

COMBINED STATE BINDER GROUP ROUND ROBIN SUMMARY B 2016-1
64-28

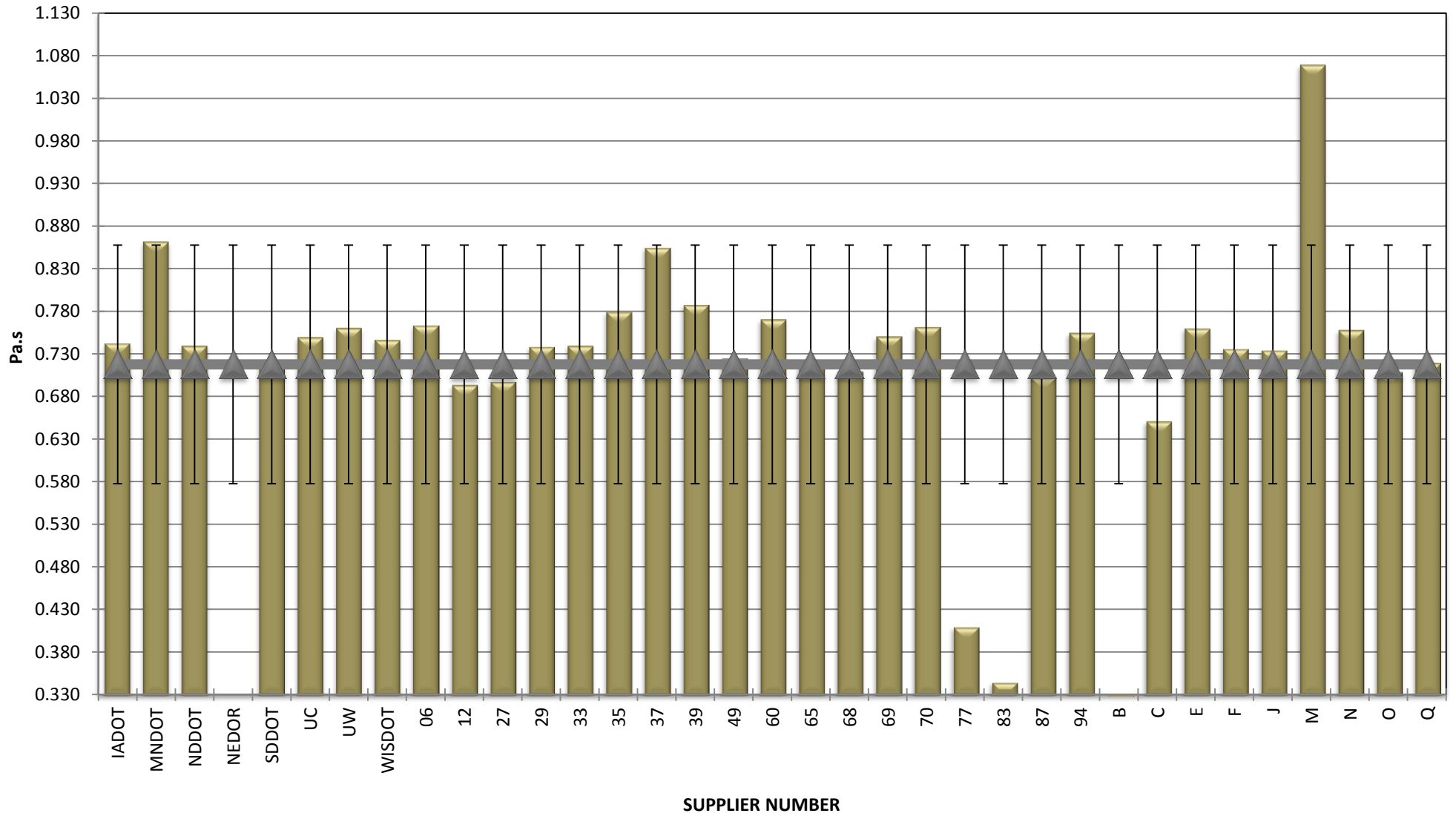
Supplier Number	Rotational Viscosity (Pa.s) @135°C	DSR Original (kPa)	DSR RTFO (kPa)	DSR PAV (kPa)	Mass Loss (%) @163°C	BBR S-value (MPa)	BBR m-value	Jnr @ 100 Pa	% Recov. @ 100 Pa	Jnr @ 3200 Pa	% Recov. @ 3200 Pa
IADOT	0.743	1.53	3.700	2,620	0.611	240	0.326	0.402	56.69	0.508	45.89
MNDOT	0.862	1.56	4.120	3,090	0.631	216	0.315	0.349	58.32	0.443	48.02
NDDOT	0.740	1.55	4.000	2,729	0.693	262	0.325	0.428	53.70	0.516	45.50
NEDOR		1.52	4.320	2,676	0.621	269	0.301	0.395	54.21	0.470	46.78
SDDOT	0.721	1.51	3.720	2,750	0.499	251	0.330	0.452	52.75	0.521	45.22
UC	0.750	1.46	3.520	2,990	0.611	267	0.311	0.410	56.60	0.544	46.10
UW	0.761	1.47	3.930	2,529	0.561	228	0.319	0.367	55.70	0.445	47.50
WISDOT	0.747	1.57	3.989	2,173	0.568	226	0.324	0.399	52.65	0.560	46.55
06	0.764	1.46	3.770	2,520	0.537	259	0.331	0.406	54.46	0.483	46.79
12	0.694	1.47	3.530	2,810	0.690		0.326				
