	174	0.327

F	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
02	1.396	1.47	2.85	1602	-0.597	230	0.348
11	1.385	1.39	3.10	1648	-0.605	229	0.338
29	1.392	1.41	3.17	1913	-0.554	237	0.338
34	1.398	1.45	3.21	1895	-0.616	229	0.349
48	1.390	1.43	3.30	1692	-0.596	224	0.333
56	1.404	1.42	2.89	1600	-0.663	227	0.337
62	1.401	1.45	3.03	1497	-0.616	224	0.344
Average	1.395	1.43	3.08	1,692	-0.607	229	0.341

J	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
05	0.944	1.42	3.32	1655	-0.371	182	0.315
08	0.925	1.43	3.24	1632	-0.327	173	0.320
22	0.931	1.42	3.19	1652	-0.353	171	0.320
31	0.938	1.46	3.29	1629	-0.351	179	0.320
39	0.944	1.48	3.17	1779	-0.353	173	0.315
41	0.944	1.45	3.09	1551	-0.316	179	0.322
44	0.944	1.34	3.46	1661	-0.337	169	0.318
52	0.944	1.51	3.23	1782	-0.319	177	0.317
87	0.946	1.39	3.20	1620	-0.313	174	0.315
Average	0.940	1.43	3.24	1662	-0.338	175	0.318

L	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
25	1.454	1.25	2.77	1449	-0.656	224	0.344
59	1.466	1.25	2.73	1460	-0.617	220	0.339
Average	1.460	1.25	2.75	1455	-0.637	222	0.342

M	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
04	1.445	1.38	2.93	1314	-0.553	223	0.337
47	1.472	1.33	2.93	1293	-0.588	222	0.339
57	1.444	1.33	2.93	1307	-0.547	224	0.335
Average	1.454	1.35	2.93	1305	-0.563	223	0.337

O	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
76	0.925	1.51	3.66	1590	-0.194	172	0.320
85	0.928	1.58	3.61	1650	-0.226	180	0.318
Average	0.927	1.55	3.64	1620	-0.210	176	0.319

P	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
30	1.268	1.35	2.71	1133	-0.546	208	0.347
71	1.295	1.41	2.73	1202	-0.519	220	0.352
73	1.303	1.39	2.57	1328	-0.514	209	0.356
Average	1.289	1.38	2.67	1221	-0.526	212	0.352

