

## BUTTONHEAD MECHANICAL ANCHORAGE TEST DATA CONVERSION - 15M AND 20M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar area in <sup>2</sup>	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area mm <sup>2</sup>	Max Load kN	Equivalent Max Stress CSA Gr 500 N/mm <sup>2</sup>	Equivalent Developed Stress %fy CSA Gr 500
5T7679	5A	75	<b>No. 5</b>	0.31	33,300	107,419	<b>143%</b>	<b>15M</b>	200	148.1	741	<b>148%</b>
	5B		<b>No. 5</b>	0.31	34,380	110,903	<b>148%</b>	<b>15M</b>	200	152.9	765	<b>153%</b>
5T8052	5A	*80	<b>No. 5</b>	0.31	33,390	107,710	<b>144%</b>	<b>15M</b>	200	148.5	743	<b>149%</b>
5T8237	5A	*80	<b>No. 5</b>	0.31	33,470	107,968	<b>144%</b>	<b>15M</b>	200	148.9	744	<b>149%</b>
5T8238	5A	*80	<b>No. 5</b>	0.31	33,600	108,387	<b>145%</b>	<b>15M</b>	200	149.5	747	<b>149%</b>
6T4057	6A	75	<b>No. 6</b>	0.44	54,120	123,000	<b>164%</b>	<b>20M</b>	300	240.7	802	<b>160%</b>
	6B		<b>No. 6</b>	0.44	52,280	118,818	<b>158%</b>	<b>20M</b>	300	232.5	775	<b>155%</b>
	6C		<b>No. 6</b>	0.44	51,600	117,273	<b>156%</b>	<b>20M</b>	300	229.5	765	<b>153%</b>
6T4340	6A	80	<b>No. 6</b>	0.44	48,400	110,000	<b>147%</b>	<b>20M</b>	300	215.3	718	<b>144%</b>
6T5550	6A	*80	<b>No. 6</b>	0.44	50,050	113,750	<b>152%</b>	<b>20M</b>	300	222.6	742	<b>148%</b>
6T5665	6A	*80	<b>No. 6</b>	0.44	49,150	111,705	<b>149%</b>	<b>20M</b>	300	218.6	729	<b>146%</b>
6T5666	6A	*80	<b>No. 6</b>	0.44	49,270	111,977	<b>149%</b>	<b>20M</b>	300	219.2	731	<b>146%</b>

### NOTES

Test results are from routine testing of each heat lot of arriving ButtonHead material, per Barsplice Products, Inc. ISO Quality System.

Reinforcing Bars, per ASTM A615 Grade 75/80 (or \*A706 Grade 80), have a minimum specified yield, fy = 75,000 psi (520 N/mm<sup>2</sup>).

See Lab reports for stress versus displacement curves (stress versus cross-head position).

Load rates per ASTM A 370.

ASTM = American Society for Testing and Materials

CSA = Canadian Standards Association

The ButtonHead, BNX, with a gross bearing area of 10 times the bar area, complies with CAN/CSA A23.3 Section 7.1.4 when installed in accordance with Barsplice Swaging Instructions (SM35) and Barsplice Terms and Conditions of Sale.

## BUTTONHEAD MECHANICAL ANCHORAGE TEST DATA CONVERSION - 25M AND 30M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar area in <sup>2</sup>	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area mm <sup>2</sup>	Max Load kN	Equivalent Max Stress CSA Gr 500 N/mm <sup>2</sup>	Equivalent Developed Stress %fy CSA Gr 500
8T2423	8A	75	<b>No. 8</b>	0.79	90,650	114,747	<b>153%</b>	<b>25M</b>	500	403.2	806	<b>161%</b>
	8B		<b>No. 8</b>	0.79	89,670	113,506	<b>151%</b>	<b>25M</b>	500	398.9	798	<b>160%</b>
	8C		<b>No. 8</b>	0.79	90,340	114,354	<b>152%</b>	<b>25M</b>	500	401.8	804	<b>161%</b>
	8D		<b>No. 8</b>	0.79	89,680	113,519	<b>151%</b>	<b>25M</b>	500	398.9	798	<b>160%</b>
8T2571	8A	80	<b>No. 8</b>	0.79	93,250	118,038	<b>157%</b>	<b>25M</b>	500	414.8	830	<b>166%</b>
	8B		<b>No. 8</b>	0.79	92,290	116,823	<b>156%</b>	<b>25M</b>	500	410.5	821	<b>164%</b>
	8C		<b>No. 8</b>	0.79	92,220	116,734	<b>156%</b>	<b>25M</b>	500	410.2	820	<b>164%</b>
8T3466	8A	*80	<b>No. 8</b>	0.79	95,820	121,291	<b>162%</b>	<b>25M</b>	500	426.2	852	<b>170%</b>
8T3531	8A	*80	<b>No. 8</b>	0.79	97,120	122,937	<b>164%</b>	<b>25M</b>	500	432.0	864	<b>173%</b>
8T3532	8A	*80	<b>No. 8</b>	0.79	96,900	122,658	<b>164%</b>	<b>25M</b>	500	431.0	862	<b>172%</b>
9T1616	9A	75	<b>No. 9</b>	1.00	111,210	111,210	<b>148%</b>	<b>30M</b>	700	494.7	707	<b>141%</b>
9T1763	9A	80	<b>No. 9</b>	1.00	114,900	114,900	<b>153%</b>	<b>30M</b>	700	511.1	730	<b>146%</b>
	9B		<b>No. 9</b>	1.00	115,770	115,770	<b>154%</b>	<b>30M</b>	700	514.9	736	<b>147%</b>
	9C		<b>No. 9</b>	1.00	114,990	114,990	<b>153%</b>	<b>30M</b>	700	511.5	731	<b>146%</b>
9T2244	9A	*80	<b>No. 9</b>	1.00	117,200	117,200	<b>156%</b>	<b>30M</b>	700	521.3	745	<b>149%</b>
9T2283	9A	*80	<b>No. 9</b>	1.00	112,640	112,640	<b>150%</b>	<b>30M</b>	700	501.0	716	<b>143%</b>
9T2284	9A	*80	<b>No. 9</b>	1.00	112,800	112,800	<b>150%</b>	<b>30M</b>	700	501.7	717	<b>143%</b>

