

Collaborative Testing Services, Inc. Containerboard Interlaboratory Testing Program

Participant Summary Report #483 (N)- December 2009

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[Instrument Manufacturer Contacts](#)

Analysis	Sample Lot	Analysis Name
<u>201</u>	<u>BOX3</u>	<u>Box Compression Strength, Corrugated Boxes</u>
<u>202</u>	<u>ECT3</u>	<u>Edgewise Compressive Strength, Wax (T811), Corrugated board</u>
<u>203</u>	<u>ECT3</u>	<u>Edgewise Compressive Strength by Clamp (T839), Corrugated board</u>
<u>205</u>	<u>42X2</u>	<u>Mullen Burst of Linerboard, 42 lb Linerboard</u>
<u>207</u>	<u>36U3</u>	<u>Mullen Burst of Linerboard, 36 lb Linerboard</u>
<u>215</u>	<u>42X2</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard</u>
<u>217</u>	<u>36U3</u>	<u>Ring Crush of Linerboard, Rigid Platen Type, 36 lb Linerboard</u>
<u>223</u>	<u>42X2</u>	<u>STFI of Linerboard, 42 lb Linerboard</u>
<u>225</u>	<u>36U3</u>	<u>STFI of Linerboard, 36 lb Linerboard</u>
<u>228</u>	<u>42X</u>	<u>Roughness - Stylus Method, 42 lb Linerboard</u>
<u>231</u>	<u>42X</u>	<u>Internal Bond Strength, Linerboard, 42 lb Linerboard</u>
<u>234</u>	<u>42X</u>	<u>Coefficient of Static Friction - Inclined Plane, 42 lb Linerboard</u>
<u>237</u>	<u>42X</u>	<u>Air Resistance - Gurley Method, Linerboard, 42 lb linerboard</u>
<u>240</u>	<u>CM71</u>	<u>Flat Crush Strength (CMT) of Medium, 26 lb Corrugating Medium</u>
<u>250</u>	<u>CM71</u>	<u>Fluted Crush of Medium, 26 lb Corrugating Medium</u>
<u>255</u>	<u>CM71</u>	<u>Ring Crush of Medium, 26 lb Corrugating Medium</u>
<u>261</u>	<u>CM71</u>	<u>STFI of Medium, 26 lb Corrugating Medium</u>

ABOUT CTS

Founded in 1971, Collaborative Testing Services, Inc. (CTS) is a privately-owned company that specializes in interlaboratory tests for a wide variety of industries, including rubber, plastics, fasteners and metals, containerboard, paper, color, and wine, as well as proficiency tests for forensic laboratories. All of the tests are designed to assist organizations in achieving and maintaining quality control objectives. Labs from the U.S., as well as more than 50 countries, currently participate in the CTS programs.

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Collaborative Testing Services, Inc.
CONTAINERBOARD INTERLABORATORY TESTING PROGRAM

INTRODUCTION

The Interlaboratory Testing Program for Containerboard is operated and maintained by Collaborative Testing Services, Inc. (CTS), with technical guidance provided by the Containerboard Group of the American Forest & Paper Association. The tests are conducted on a monthly basis.

For these tests samples of linerboard and corrugating medium, that each have been separately randomized from narrow rolls, are distributed for testing weekly. One weight of medium (26 lb.) is used for Concora Flat Crush Strength, Corrugated Fluted Crush Strength, Ring Crush Strength, and STFI Compression. Two weights of linerboard are tested each month for Mullen Burst, Ring Crush, and STFI Compression: 42 lb. - every month; 36 lb. and 69 lb. - alternate months. The participants return their test results for analysis and receive a monthly report.

Please refer to the section, "EXPLANATION OF TABLES", for definitions of terms and guidelines to interpreting the results.

USE OF AVERAGE MEAN AS A COLLABORATIVE REFERENCE VALUE

The samples of linerboard and corrugating medium, which have been randomized and placed in sealed packages for distribution in this program, may be used as collaborative reference materials. The values most representative of each material are the Cumulative Grand Means in the latest reports, given at the bottom right of each table. Comparisons can only be made within one lot of material; therefore check your measurements against the Cumulative Grand Means with the same lot code as on the packages being tested.