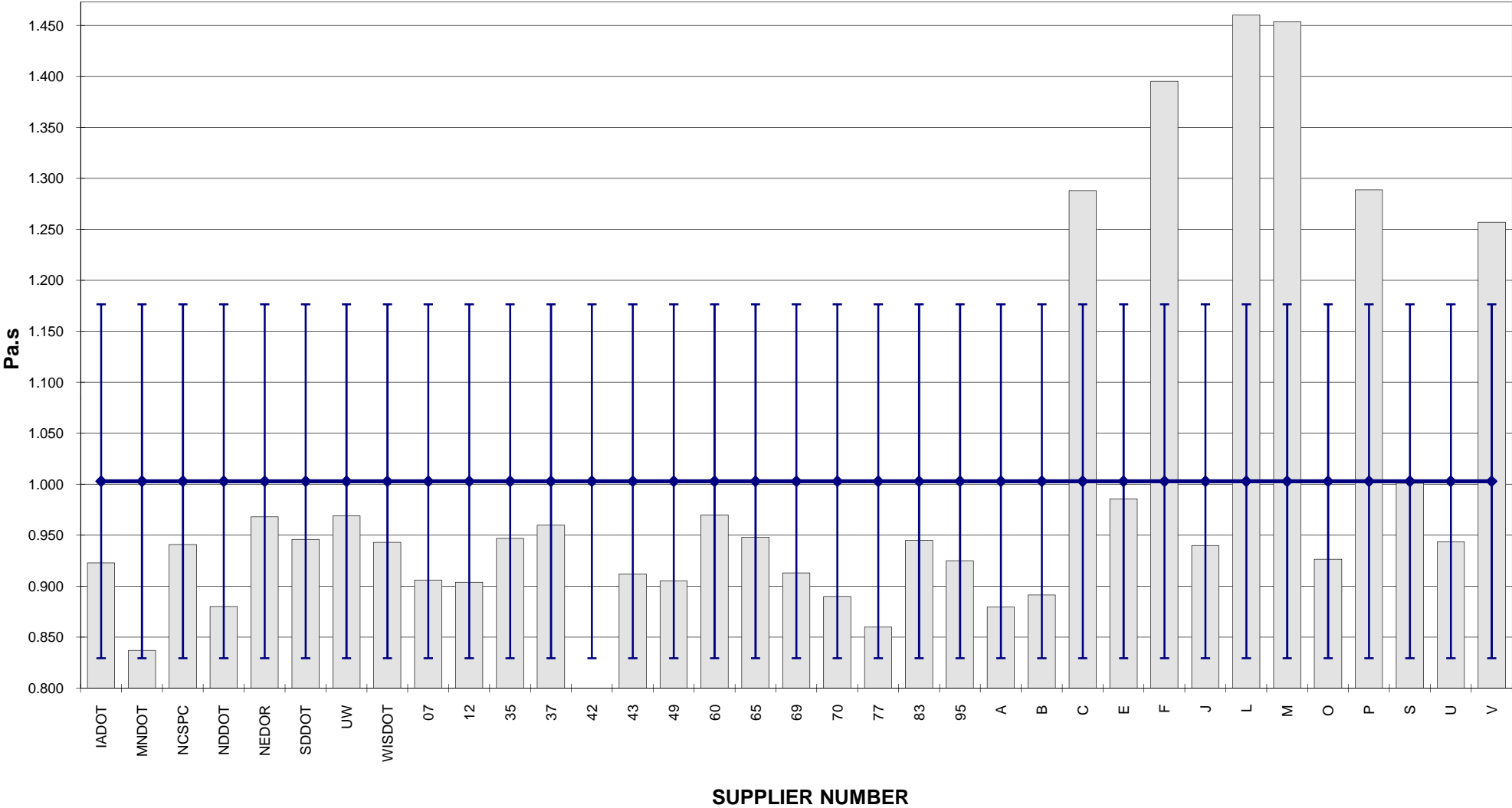
S	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
53	1.000	1.50	3.40	1599	-0.360	200	0.326
64	1.002	1.47	3.72	1753	-0.410	200	0.319
Average	1.001	1.49	3.56	1676	-0.385	200	0.323

U	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
13	0.925	1.42	3.33	1550	-0.301	176	0.326
24	0.965	1.38	3.31	1560	-0.299	178	0.332
93	0.941	1.47	3.34	1420	-0.244	183	0.335
Average	0.944	1.42	3.33	1510	-0.281	179	0.331

V	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value
58	1.260	1.34	2.88	1420	-0.690	211	0.350
78	1.259	1.32	2.97	1500	-0.679	211	0.347
81	1.252	1.32	2.97	1530	-0.688	218	0.343
Average	1.257	1.33	2.94	1483	-0.686	213	0.347