27	0.698	1.51	4.130	2,580	0.693	230	0.334	0.360	57.22	0.462	46.48
29	0.739	1.62	4.283	2,388	0.704	264	0.323	0.349	57.59	0.418	50.10
33	0.740	1.49	3.890	2,680	0.543	250	0.327	0.363	58.95	0.470	48.06
35	0.780	1.63	4.400	3,790	0.735	260	0.316				
37	0.855	1.57	3.957	2,745	0.654	243	0.324	0.378	55.94	0.448	48.71
39	0.788	1.56	4.200	2,440	0.587	239	0.326	0.336	58.55	0.424	48.70
49	0.725	1.52	3.770	2,490	0.648	236	0.327	0.391	57.50	0.505	46.30
60	0.771	1.45	3.520	2,620	0.549	263	0.329	0.484	51.72	0.584	43.19
65	0.718	1.36	3.516	2,556	0.668	248	0.322	1.048	46.20	1.470	30.40
68	0.710	1.49	3.740	2,784	0.648	261	0.324	0.421	54.95	0.510	46.51
69	0.751	1.46	3.560	2,954	0.627	269	0.319	0.399	56.60	0.519	46.90
70	0.762	1.48	3.645	2,239	0.584	244	0.337	0.435	53.52	0.520	45.56
77	0.410	1.51	4.280	2,790	0.816	241	0.321	0.347	57.32	0.434	47.62
83	0.345	1.51	3.985	3,115	0.583	261	0.309	0.395	55.31	0.469	48.07
