

COMBINED STATE BINDER GROUP ROUND ROBIN SUMMARY B 2015-3

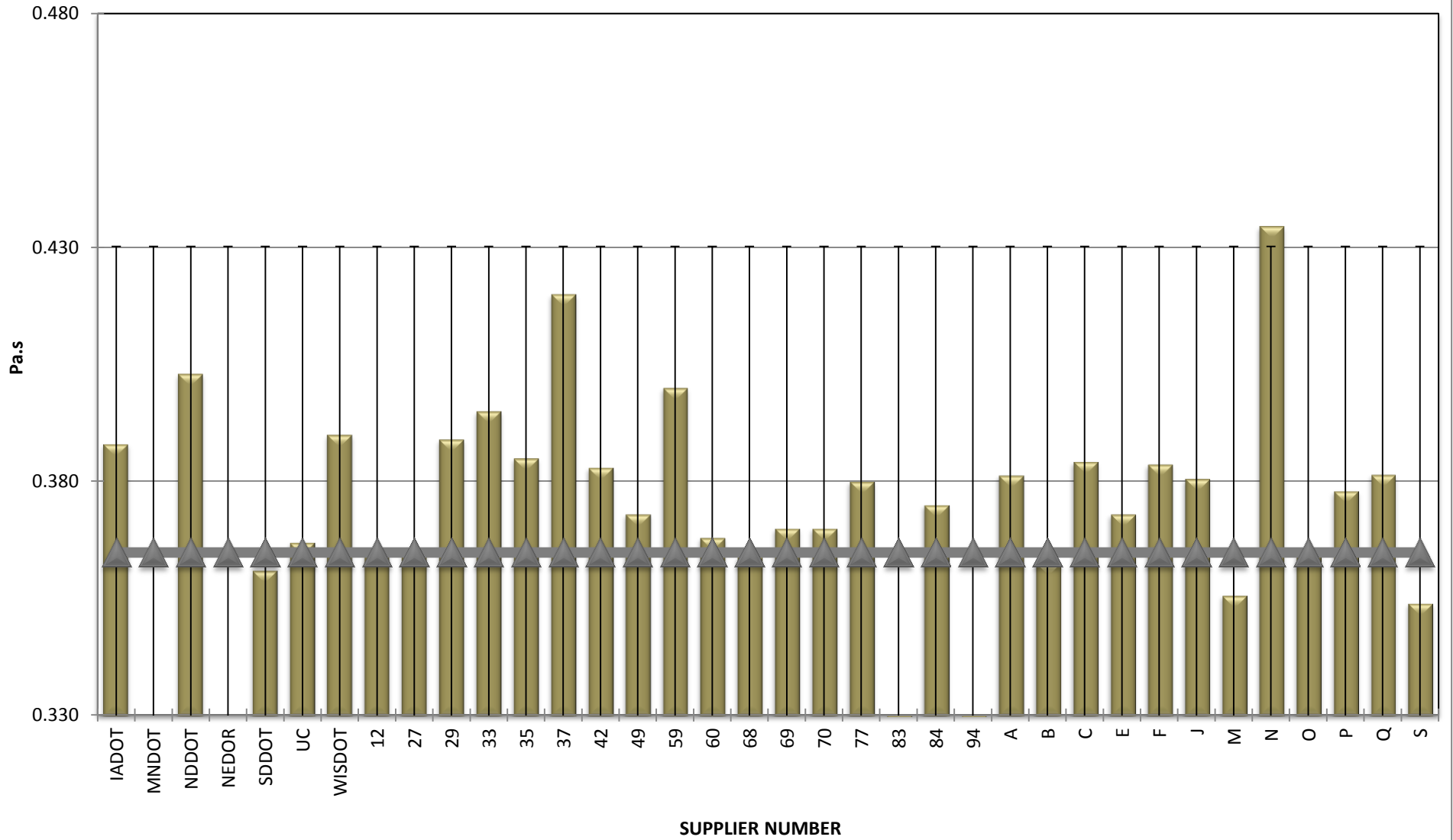
Supplier Number	Rotational Viscosity (Pa.s) @135°C	DSR Original (kPa)	DSR RTFO (kPa)	DSR PAV (kPa)	Mass Loss (%) @163°C	BBR S-value (MPa)	BBR m-value	Jnr @ 100 Pa	% Recov. @ 100 Pa	Jnr @ 3200 Pa	% Recov. @ 3200 Pa
IADOT	0.388	1.12	2.790	3,910	0.625	206	0.352	1.376	5.12	1.439	2.48
MNDOT		1.08	2.350	2,910	0.700	188	0.337	1.446	4.37		2.22
NDDOT	0.403	1.13	2.810	3,811	0.706	213	0.343	1.332	4.90	1.419	2.40
NEDOR		1.11	3.890	4,411	0.654	223	0.331	0.941	6.02	0.983	4.74
SDDOT	0.361	1.14	2.960	4,160	0.523	194	0.356	1.285	4.99	1.354	2.86
UC	0.367	1.13	2.810	3,616	0.632	223	0.348	1.354	5.90	1.514	2.10
WISDOT	0.390	1.18	2.880	3,087	0.584	200	0.362	1.320	5.87	1.450	2.54
12	0.365	1.08	2.900	3,670	0.788	213	0.344				
27	0.365	1.08	2.700	3,770	0.553	208	0.354	1.415	4.63	1.513	1.68
29	0.389	1.10	2.840	4,508	0.734	215	0.349	1.394	4.36	1.463	2.55
33	0.395	1.09	2.860	3,670	0.580	214	0.344	1.341	4.67	1.426	1.98
35	0.385	1.16	3.100	3,520	0.736	214	0.344				
37	0.420	1.18	2.960	4,171	0.689	212	0.345	1.350	5.16	1.450	2.50