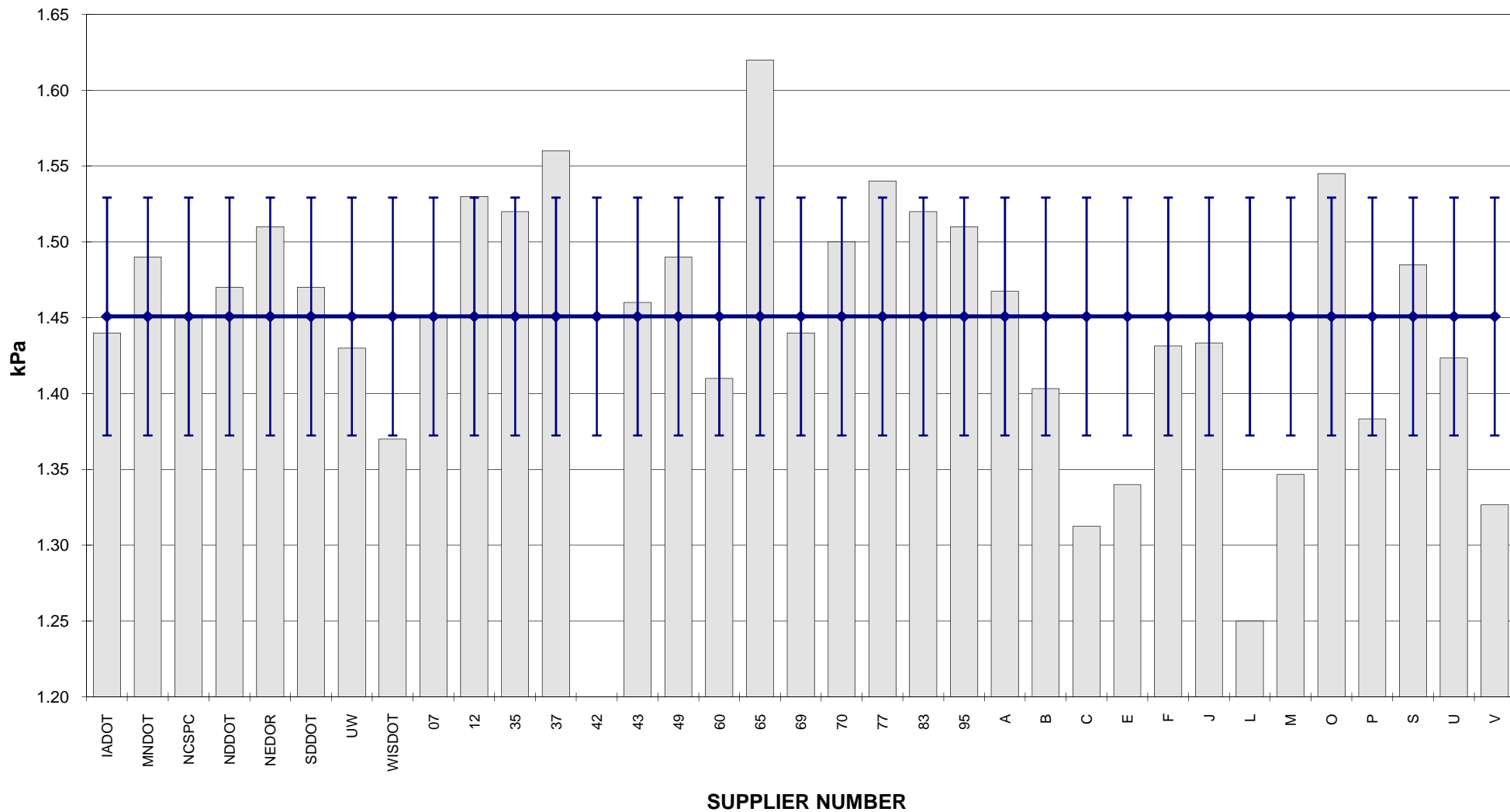
COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28