87	0.703	1.53	3.920	2,700	0.631	249	0.318	0.375	56.27	0.447	48.68
94	0.755	1.49	3.770	2,374	0.004	156	0.263	0.394	57.91	0.515	46.88
B	0.231	1.59	4.477	3,153	0.681	233	0.317	0.310	59.07	0.380	49.90
C	0.652	1.52	4.263	2,633	0.467	255	0.321	0.348	57.31	0.405	51.03
E	0.761	1.51	3.795	2,190	0.635	241	0.330	0.384	57.74	0.496	46.61
F	0.736	1.55	3.950	2,709	0.550	258	0.318	0.354	59.44	0.457	48.86
J	0.735	1.54	3.975	2,708	0.687	253	0.316	0.331	59.72	0.443	48.56
M	1.069	1.38	3.587	2,467	0.569	245	0.332				
N	0.758	1.57	3.810	2,530	0.531	229	0.333	0.425	54.39	0.514	45.43
O	0.709	1.59	4.280	3,010	0.365	246	0.328	0.341	57.43	0.397	50.99
Q	0.720	1.50	3.945	2,744	0.739	273	0.321	0.367	57.97	0.465	47.71
V	0.715	1.47	3.757	2,753	0.750	251	0.323	0.383	56.95	0.488	46.61
Average	0.718	1.51	3.917	2,695	0.602	246	0.321	0.404	56.08	0.504	46.85
Std. Dev.	0.140	0.06	0.272	305	0.135	21	0.012	0.122	2.72	0.179	3.41
Coef. of Var.	19.528	3.85	6.942	11	22.353	9	3.866	30.101	4.86	35.545	7.28