42	0.383	1.11	2.910	3,690	0.816	198	0.359	1.332	5.18	1.425	2.15
49	0.373	1.10	2.850	3,710	0.667	204	0.339	1.367	4.49	1.452	1.99
59	0.400	1.15	2.936	3,723	0.514			1.300	5.98		2.78
60	0.368	1.02	2.500	3,670	0.723	212	0.351	1.609	3.88	1.715	1.47
68	0.364	1.11	3.110	3,982		203	0.342	1.220	8.98	1.330	3.17
69	0.370	1.22	2.780	3,361	0.493	188	0.358	1.384	5.20	1.528	2.10
70	0.370	1.10	2.899	3,272	0.670	197	0.370	1.296	5.25	1.381	2.82
77	0.380	1.05	2.360	3,820	0.518	195	0.361	1.620	3.98		1.12
83	0.195	1.10	3.115	3,638	0.620	212	0.338	1.240	6.77	1.339	2.95
84	0.375	1.12	2.850	3,779	0.660	217	0.346	1.354	5.12	1.449	1.98
94	0.042	1.12	3.190	3,273	0.532	155	0.359	1.213	6.01		3.20
A	0.381	1.07	3.003	4,039	0.700	208	0.355	1.313	5.10	1.397	1.97
B	0.363	1.25	2.967	4,313	0.655	196	0.342	1.273	6.30	1.468	2.78
C	0.384	1.10	2.816	3,694	0.559	191	0.342	1.437	4.85	1.532	2.36
E	0.373	1.13	3.025	3,616	0.753	206	0.348	1.258	5.16	1.340	2.41
F	0.384	1.11	2.843	3,822	0.618	208	0.348	1.378	4.92	1.469	2.31
J	0.381	1.09	2.859	3,697	0.658	206	0.349	1.302	4.81	1.435	1.79