Material	Lot Code	Dates in Use
36# Linerboard	36U3	May 2008 -
42# Linerboard	42X1 42X2	March 2008 - May 2009 June 2009 -
69# Linerboard 69# Linerboard	69Y1 69Y2	July 2008 - March 2009 May 2009 -
Corrugating Medium	CM71 CM72	July 2008 - October 2009 November 2009 -

EXPLANATION OF TABLES

Each analysis is divided into three time spans. On the left side of the table are the individual laboratory results for each week of the month; in the center are each lab's statistical data for the month; and on the right are each lab's cumulative data for up to 16 weeks. At the bottom of the table are the consensus statistics for all the participants for each of the three time spans.

Definitions of Terms Used

Weekly Results

Laboratory Data

WebCode - A six character laboratory identifier used to maintain information on a confidential basis. The WebCode is unique for each analysis and will change for each report. Your WebCode can be found in your Individual Report (Current Month Performance Report) and your datasheet.

Weekly Means - The average of the test results obtained by the participant for each week that data were reported.

Consensus Data

Wk Mean - For each week, the average of the Means for all the participants, excluding those laboratories flagged with an 'X'.

Avg SDr - For each week, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'. The Avg SDr is an indication of the variation of measurements within an average laboratory.

SD btwn Labs - For each week, the standard deviation of the laboratory Means about the Wk Mean, excluding those laboratories flagged with an 'X'. The SD LABS is an indication of the precision of measurement between the laboratories.

Labs Incl - The number of laboratory Means included in the Wk Mean for that week.

Labs Excl - The number of laboratory Means reported but excluded from the Wk Mean for that week because of outlying results ('X' following Mean).

Labs not rcvd - The number of laboratories failing to report for that week.

Monthly Results

Laboratory Data

Mean - For each laboratory, the average of all the weekly Means reported for this month.

CPV - **Comparative Performance Value**, an indication of how well a laboratory's Mean agrees with the other participants. The CPV is a ratio indicating the number of standard deviations from the consensus mean (Monthly Mean). The closer a laboratory's CPV is to zero, the more consistent its results are with the other participants' data.

SDr - For each laboratory, the average of the weekly within-lab standard deviations (SDr's) for all reported Weekly Means this month.

SD Wks - The standard deviation among the laboratory's weekly Means, including those Means flagged with an 'X'. The SD Wks is an indication of that laboratory's ability to obtain constant results from week to week.

Consensus Data

Month Mean - The average of the Means for all the participants, excluding those laboratories flagged with an 'X,' reporting data for this month.

Avg SDr - For the current month, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'.

SD btwn Labs - For the current month, the standard deviation of the laboratory Means about the Month Mean, excluding those laboratories flagged with an 'X'.

SD Wks - For the current month, the average of the laboratory between week standard deviations (SD Wks') for all the participants.

Labs Incl - The number of laboratory Means included in the Month Mean.

continued on next page

Cumulative Results

Laboratory Data

- Mean - For each lab, the average of all the monthly Means reported for the weeks shown.
- CPV - **Comparative Performance Value**, an indication of how well a laboratory's cumulative mean agrees with the other participants. The CPV is a ratio indicating the number of standard deviations from the consensus mean (Monthly Mean).
- SDr - For each laboratory, the average of the weekly within-lab standard deviations (SDr's) for the weeks shown.
- SD Wks- The standard deviation among the laboratory's weekly Means for the weeks shown, including those Means flagged with an 'X'. The SD Wks is an indication of that laboratory's ability to obtain constant results from week to week.
- Wks - The number of weeks included in the cumulative period.