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B	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
01	0.223	1.60	4.34	2,750	0.686	222	0.315	0.340	58.00	0.410	48.70
17	0.230	1.59	4.71	3,440	0.687	241	0.310	0.280	60.30	0.350	51.30
45	0.240	1.57	4.38	3,270	0.669	237	0.326	0.310	58.90	0.380	49.70
AVERAGE	0.231	1.59	4.48	3,153	0.681	233.3333	0.317	0.310	59.07	0.380	49.90
C	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
28	0.653	1.51	4.15	2,492	0.519	262	0.322	0.344	56.41	0.397	50.52
66	0.642	1.52	4.46	2,709	0.414	260	0.319	0.325	58.56	0.374	52.98
90	0.654	1.50	4.26	2,770	0.438	254	0.314	0.356	57.27	0.416	50.57
99	0.657	1.55	4.18	2,561	0.496	245	0.328	0.367	56.99	0.432	50.06
AVERAGE	0.652	1.52	4.26	2,633	0.467	255.25	0.321	0.348	57.31	0.405	51.03
E	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
15	0.767	1.51	3.69	2,160	0.604	236	0.332	0.404	56.82	0.519	45.74
89	0.754	1.50	3.90	2,220	0.665	245	0.328	0.364	58.66	0.473	47.47