M	0.356	1.03	2.377	3,493	0.625	177	0.348		4.47		4.10
N	0.435	1.16	2.935	4,025	0.458	212	0.344	1.265	7.63	1.395	2.24
O	0.365	1.06	2.685	3,595	0.375	191	0.345	1.459	4.41	1.549	1.92
P	0.378	1.15	2.905	3,590	0.573	211	0.360	1.375	6.08	1.465	2.61
Q	0.382	1.15	3.005	3,561	0.681	207	0.356	1.255	5.71	1.340	2.82
S	0.354	1.10	2.745	3,720	0.731	193	0.354	1.415	4.31	1.501	1.87
U	0.382	1.08	2.810	3,610	0.608	201	0.340	1.325	5.70	0.930	2.24
V	0.368	1.09	2.880	3,690	0.663	208	0.350	1.303	5.40	1.395	2.07
Average	0.365	1.11	2.874	3,726	0.632	203	0.349	1.338	5.32	1.414	2.42
Std. Dev.	0.065	0.05	0.256	327	0.095	13	0.008	0.114	1.01	0.145	0.67
Coef. of Var.	17.936	4.16	8.921	9	15.019	6	2.357	8.512	18.97	10.248	27.80
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A	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
19	0.378	1.07	2.94	4,096	0.724	212	0.351	1.374	4.90	1.464	1.80
51	0.382	1.06	3.14	3,894	0.694	205	0.354	1.230	5.40	1.308	2.20
98	0.384	1.07	2.94	4,126	0.681	206	0.359	1.334	5.00	1.420	1.90
AVERAGE	0.381	1.07	3.00	4,039	0.700	207.6667	0.355	1.313	5.10	1.397	1.97