Consensus Data

- Grand Mean - The average of the Means for all the participants, excluding those laboratories flagged with an 'X,' reporting data for the number of weeks included in the cumulative period.
- Avg SDr - For the cumulative period, the average of the within-laboratory standard deviations (SDr's) for all the participants, excluding those laboratories flagged with an 'X'.
- SD btwn Labs - For the cumulative period, the standard deviation of the laboratory Means about the Month Mean, excluding those laboratories flagged with an 'X'.
- SD Wks - For the cumulative period, the average of the laboratory between week standard deviations for all the participants.
- Labs Incl - The number of laboratory Means included in the Grand Mean.

Any laboratory that receives a 'flag' following a mean or standard deviation should refer to the chart below for an explanation of the data flag symbol:

<u>Flag</u>	<u>Explanation</u>
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Data Flags " X " and " * " indicate a laboratory's performance on an average value differed from the consensus.
Data Flags " H " and " L " indicate a laboratory's performance on a standard deviation differed from the consensus.

Flags assigned to Weekly Means, Monthly Mean and Cumulative Mean:

- X** Excluded from the weekly means, monthly means and/or the cumulative mean. Immediate review of data and/or testing procedure is required.
- *** Included in the weekly means, monthly means and/or the cumulative mean; however, lab should review testing procedure and monitor future results.

Flags assigned to Weekly Means:

- H** Indicates high within-laboratory standard deviation. The laboratory SDr for each week is not shown, but laboratory average SDr and consensus average SDr values are shown.
- L** Indicates low within-laboratory standard deviation. The laboratory SDr for each week is not shown, but laboratory monthly average SDr and consensus average SDr values are shown.

Flags assigned to Monthly SD Wks and Cumulative SD Wks:

- H** Indicates high variability between weekly means (high week-to-week variation).
- L** Indicates low variability between weekly means (low week-to-week variation).

INSTRUMENT MANUFACTURER CONTACTS

If your data results have been flagged with an "X" and you believe that the problem may be with your instrument (and not your testing procedures), then CTS urges you to contact the appropriate instrument manufacturer. Where possible, CTS has asked the manufacturer to supply a contact person who is familiar with the Containerboard Collaborative Reference Program, and who can thus work with you on evaluating your results to better determine the cause of the problem. Additional contact names will be added as they become available.

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Containerboard Interlaboratory Testing Program
Analysis 201

Top to Bottom Box Compression Strength, Corrugated Boxes - BOX3
TAPPI Official Test Method T804



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
3HGDYZ	910.1	-0.66	87.3	929.4	-0.21	51.6	4	LL
3MGNNT	943.6	-0.06	51.7	917.6	-0.50	35.8	4	XX
3QV4J7	1,003.7	1.01	42.8	960.9	0.57	53.1	4	XX
6RR4GM	946.6	-0.01	48.1	935.4	-0.06	52.9	4	XX
8DUU78	1,003.2	1.00	70.3	975.7	0.93	62.2	4	LG
94TKUU	987.9	0.73	62.6	973.7	0.89	62.7	4	LL
A3DPL8	1,016.3	1.24	17.8	949.1	0.28	33.9	4	TB
A4R2TC	1,011.4	1.15	16.8	976.8	0.96	47.8	4	ER
BGXDKX	1,025.8	1.41	20.5	1,025.8	2.17*	20.5	1	LL
C6EHN6	952.0	0.09	73.6	885.6	-1.29	66.0	4	LO
CMAM2J	995.5	0.87	27.6	943.4	0.14	65.0	4	LH
D98WVQ	947.0	0.00	59.0	933.5	-0.11	66.8	4	TP
E34HE8	943.6	-0.06	37.6	919.5	-0.45	33.8	4	ES
E7JZLQ	855.3	-1.63	56.7	897.6	-0.99	67.9	4	EX
E89FML	994.2	0.84	39.1	965.4	0.68	36.8	4	TC
EKU6RD	826.6	-2.14*	63.1	857.2	-1.99	51.1	4	TS
GEHVGM	907.9	-0.70	79.7	940.6	0.07	69.0	4	LG
JV7K7Y	1,030.7	1.49	33.6	1,006.5	1.69	48.5	4	LM
QJ9C4N	942.6	-0.08	48.1	909.7	-0.69	52.7	4	LO
QWPCGH	917.1	-0.53	6.1	930.3	-0.19	48.5	4	LN
ULH4H2	870.0	-1.37	73.5	843.0	-2.34*	61.4	4	LH
UUB8TP	917.8	-0.52	88.6	924.2	-0.34	72.6	4	ER
VKXJT3	955.3	0.15	28.7	969.5	0.78	36.2	4	RP
VLA293	899.5	-0.85	25.7	938.8	0.02	26.8	2	XX
XL7BYP	857.7	-1.59	37.7	926.7	-0.28	53.5	4	TR
ZJ98DX	958.6	0.21	45.9	948.1	0.25	56.2	4	MC