AVERAGE	0.761	1.51	3.80	2,190	0.635	240.5	0.330	0.384	57.74	0.496	46.61
F	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
02	0.754	1.53	3.89	2,572	0.503	255	0.318	0.363	59.29	0.469	48.61
11	0.759	1.53	4.09	2,711	0.501	261	0.316	0.336	60.04	0.431	49.81
34	0.701	1.60	3.92	2,801	0.573	264	0.321	0.364	58.65	0.471	48.10
48	0.702	1.57	3.97	2,701	0.589	261	0.322	0.355	59.38	0.456	49.17
56	0.751	1.52	4.00	2,820	0.557	259	0.320	0.341	60.07	0.440	49.48
62	0.751	1.55	3.83	2,650	0.574	250.5	0.314	0.365	59.20	0.478	47.96
AVERAGE	0.736	1.55	3.95	2,709	0.550	258.25	0.318	0.354	59.44	0.457	48.86
J	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
05	0.738	1.58	3.92	2,645	0.71	250	0.314	0.335	59.94	0.454	48.46
08	0.740	1.50	3.91	2,612	0.648	246	0.309	0.330	59.47	0.432	48.94
10	0.738	1.57	3.91	2,676	0.719	253	0.323	0.344	59.24	0.452	48.47
22	0.732	1.50	3.91	2,658	0.623	254	0.319	0.353	58.54	0.468	47.37
31	0.734	1.58	4.00	2,675	0.651	261	0.315	0.327	59.26	0.422	48.93