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	0.350	1.30	3.24	4,045	0.707	202	0.342	1.102	8.68	1.222	3.48
17	0.400	1.25	2.54	4,552	0.573	192	0.346	1.541	4.51	1.926	1.93
45	0.338	1.19	3.12	4,343	0.686	195	0.338	1.176	5.70	1.257	2.92
AVERAGE	0.363	1.25	2.97	4,313	0.655	196.3333	0.342	1.273	6.30	1.468	2.78
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	0.384	1.09	2.76	3,582	0.58	182	0.342	1.492	5.07	1.590	2.23
66	0.385	1.11	2.86	3,823	0.500	188	0.345	1.395	4.32	1.484	2.53
90	0.384	1.08	2.89	3,781	0.588	187	0.348	1.418	5.16	1.512	2.39
99	0.384	1.11	2.75	3,588	0.568	209	0.335	1.444	4.86	1.542	2.27
AVERAGE	0.384	1.10	2.82	3,694	0.559	191.25	0.342	1.437	4.85	1.532	2.36
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	0.374	1.10	2.95	3,685	0.692	208	0.349	1.304	4.51	1.379	2.27
89	0.372	1.15	3.10	3,546	0.814	204	0.347	1.212	5.81	1.300	2.55
AVERAGE	0.373	1.13	3.03	3,616	0.753	206	0.348	1.258	5.16	1.340	2.41
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	0.391	1.14	2.83	3,905	0.638	198	0.352	1.405	4.41	1.484	2.50
11	0.378	1.11	2.97	3,651	0.669	210	0.350	1.322	4.52	1.397	2.63