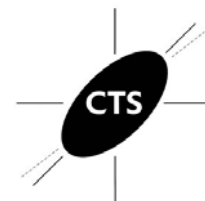
Consensus (All Labs) Results			
Month Mean	946.92	Grand Mean	937.84
Avg SDr	52.70	Avg SDr	53.09
SD btwn Labs	56.14	SD btwn Labs	40.55
Labs Incd	26	Labs Incd	26

Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BOX3
TAPPI Official Test Method T804



Instrument Code List as Reported by the Labs

(ER) - Emerson 6200 Series	(ES) - Emerson 8510
(EX) - Emerson Apparatus (Model not specified)	(LG) - TLS / L.A.B. Validator Series
(LH) - L.A.B. Compression Tester Model #10610	(LL) - Lansmont 76-5K
(LM) - Lansmont 122-15k	(LN) - Lansmont 152-50k
(LO) - Lansmont 152-30k	(MC) - MTI Lab Model 10240
(RP) - Regmed P4000M	(TB) - TMI Monitor/Compression Tester, Model 17-70
(TC) - TMI Monitor/Compression Tester, Model 17-37	(TP) - Tinius Olsen Model 398
(TR) - Toyo Seiki Model RCT-5TU	(TS) - Tinius Olsen Model CTM
(XX) - Instrument make/model not specified by lab	



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
7CJRJ9	37.0	-0.15	3.2	37.6	-0.25	3.1	4	LC
FRDCL9	41.9	1.38	4.5	42.4	1.19	3.8	4	TD
HUPYBX	40.2	0.85	1.4	40.9	0.75	1.5	4	LC
QTCCJR	33.8	-1.14	2.3	32.8	-1.69	1.9	4	WK
WU2U3D	34.1	-1.02	2.5	37.6	-0.25	2.1	4	EN
Z2VXK8	37.7	0.07	0.9	39.2	0.24	1.2	4	TC

Consensus (All Labs) Results					
Month Mean	37.44		Grand Mean	38.41	
Avg SDr	2.73		Avg SDr	2.43	
SD btwn Labs	3.24		SD btwn Labs	3.35	
Labs Incd	6		Labs Incd	6	

Instrument Code List as Reported by the Labs

(EN) - Emerson 2200

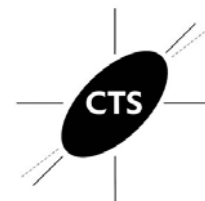
(LC) - L&W Crush Tester 48

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TD) - TMI Digital Crush Tester, Model 17-09

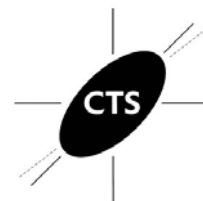
(WK) - Zwick Z005 Crush Tester

Containerboard Interlaboratory Testing Program
Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT3
TAPPI T839