### NOTES

Test results are from routine testing of each heat lot of arriving ButtonHead material, per Barsplice Products, Inc. ISO Quality System. Reinforcing Bars, per ASTM A615 Grade 75/80 (or \*A706 Grade 80), have a minimum specified yield, fy = 75,000 psi (520 N/mm<sup>2</sup>). See Lab reports for stress versus displacement curves (stress versus cross-head position). Load rates per ASTM A 370.

ASTM = American Society for Testing and Materials

CSA = Canadian Standards Association

The ButtonHead, BNX, with a gross bearing area of 10 times the bar area, complies with CAN/CSA A23.3 Section 7.1.4 when installed in accordance with Barsplice Swaging Instructions (SM35) and Barsplice Terms and Conditions of Sale.

## BUTTONHEAD MECHANICAL ANCHORAGE TEST DATA CONVERSION - 35M AND 45M (GRADE 500)

Lab Report & Reference No.		Bar Grade	ASTM Bar Size Designation	ASTM Bar area in <sup>2</sup>	Max Load lb	Max Stress psi	Developed Stress %fy ASTM Gr 75 (metric Gr 520)	Equivalent CSA Designation	CSA Bar Area mm <sup>2</sup>	Max Load kN	Equivalent Max Stress CSA Gr 500 N/mm <sup>2</sup>	Equivalent Developed Stress %fy CSA Gr 500
11T3136	11A	75	<b>No. 11</b>	1.56	186,939	119,833	<b>160%</b>	<b>35M</b>	1000	831.5	832	<b>166%</b>
	11B		<b>No. 11</b>	1.56	186,740	119,705	<b>160%</b>	<b>35M</b>	1000	830.6	831	<b>166%</b>
	11C		<b>No. 11</b>	1.56	186,021	119,244	<b>159%</b>	<b>35M</b>	1000	827.4	827	<b>165%</b>
	11D		<b>No. 11</b>	1.56	188,209	120,647	<b>161%</b>	<b>35M</b>	1000	837.2	837	<b>167%</b>
11T3250	11A	80	<b>No. 11</b>	1.56	195,460	125,295	<b>167%</b>	<b>35M</b>	1000	869.4	869	<b>174%</b>
11T4018	11A	*80	<b>No. 11</b>	1.56	171,829	110,147	<b>147%</b>	<b>35M</b>	1000	764.3	764	<b>153%</b>
11T4069	11A	*80	<b>No. 11</b>	1.56	182,570	117,032	<b>156%</b>	<b>35M</b>	1000	812.1	812	<b>162%</b>
11T4071	11A	*80	<b>No. 11</b>	1.56	180,940	115,987	<b>155%</b>	<b>35M</b>	1000	804.8	805	<b>161%</b>
14T841	14A	75	<b>No. 14</b>	2.25	261,531	116,236	<b>155%</b>	<b>45M</b>	1500	1163.3	776	<b>155%</b>
	14B		<b>No. 14</b>	2.25	260,939	115,973	<b>155%</b>	<b>45M</b>	1500	1160.7	774	<b>155%</b>
	14C		<b>No. 14</b>	2.25	257,049	114,244	<b>152%</b>	<b>45M</b>	1500	1143.4	762	<b>152%</b>
	14D		<b>No. 14</b>	2.25	259,641	115,396	<b>154%</b>	<b>45M</b>	1500	1154.9	770	<b>154%</b>
14T1338	14A	*80	<b>No. 14</b>	2.25	246,400	109,511	<b>146%</b>	<b>45M</b>	1500	1096.0	731	<b>146%</b>
14T1361	14A	*80	<b>No. 14</b>	2.25	245,819	109,253	<b>146%</b>	<b>45M</b>	1500	1093.4	729	<b>146%</b>

### NOTES

Test results are from routine testing of each heat lot of arriving ButtonHead material, per Barsplice Products, Inc. ISO Quality System.

Reinforcing Bars, per ASTM A615 Grade 75/80 (or \*A706 Grade 80), have a minimum specified yield, fy = 75,000 psi (520 N/mm<sup>2</sup>).

See Lab reports for stress versus displacement curves (stress versus cross-head position).

Load rates per ASTM A 370.

ASTM = American Society for Testing and Materials

CSA = Canadian Standards Association

The ButtonHead, BNX, with a gross bearing area of 10 times the bar area, complies with CAN/CSA A23.3 Section 7.1.4 when installed in accordance with Barsplice Swaging Instructions (SM35) and Barsplice Terms and Conditions of Sale.