41	0.736	1.55	3.97	2,764	0.704	248	0.314	0.326	60.68	0.457	48.47
44	0.732	1.49	4.03	2,857	0.727	256	0.314	0.322	60.55	0.452	48.26
52	0.727	1.59	4.15	2,780	0.717	253	0.322	0.311	60.04	0.407	49.58
AVERAGE	0.735	1.54	3.97	2,708	0.687	253	0.316	0.331	59.72	0.443	48.56
M	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
04	0.710	1.40	3.51	2,425	0.491	249	0.330				
47	1.753	1.42	3.79	2,509	0.616	225	0.333				
57	0.745	1.32	3.46	2,467	0.599	262	0.333				
AVERAGE	1.069	1.38	3.59	2,467	0.569	245.3333	0.332				
N	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
07	0.774	1.58	3.71	2,230	0.581	218	0.332	0.434	52.60	0.516	44.69
43	0.773	1.58	3.54	2,540	0.571	216	0.336	0.472	51.86	0.567	43.30
95	0.728	1.56	4.18	2,819	0.442	252	0.332	0.370	58.70	0.460	48.30
AVERAGE	0.758	1.57	3.81	2,530	0.531	228.6667	0.333	0.425	54.39	0.514	45.43
O	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
76	0.708	1.57	4.33	3,010	0.365	248	0.327	0.337	57.29	0.392	50.85