ROTATIONAL VISCOSITY



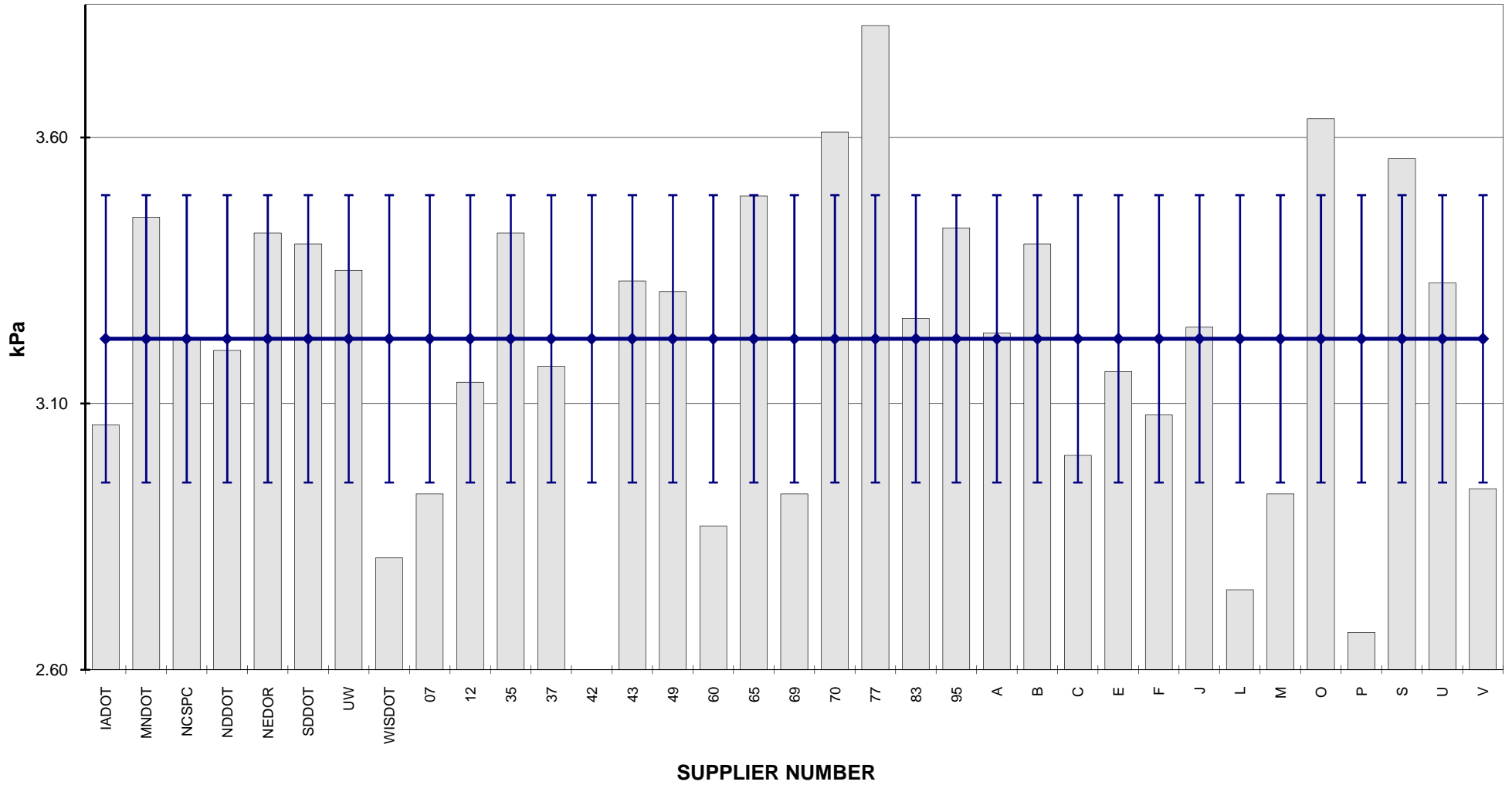
**COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28**