34	0.383	1.15	2.78	3,843	0.578	211	0.347	1.411	5.54	1.520	2.25
48	0.373	1.12	2.68	3,682	0.6	207	0.348	1.479	4.85	1.586	2.18
56	0.388	1.09	2.97	3,730	0.611	209	0.344	1.358	5.11	1.452	2.09
62	0.389	1.06	2.83	4,120	0.613	212.5	0.345	1.293	5.06	1.378	2.22
AVERAGE	0.384	1.11	2.84	3,822	0.618	207.8333	0.348	1.378	4.92	1.469	2.31
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	0.382	1.09	2.83	3,705	0.721	203	0.346	1.268	4.88	1.398	1.75
08	0.383	1.08	2.82	3,639	0.576	199	0.354	1.355	4.47	1.493	1.76
10	0.383	1.07	2.82	3,537	0.573	198	0.352	1.318	4.92	1.456	1.65
22	0.383	1.08	2.94	3,808	0.711	206	0.348	1.275	4.66	1.404	1.94
31	0.382	1.11	2.89	3,881	0.738	220	0.344	1.274	5.16	1.407	1.77
41	0.381	1.10	2.85	3,914	0.588	208	0.350	1.315	4.93	1.452	1.79
44	0.382	1.08	2.86	3,542	0.586	203	0.348	1.309	4.70	1.442	1.83
52	0.384	1.07	2.93	3,789	0.723	207	0.348	1.266	4.72	1.383	1.95
87	0.381	1.10	2.75	3,486	0.578	200	0.354	1.339	4.87	1.479	1.63
AVERAGE	0.381	1.09	2.86	3,697	0.658	205.7	0.349	1.302	4.81	1.435	1.79
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	0.357	1.03	2.32	3,490	0.573	180	0.345		4.60		2.10