85	0.710	1.61	4.23	3,010	0.364	243	0.328	0.344	57.57	0.402	51.12
AVERAGE	0.709	1.59	4.28	3,010	0.365	246	0.328	0.341	57.43	0.397	50.99
Q	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
23	0.720	1.52	4.00	2,835	0.732	277.000	0.320	0.350	58.52	0.444	48.36
93	0.720	1.48	3.89	2,652	0.746	268	0.321	0.383	57.42	0.486	47.05
AVERAGE	0.720	1.50	3.95	2,744	0.739	273	0.321	0.367	57.97	0.465	47.71
V	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
58	0.712	1.46	3.74	2,810	0.750	248	0.325	0.397	56.77	0.509	46.15
78	0.720	1.46	3.77	2,710		250	0.324	0.373	57.41	0.479	46.89
81	0.712	1.49	3.76	2,740	0.75	256	0.321	0.380	56.66	0.477	46.78
AVERAGE	0.715	1.47	3.76	2,753	0.750	251	0.323	0.383	56.95	0.488	46.61

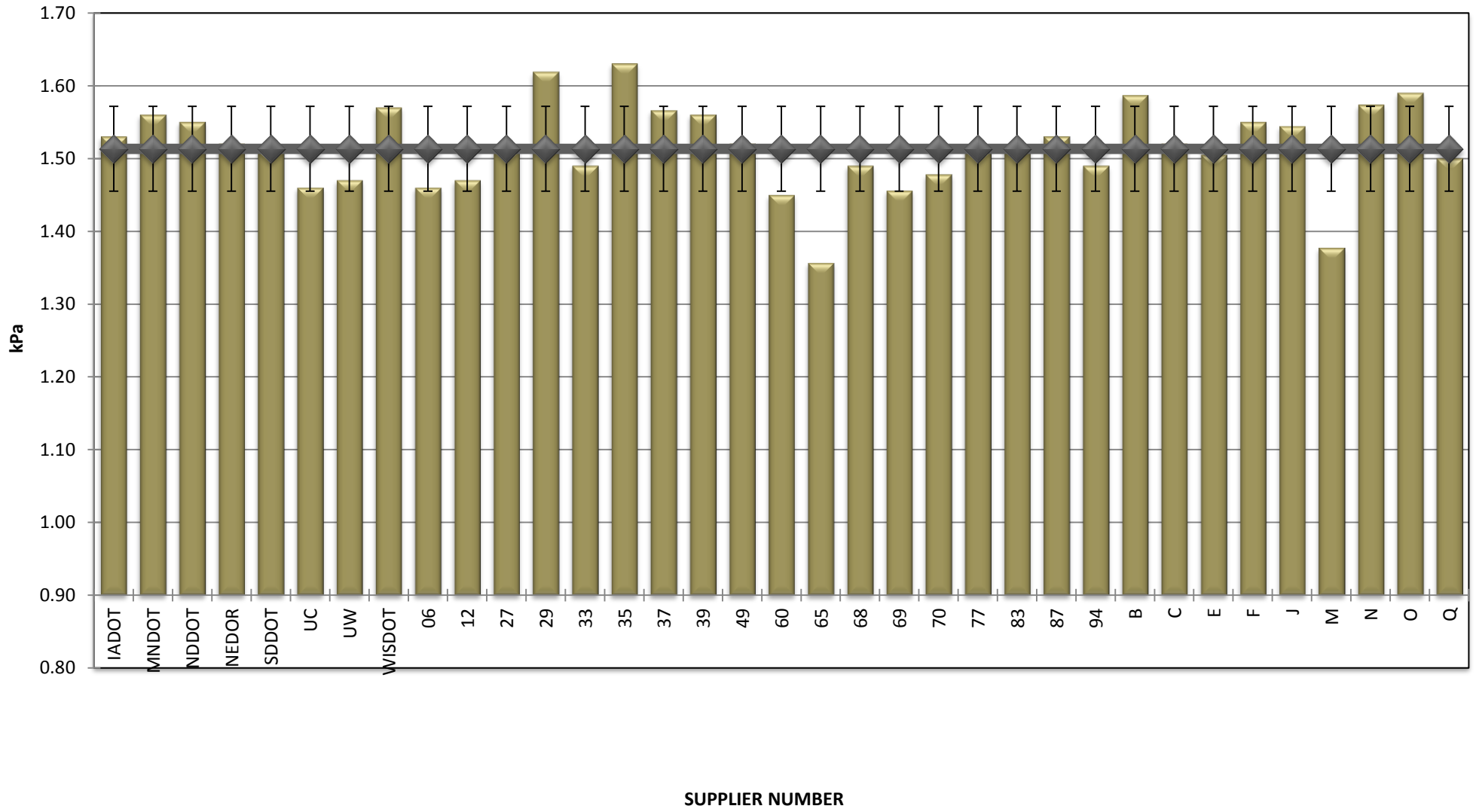
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ROTATIONAL VISCOSITY



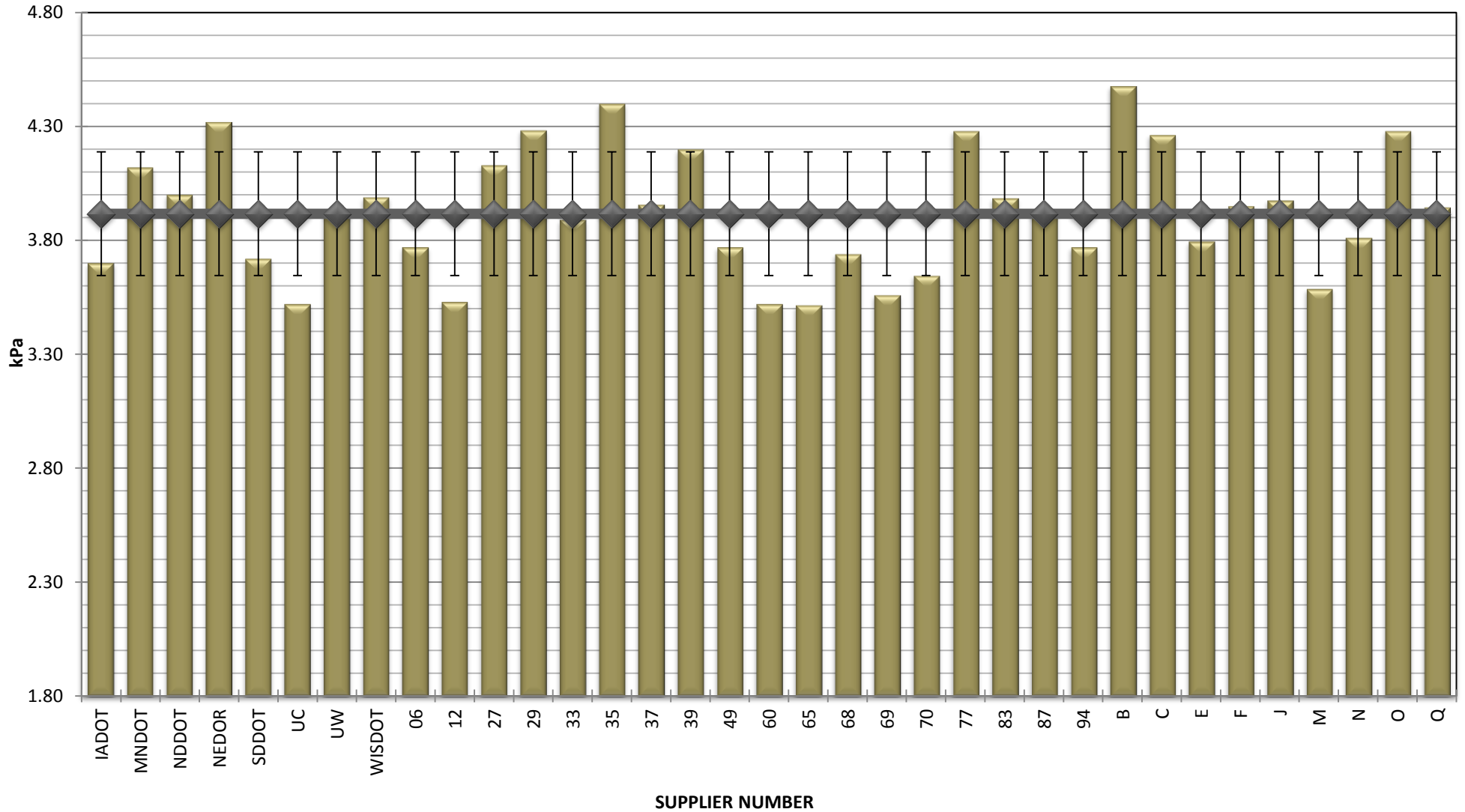
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DSR - ORIGINAL