DSR - ORIGINAL

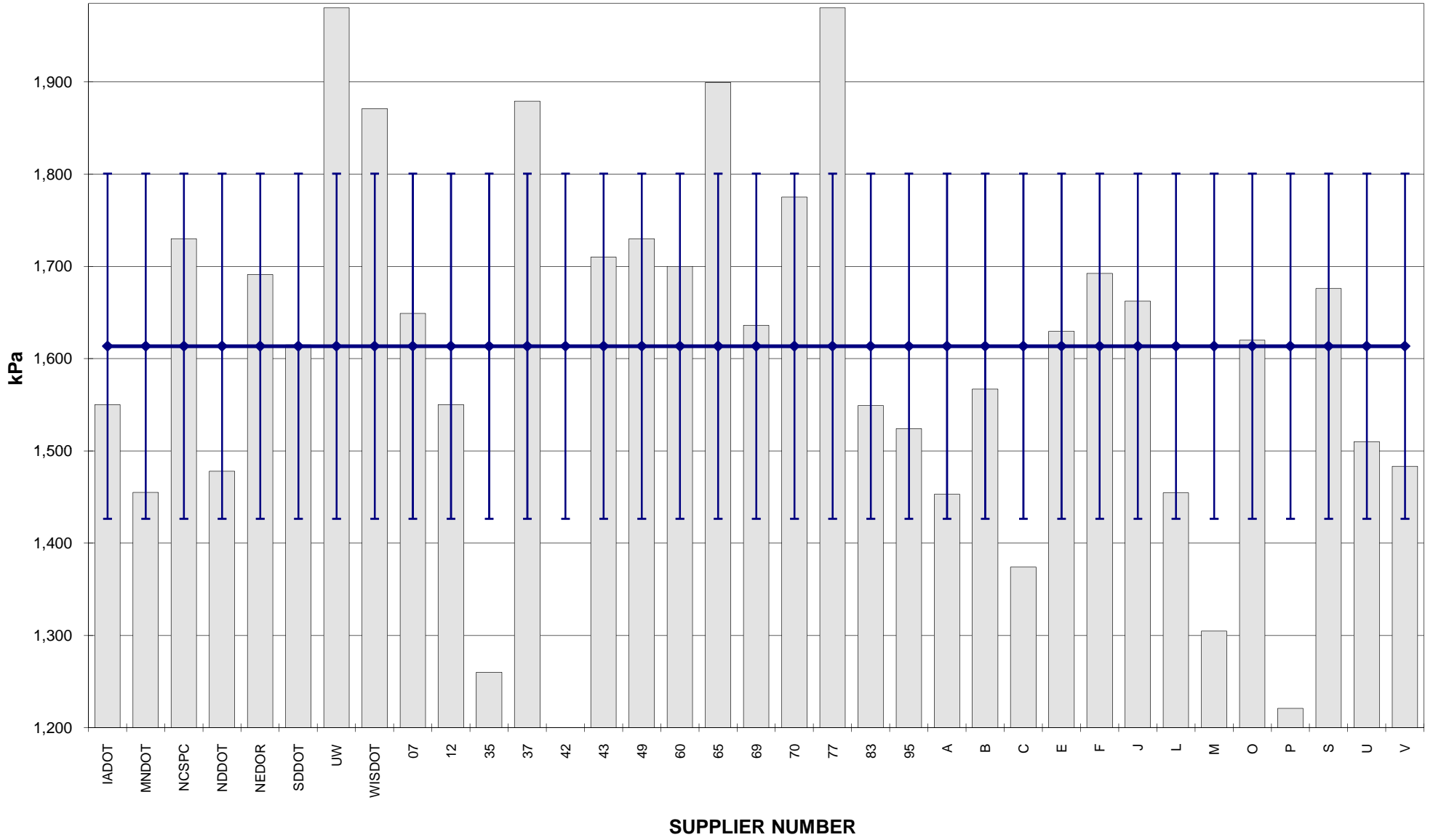


**COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28**

DSR - RTFO

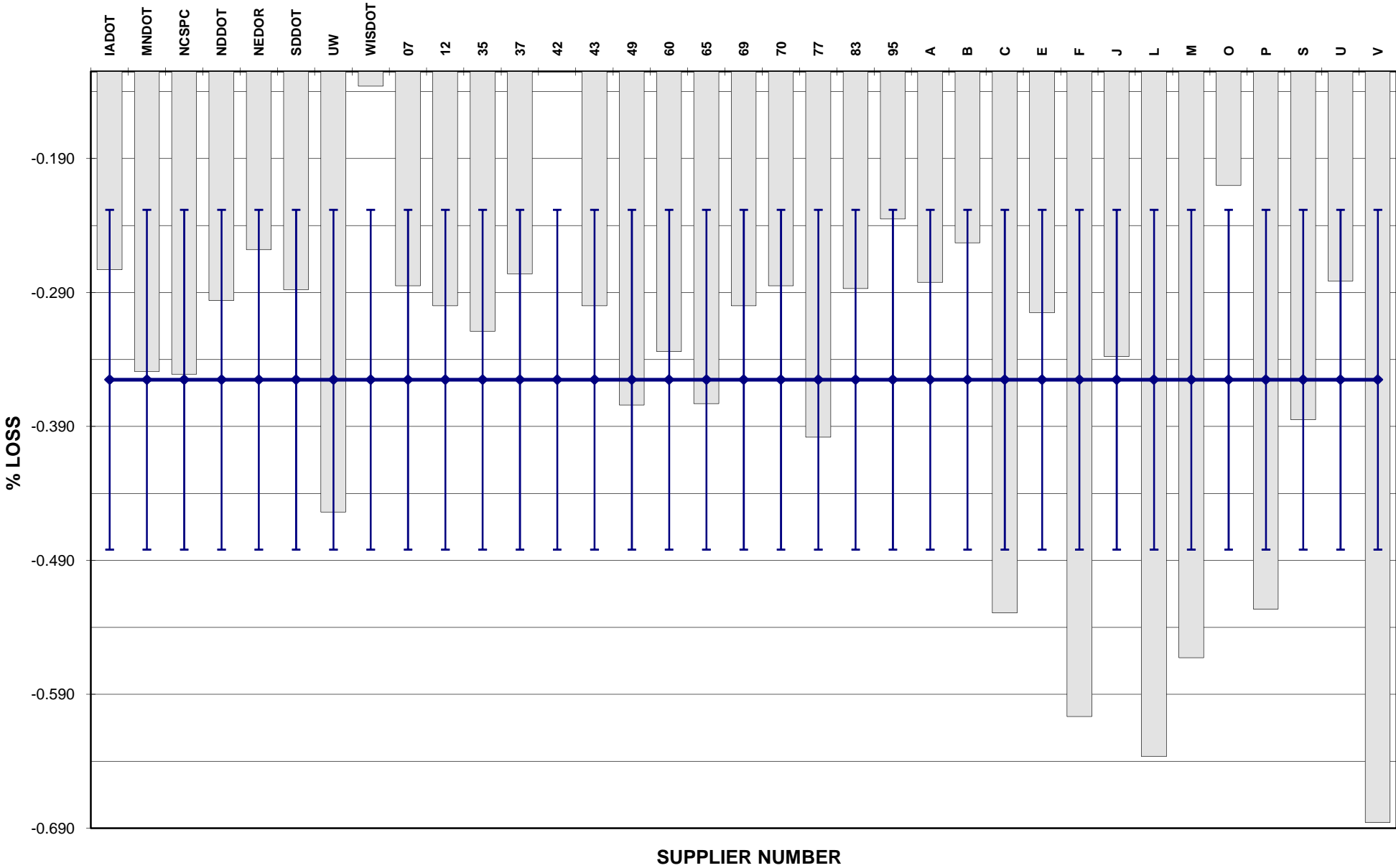


COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28
DSR - PAV

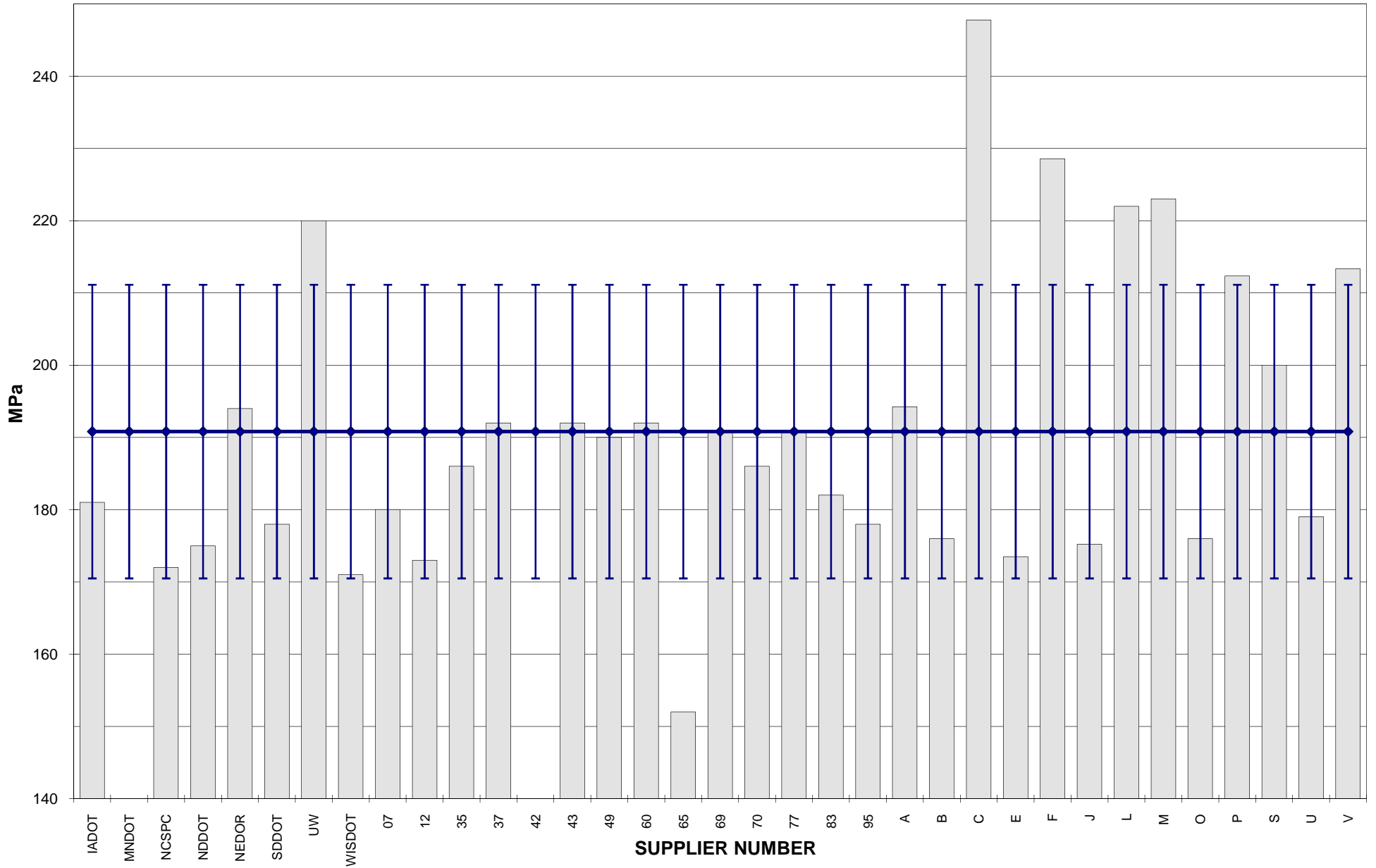


**COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28**

RTFO MASS LOSS



COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28
BBR STIFFNESS



**COMBINED STATE BINDER GROUP ROUND ROBIN 2011-3
SUMMARY B
PG 70-28
BBR m-VALUE**