47	0.360	1.03	2.41	3,491	0.645	183	0.350		4.40		5.10
57	0.350	1.04	2.41	3,499	0.658	169	0.350		4.40		5.10
AVERAGE	0.356	1.03	2.38	3,493	0.625	177	0.348		4.47		4.10
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	0.437	1.14	2.96	4,270	0.586	218	0.346	1.260	8.18	1.400	2.20
43	0.432	1.17	2.91	3,780	0.330	206	0.342	1.270	7.08	1.390	2.28
AVERAGE	0.435	1.16	2.94	4,025	0.458	212	0.344	1.265	7.63	1.395	2.24
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	0.365	1.06	2.61	3,500	0.384	192	0.349	1.496	4.28	1.589	1.83
85	0.365	1.06	2.76	3,690	0.366	190	0.341	1.421	4.54	1.508	2.01
AVERAGE	0.365	1.06	2.69	3,595	0.375	191	0.345	1.459	4.41	1.549	1.92
P	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
30	0.374	1.14	2.76	3,523	0.463	207	0.362	1.460	6.21	1.550	2.43
73	0.382	1.16	3.05	3,657	0.683	215	0.357	1.290	5.94	1.380	2.79
AVERAGE	0.378	1.15	2.91	3,590	0.573	211	0.360	1.375	6.08	1.465	2.61
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	0.381	1.16	3.00	3,531	0.689	204	0.357	1.240	5.82	1.330	2.86
93	0.382	1.13	3.01	3,591	0.672	210	0.354	1.270	5.59	1.350	2.77