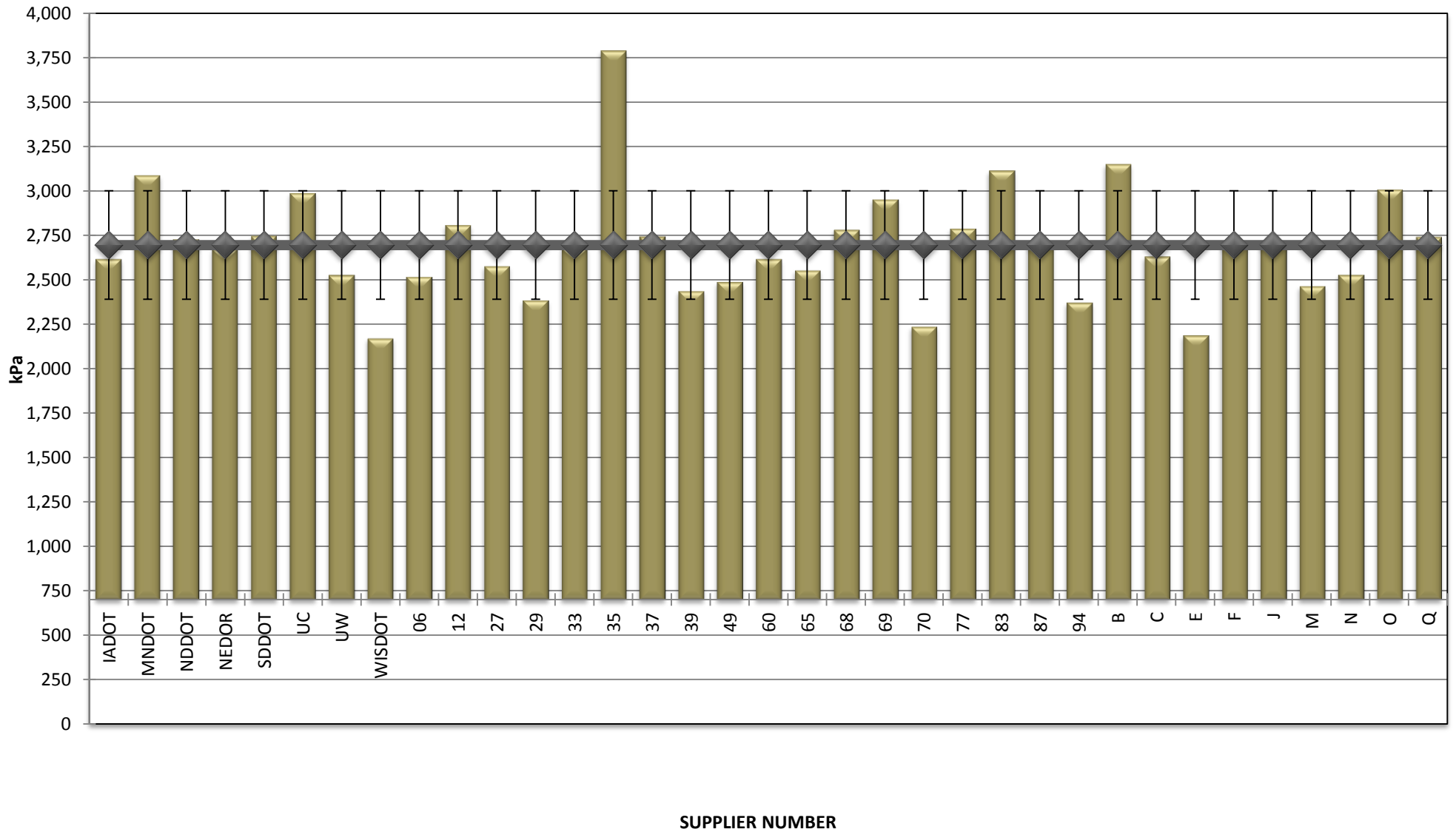
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DSR - RTFO

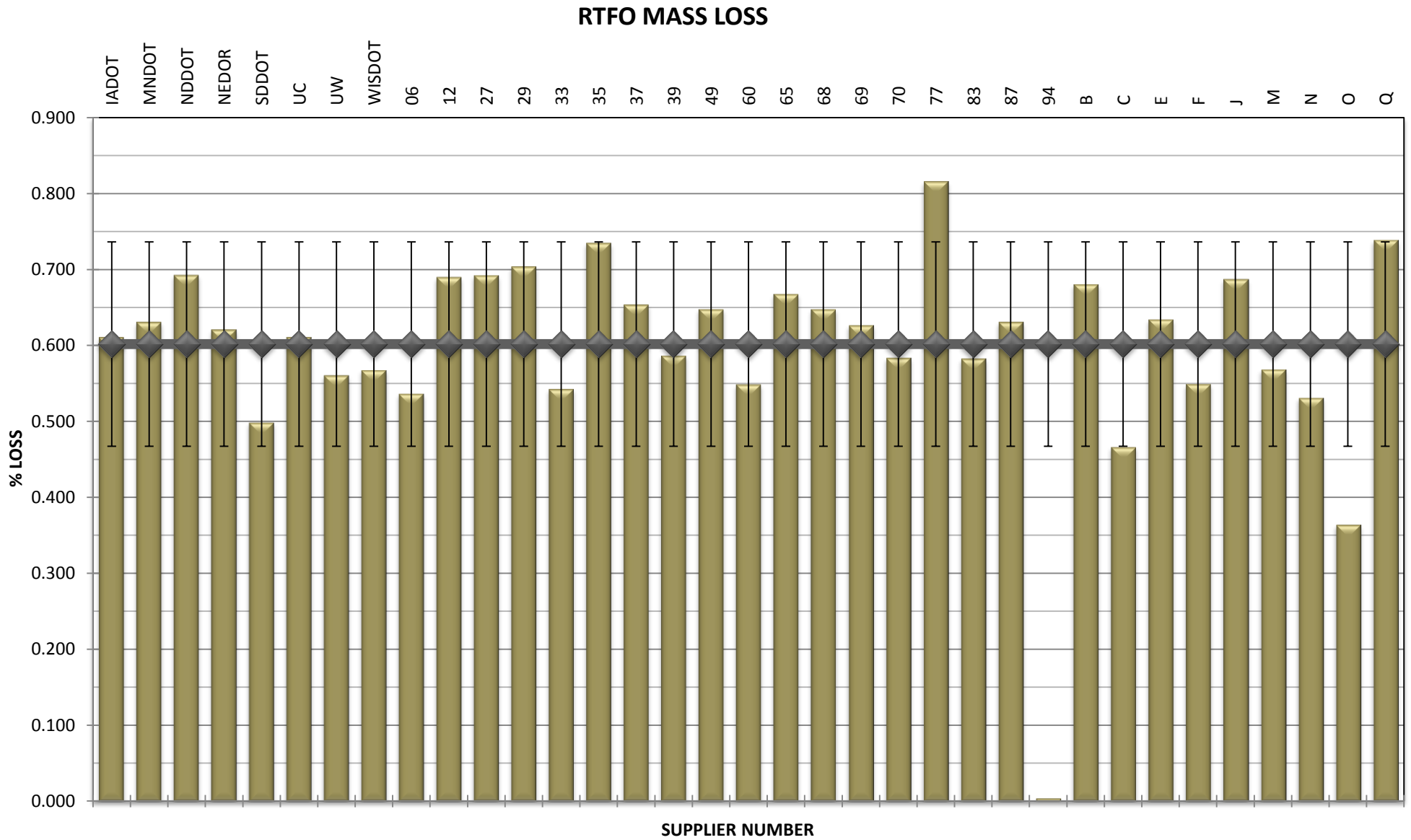


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DSR - PAV

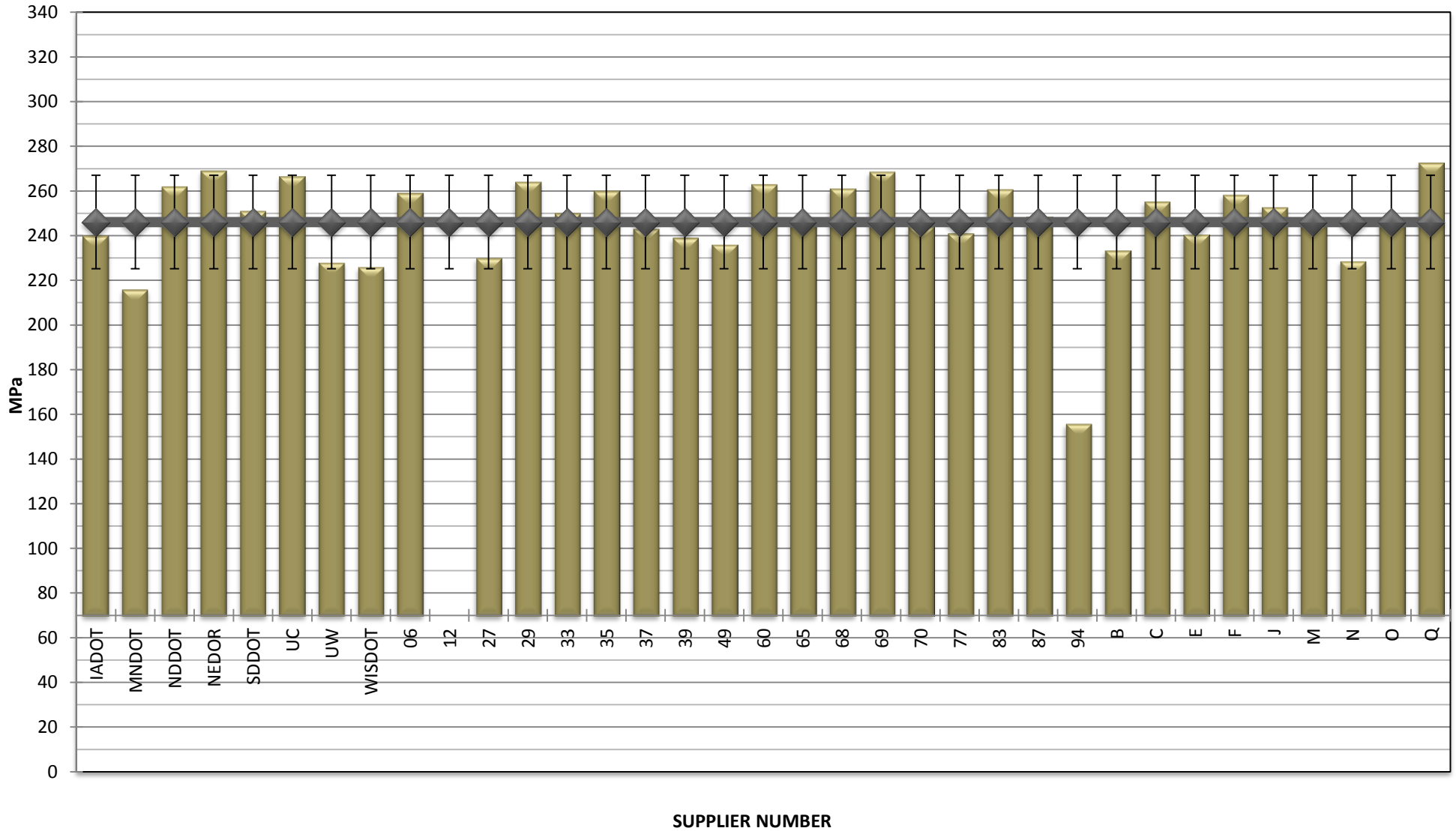


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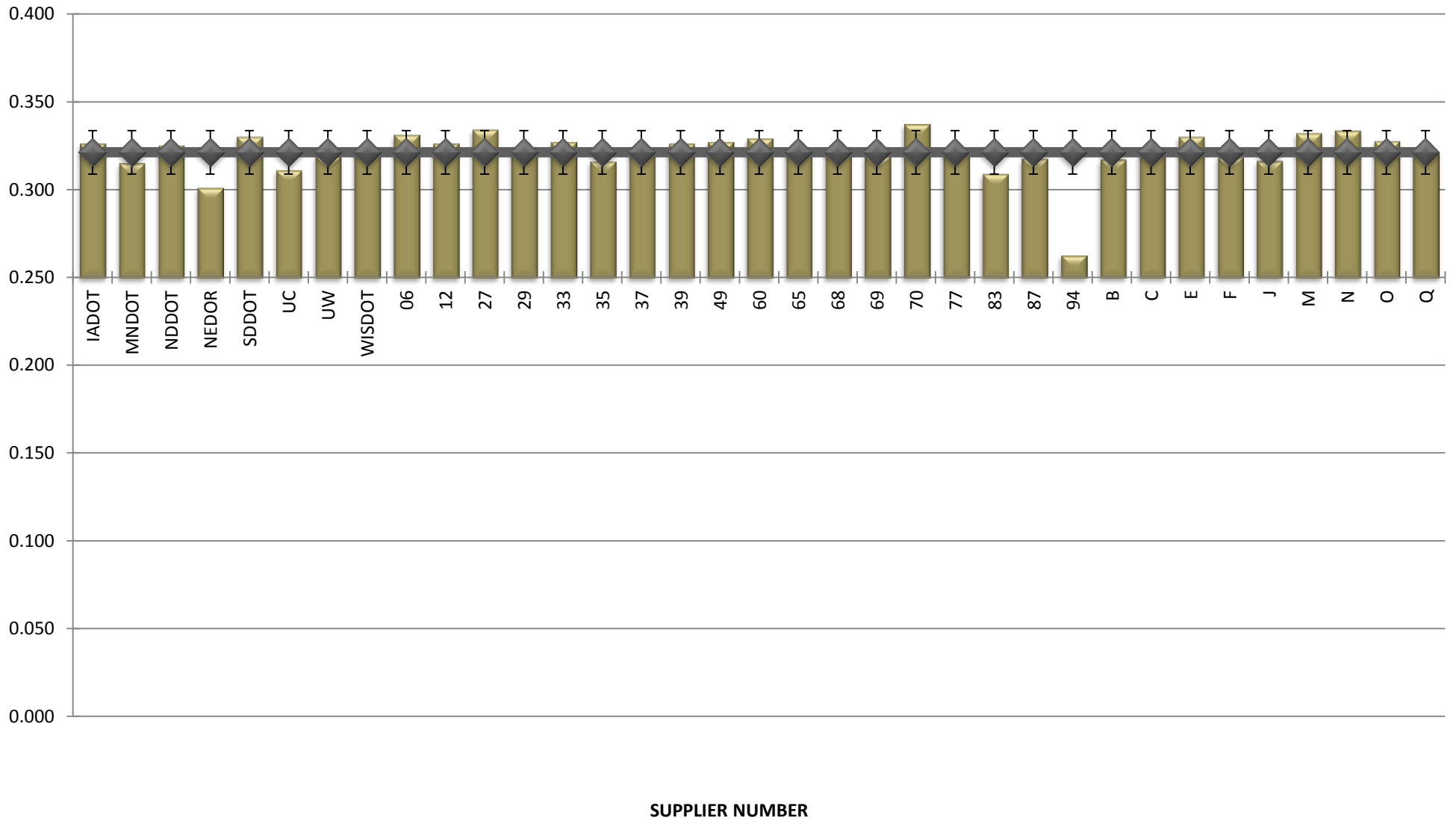
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BBR STIFFNESS



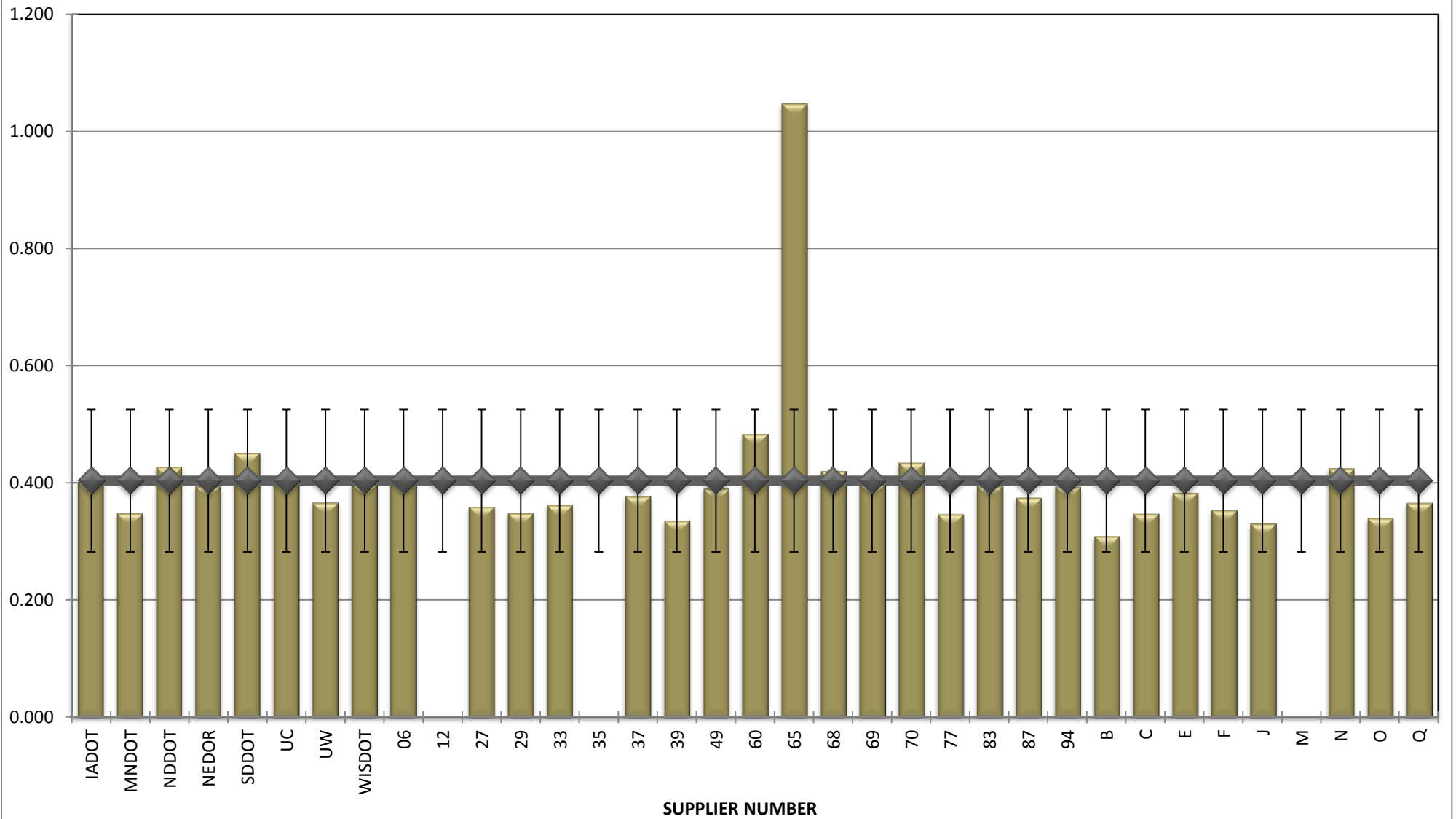
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BBR m-VALUE



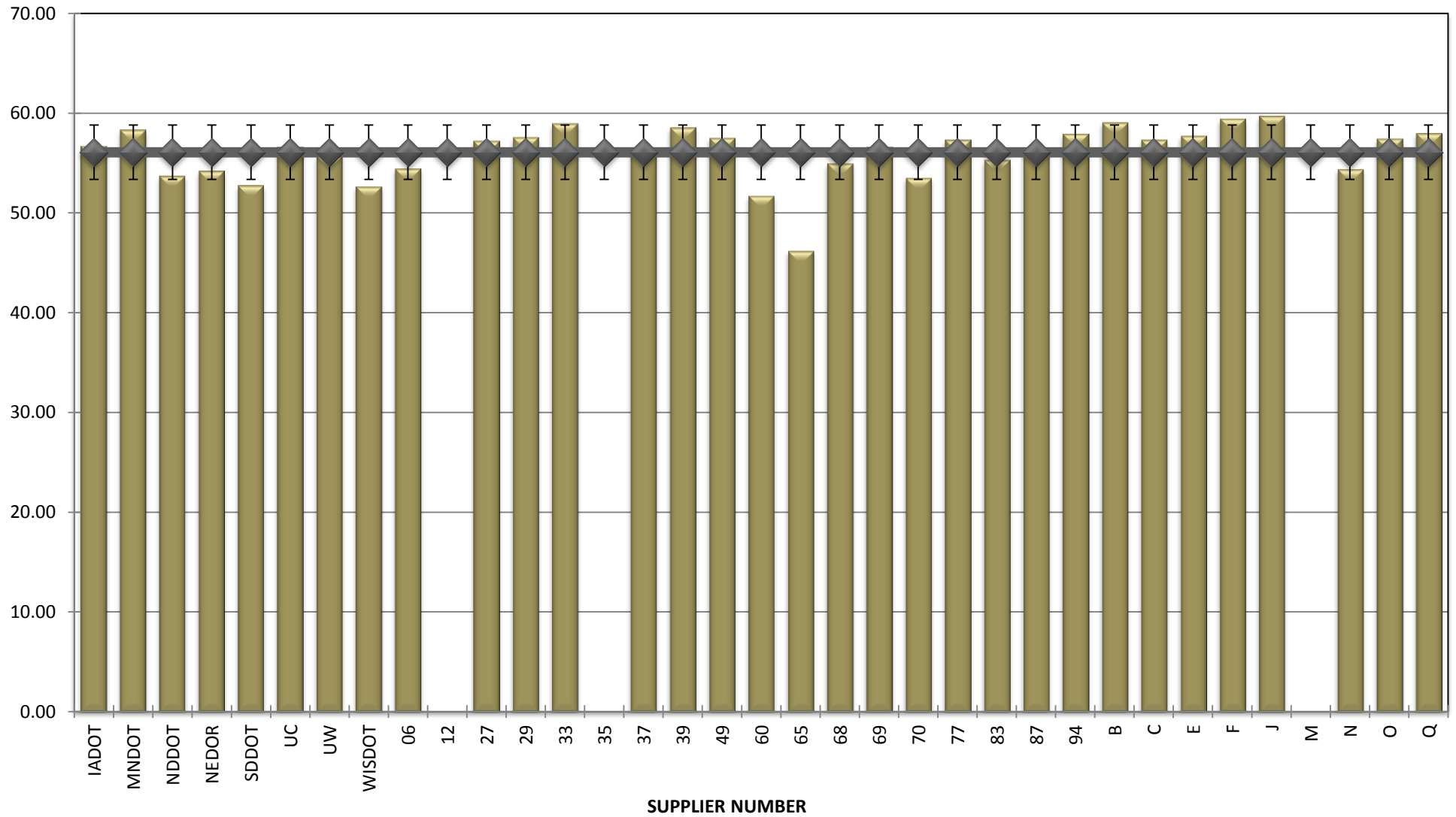
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Jnr @ 100 Pa



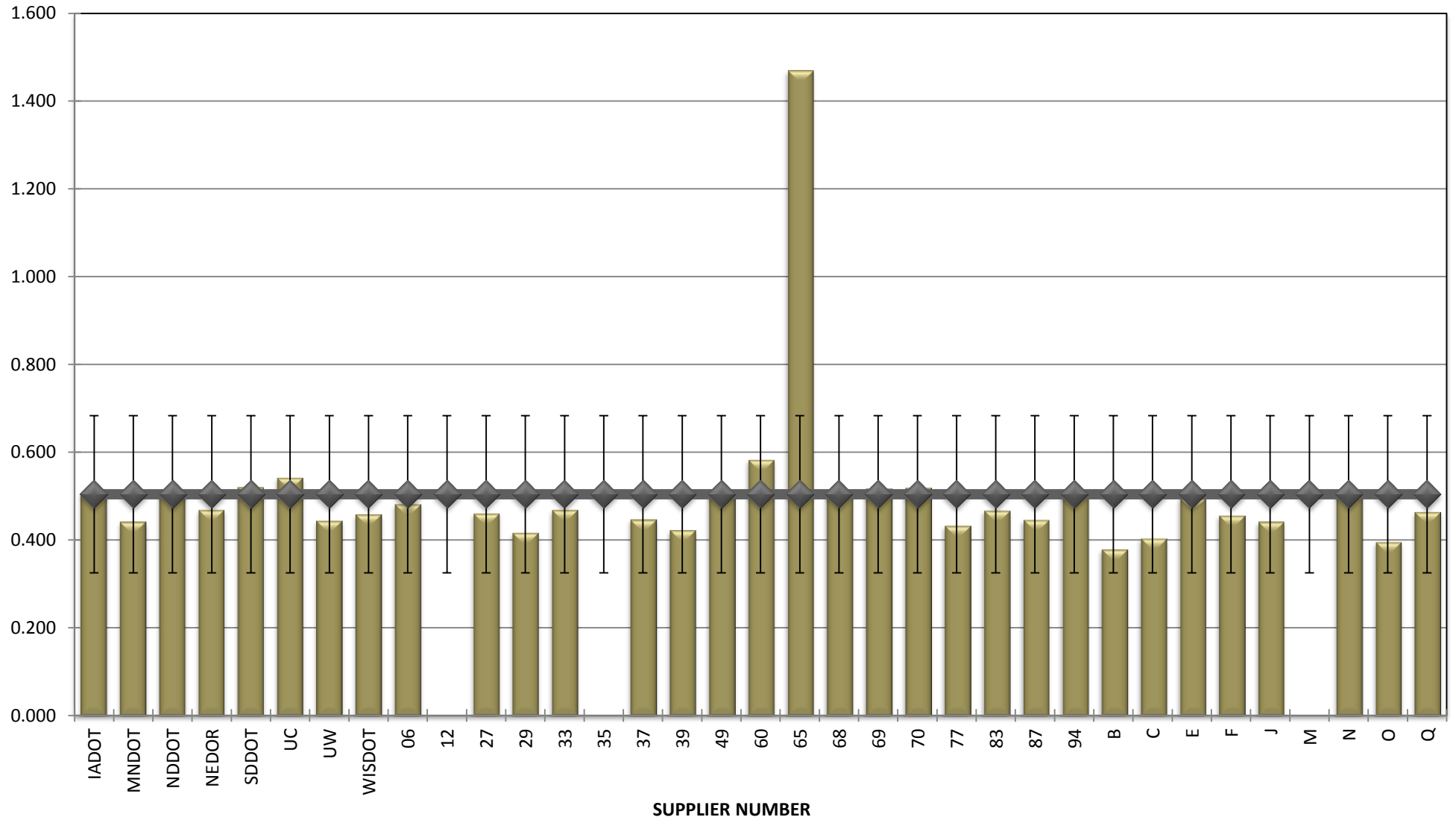
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% Recovery @ 100 Pa



**COMBINED STATE BINDER GROUP ROUND ROBIN
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Jnr @ 3200 Pa



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% Recovery @ 3200 Pa