AVERAGE	0.382	1.15	3.01	3,561	0.681	207	0.356	1.255	5.71	1.340	2.82
S	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
53	0.353	1.10	2.76	3,680	0.745	192	0.356	1.405	4.44	1.492	1.91
64	0.355	1.10	2.73	3,760	0.717	194	0.352	1.426	4.19	1.511	1.84
AVERAGE	0.354	1.10	2.75	3,720	0.731	193	0.354	1.415	4.31	1.501	1.87
U	Rot. Visc.	ODSR	RTFO DSR	PAVDSR	Mass Loss	S-value	m-value	Jnr @ 100 Pa	% Rec. 100 Pa	Jnr @ 3200 Pa	% Rec. @ 3200 Pa
13	0.380	1.06	2.77	3,610	0.614	208	0.337	1.310	6.33	0.430	2.32
24	0.383	1.09	2.85	3,610	0.602	193	0.342	1.340	5.06	1.430	2.15
AVERAGE	0.382	1.08	2.81	3,610	0.608	200.5	0.340	1.325	5.70	0.930	2.24
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	0.365	1.08	2.86	3,800	0.68	205	0.350	1.361	4.60	1.445	1.86
78	0.365	1.09	2.92	3,630	0.680	209	0.349	1.234	5.64	1.322	2.37
81	0.373	1.10	2.86	3,640	0.630	210	0.350	1.314	5.95	1.419	1.98
AVERAGE	0.368	1.09	2.88	3,690	0.663	208	0.350	1.303	5.40	1.395	2.07

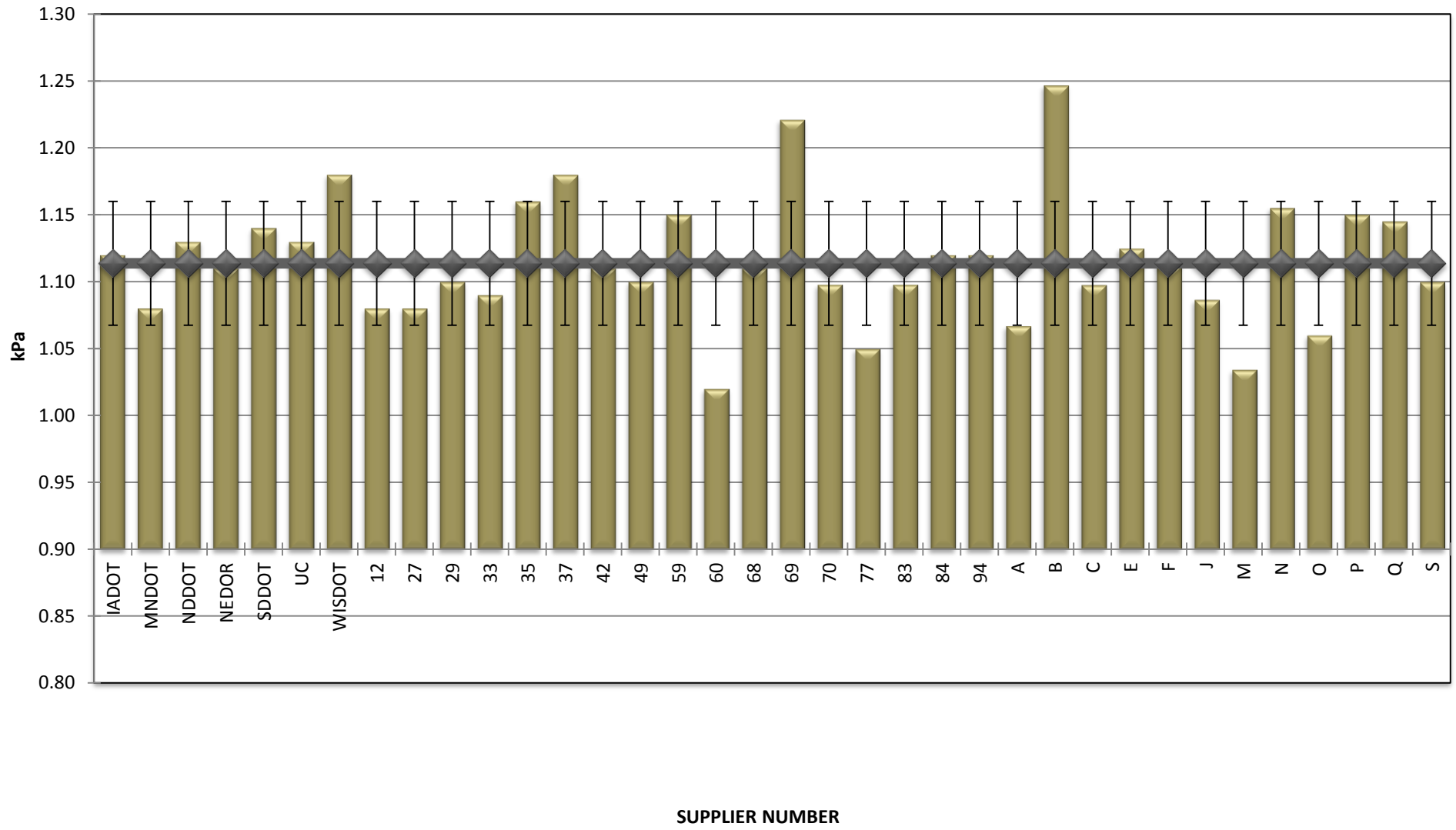
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ROTATIONAL VISCOSITY



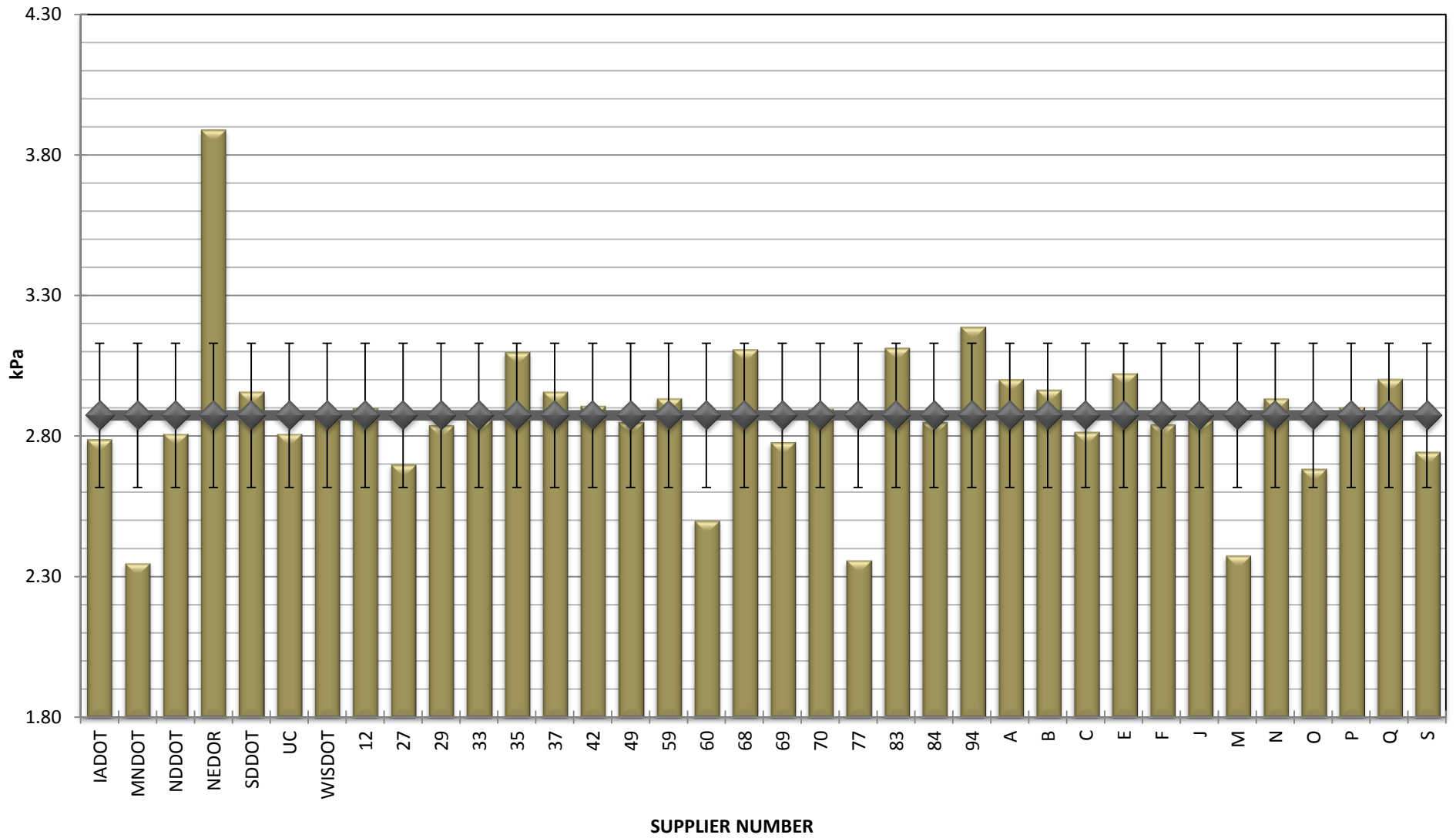
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DSR - ORIGINAL



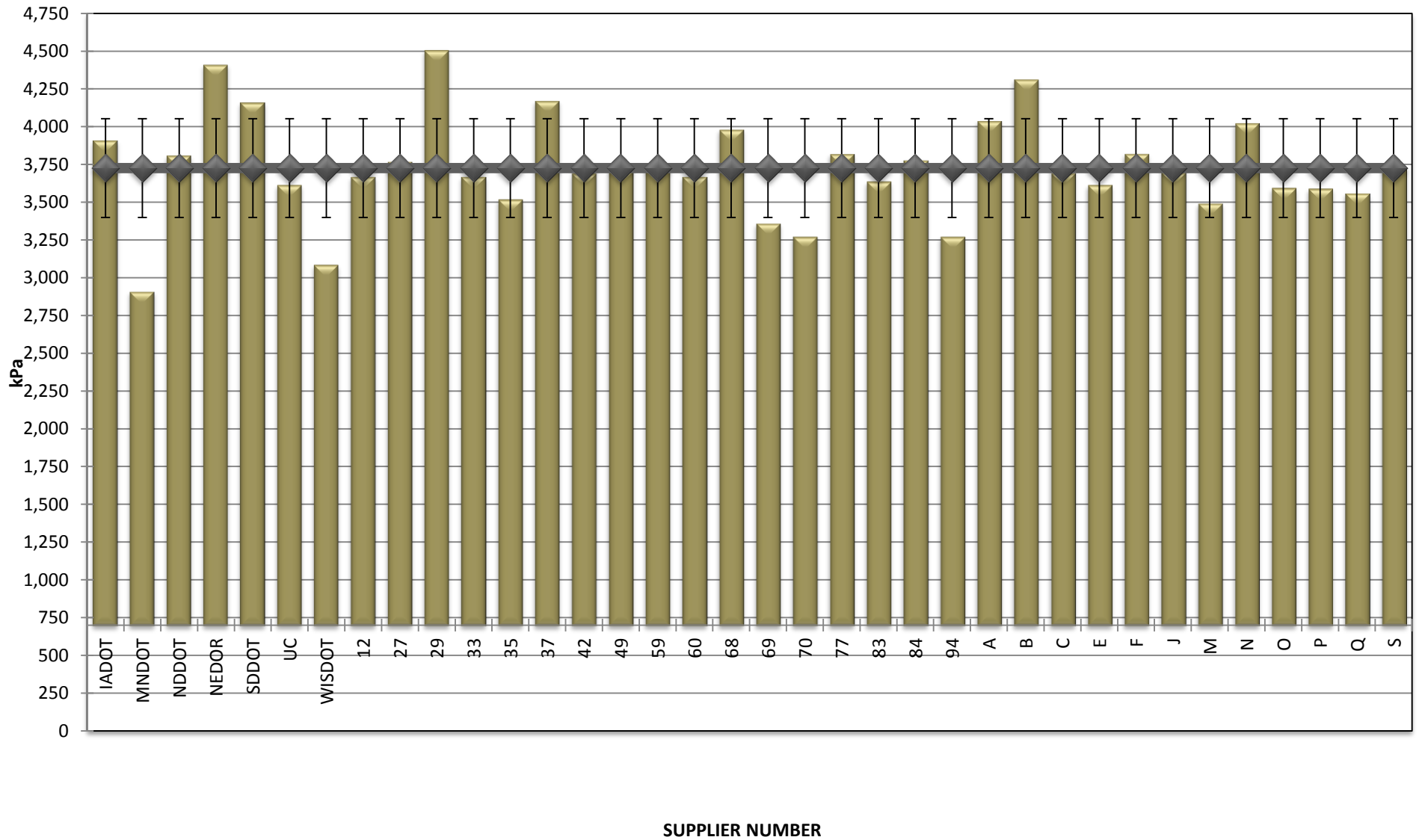
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DSR - RTFO



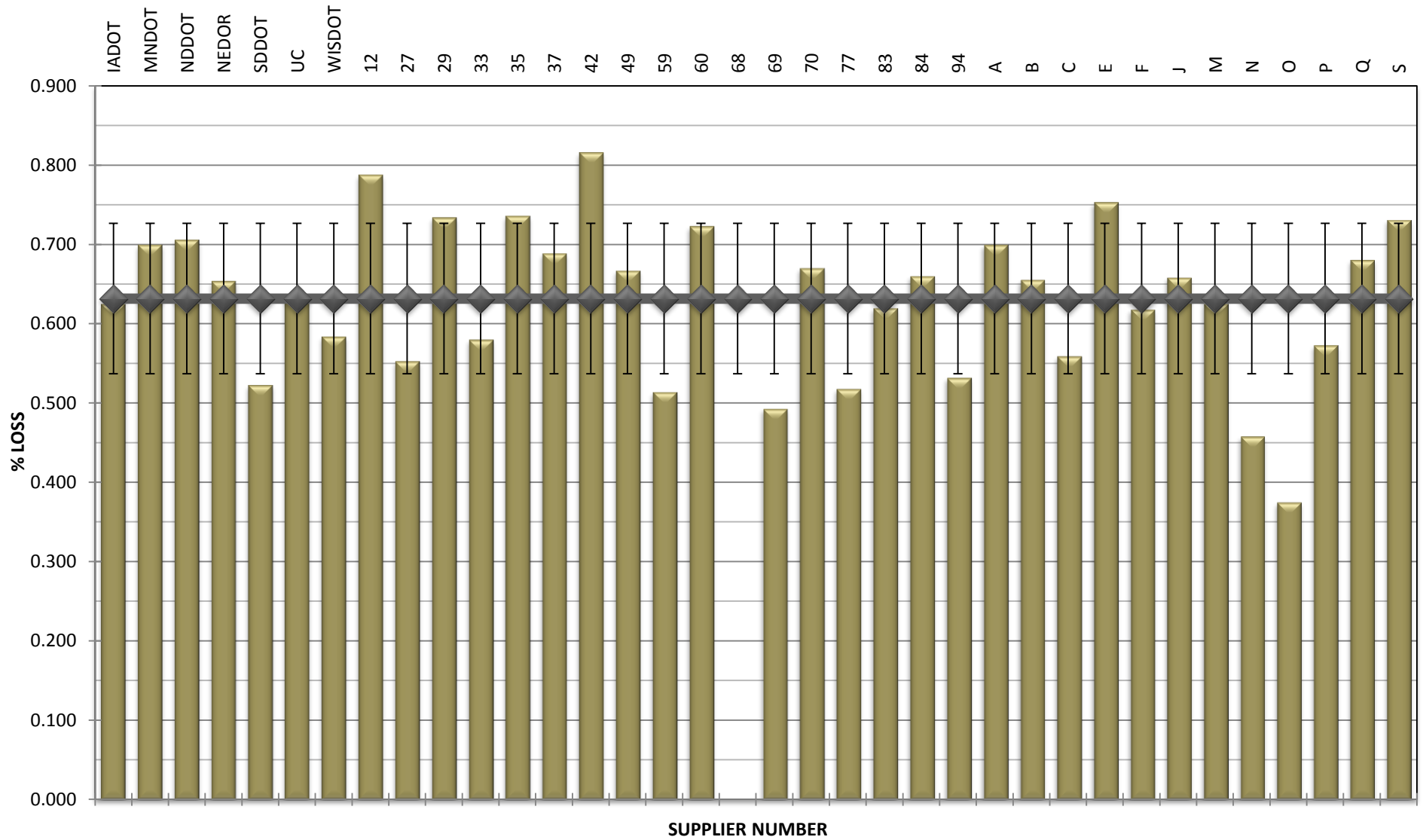
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DSR - PAV



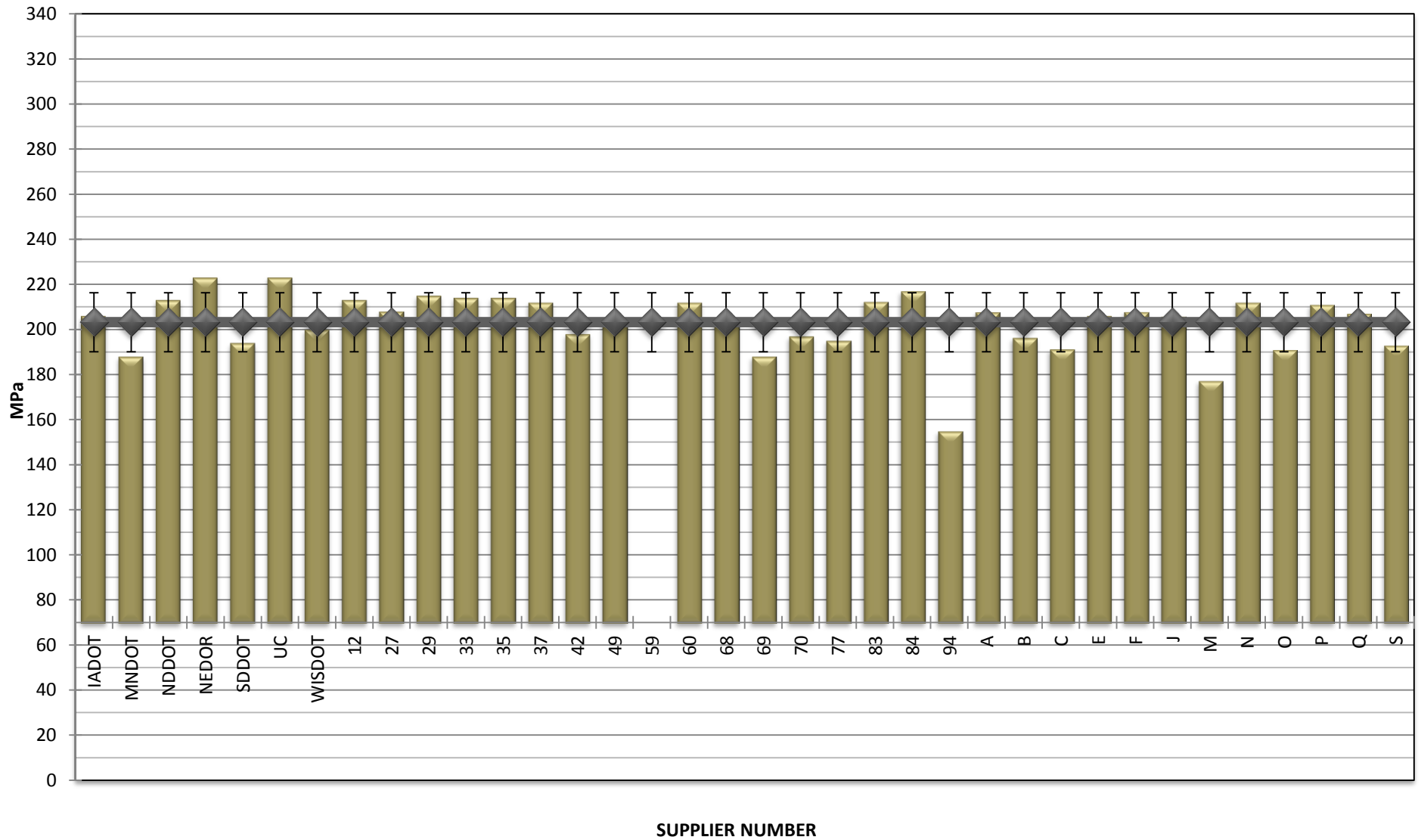
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RTFO MASS LOSS



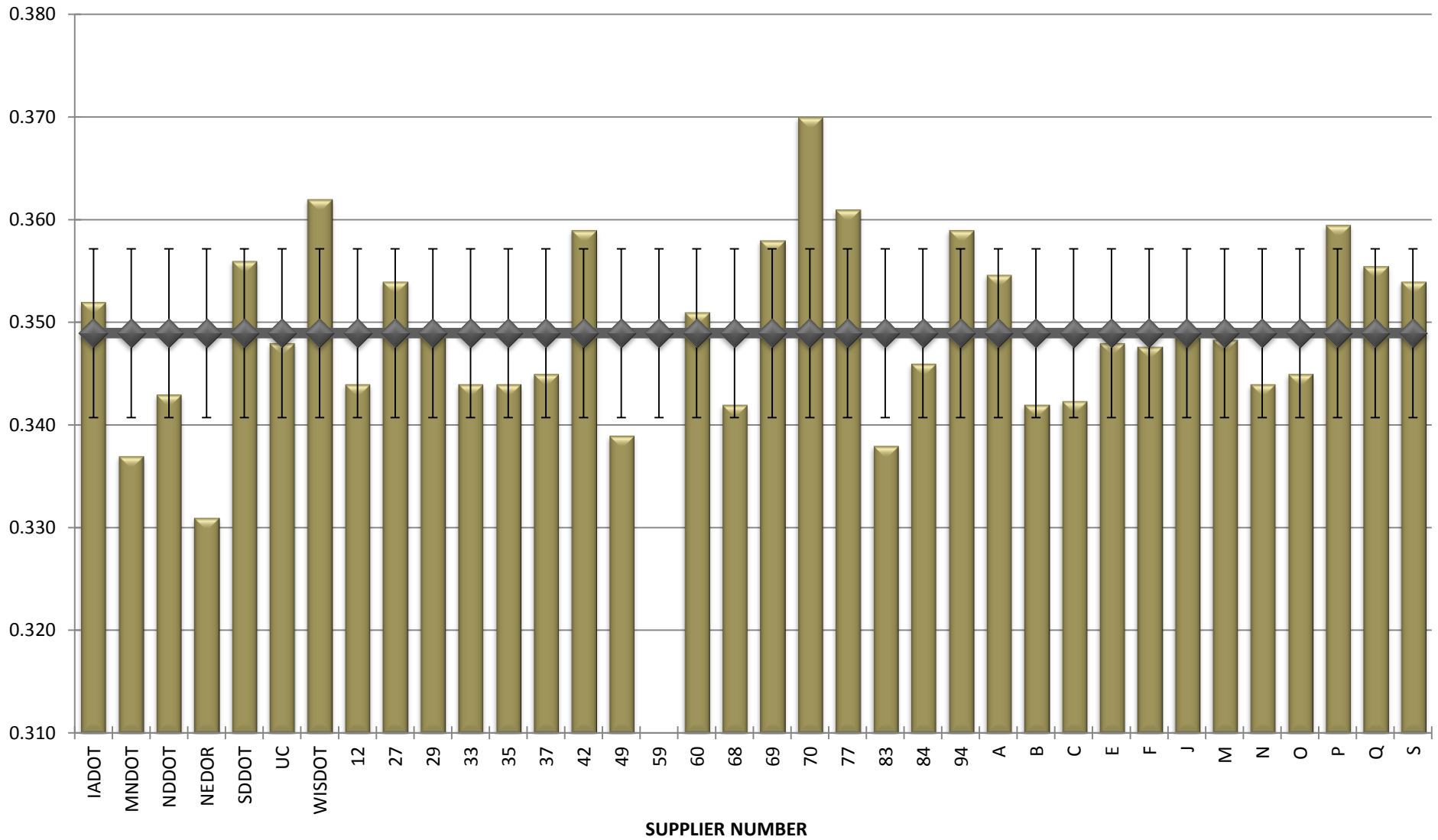
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BBR STIFFNESS



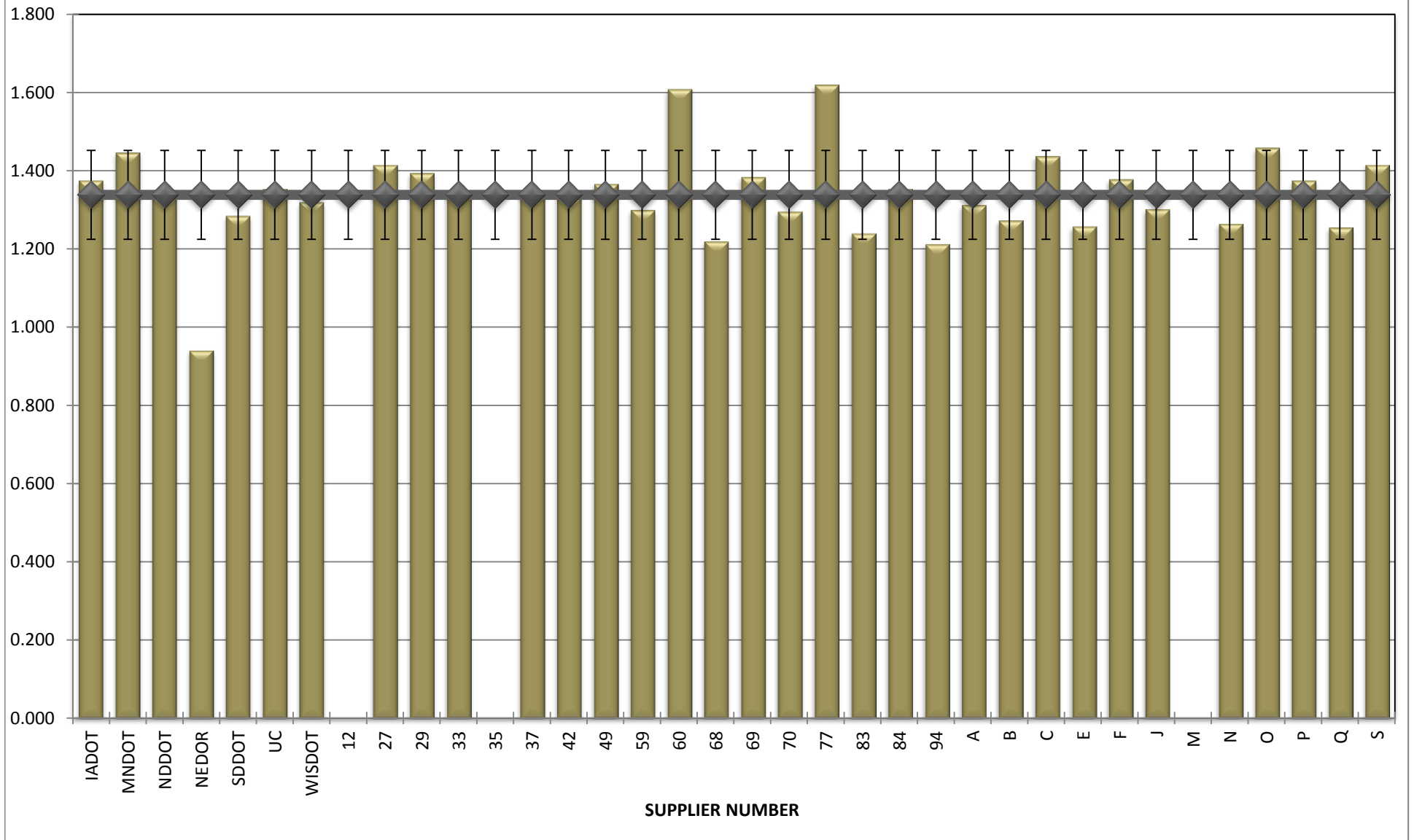
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BBR m-VALUE



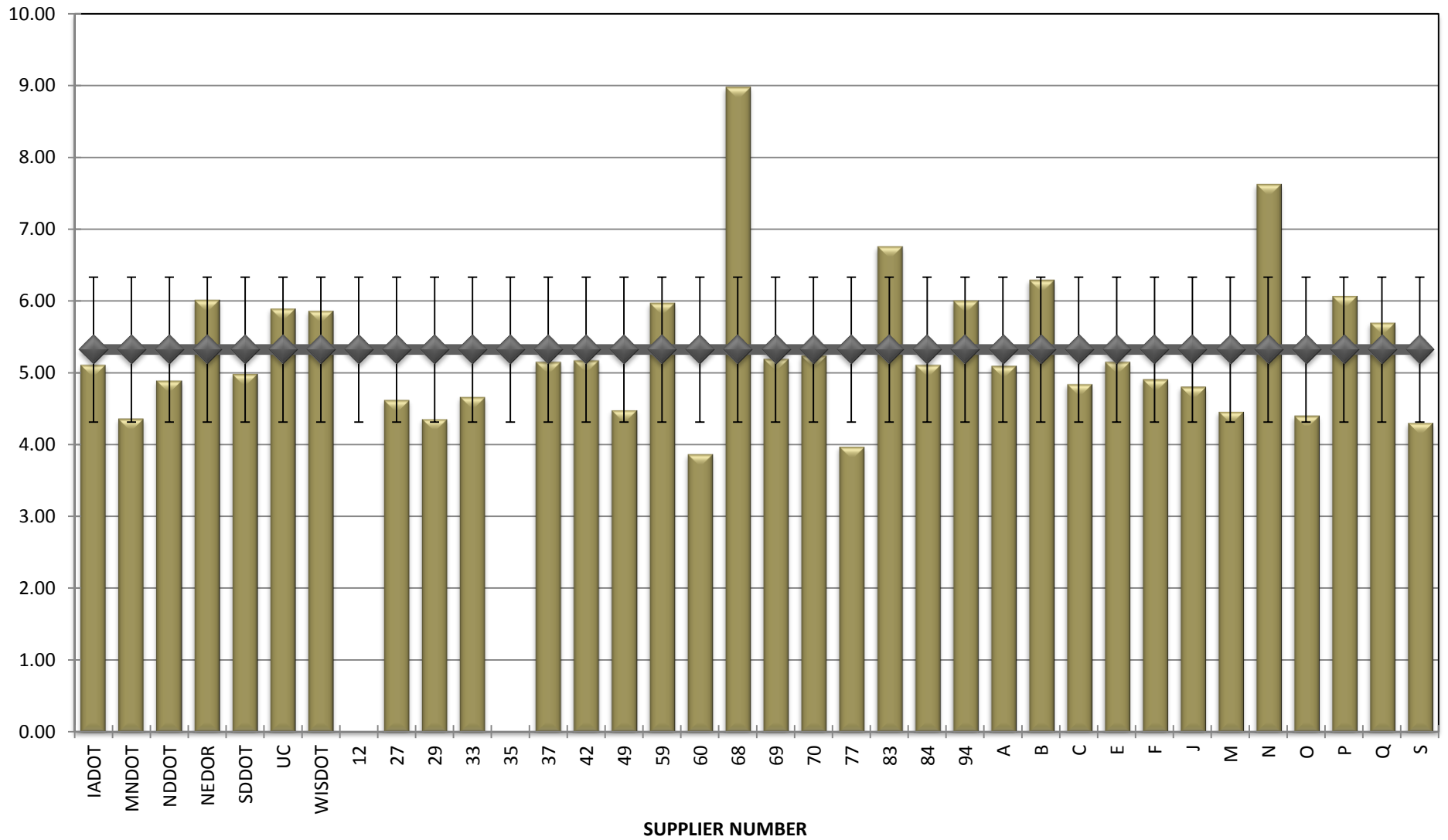
COMBINED STATE BINDER GROUP ROUND ROBIN
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Jnr @ 100 Pa



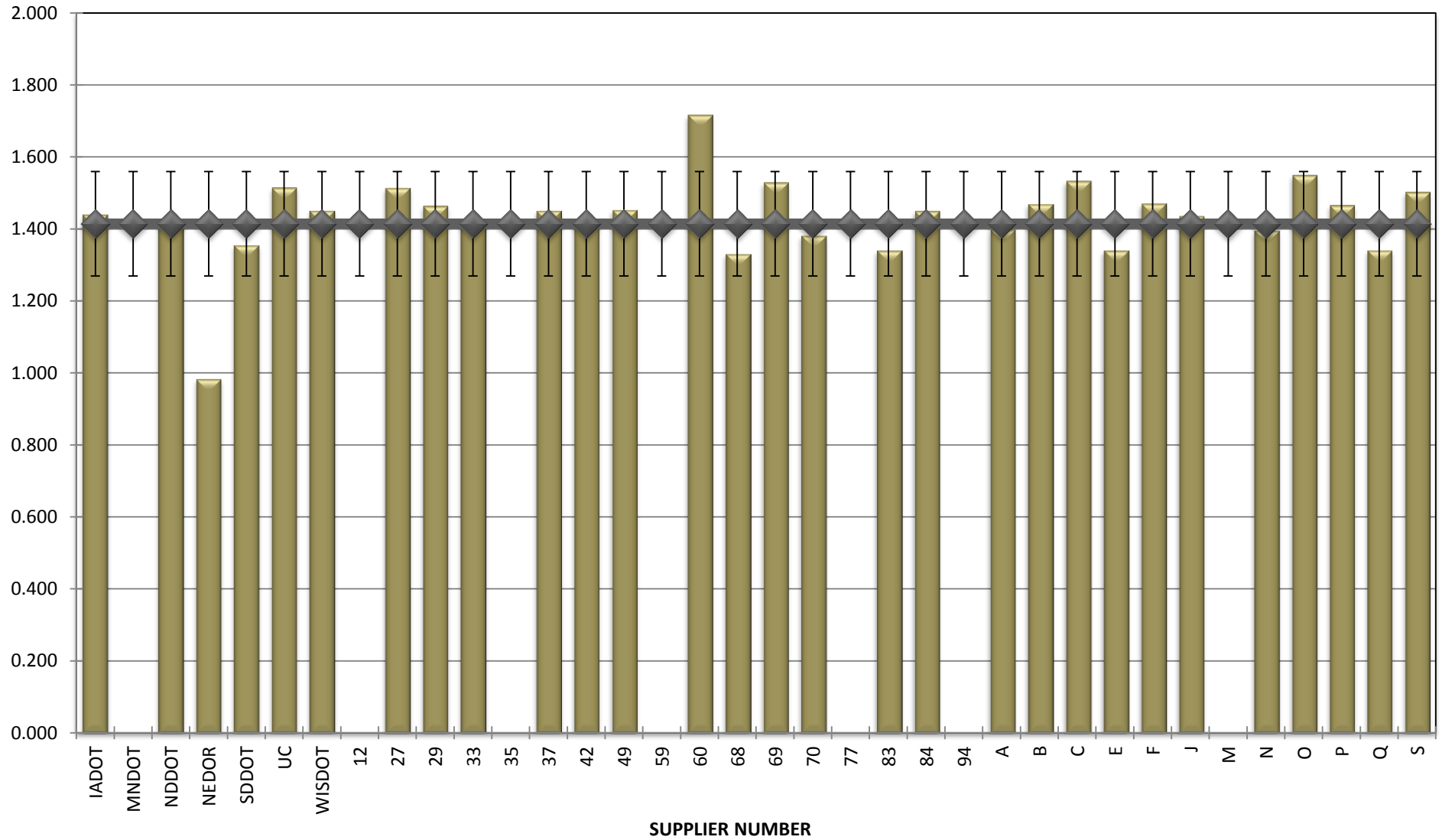
COMBINED STATE BINDER GROUP ROUND ROBIN
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% Recovery @ 100 Pa



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



**COMBINED STATE BINDER GROUP ROUND ROBIN
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% Recovery @ 3200 Pa