WebCode	Monthly Results			Cumulative Results				Inst
	Mean	CPV	SDr	Mean	CPV	SDr	Months	
2323B2	45.5	0.88	1.9	43.4	0.36	1.3	4	TL
3YGTWE	42.6	0.02	1.2	42.9	0.17	1.3	4	TC
72V2VV	41.5	-0.32	1.3	41.6	-0.43	1.5	4	LD
78Z9EY	38.7	-1.15	2.4	40.2	-1.04	2.1	4	TB
7E2YMQ	49.1	1.95	2.3	44.4	0.82	3.7	4	EM
7GNAMW	45.1	0.76	1.3	44.9	1.03	2.1	3	LC
7LWPWK	46.6	1.21	0.9	43.7	0.52	2.0	4	TD
7V7U9B	43.9	0.39	2.2	42.9	0.17	2.0	4	LC
83M3WY	39.1	-1.02	1.9	40.4	-0.98	1.7	4	XX
9X6ACJ	39.0	-1.06	1.2	40.7	-0.81	1.8	4	TC
9ZE2WL	42.9	0.09	2.3	40.9	-0.75	2.9	4	EN
A6LE7A	49.2	1.97	1.2	48.2	2.52*	1.6	4	EM
ABL2JJ	45.2	0.78	2.3	43.2	0.27	3.1	4	EM
BF64MU	41.6	-0.30	3.4	42.6	0.00	2.9	4	LC
BGB73T	40.2	-0.69	2.0	41.5	-0.49	2.3	4	LC
BJD4DL	44.0	0.44	0.5	43.4	0.39	1.2	4	TC
BPGRTM	34.6	-2.37*	0.6	34.6	-3.58X	0.6	1	XX
C2YZGL	44.5	0.58	1.9	42.4	-0.07	2.0	4	TA
CWJGHC	40.5	-0.61	1.3	42.6	0.01	1.6	4	LC
CXUH6B	38.7	-1.14	3.7	40.3	-1.00	3.0	4	LX
E866ZB	40.8	-0.51	1.5	41.5	-0.49	1.7	4	EM
EJLFJF	41.3	-0.37	1.6	43.9	0.62	1.8	4	LC
GZ7PU9	41.0	-0.46	2.0	42.2	-0.18	1.8	4	LC
HTM9UN	40.9	-0.50	2.0	41.2	-0.62	2.0	4	EN
JKH28A	40.4	-0.65	1.4	38.7	-1.74	1.2	4	CT
KCYAXM	40.1	-0.72	1.0	41.4	-0.51	1.1	4	TC
KULDWC	45.8	0.96	1.3	43.8	0.55	1.6	4	TD
MFZCEG	44.1	0.47	1.3	43.3	0.32	2.0	4	LC
NEHMPA	37.8	-1.41	2.1	35.8	-3.04X	2.7	3	TK
QGHMQH	39.5	-0.91	1.9	39.5	-1.38	1.9	1	LC
UG3B7W	41.2	-0.40	0.9	38.2	-1.93	1.0	4	XX
URV8YA	47.6	1.49	1.6	47.3	2.13*	2.2	4	LZ
WQ2H7D	43.8	0.37	1.3	43.3	0.34	1.6	4	EN
X2LQJE	48.4	1.74	1.7	45.3	1.23	2.5	4	TM
XAFA2E	40.0	-0.77	2.2	41.2	-0.60	1.9	4	TC
XLB6ZP	45.2	0.79	1.4	43.6	0.46	2.8	3	LC

Containerboard Interlaboratory Testing Program
 Analysis 203
Edgewise Compressive Strength by T839, Corrugated board - ECT3
 TAPPI T839



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
YPMEHK	40.9	-0.49	1.4	40.7	-0.82	1.2	4	EM
ZFPRLZ	45.9	0.99	1.6	46.9	1.94	2.3	4	LC

Consensus (All Labs) Results					
Month Mean	42.55		Grand Mean	42.56	
Avg SDr	1.80		Avg SDr	2.06	
SD btwn Labs	3.37		SD btwn Labs	2.23	
Labs Incd	38		Labs Incd	36	

Instrument Code List as Reported by the Labs

- | | |
|--|--|
| (CT) - Con-Ten | (EM) - Emerson 1200 Series |
| (EN) - Emerson 2200 | (LC) - L&W Crush Tester 48 |
| (LD) - L&W Crush Tester 248 | (LX) - L&W 506 |
| (LZ) - L&W Crush Tester (model not specified) | (TA) - Thwing-Albert (model not specified) |
| (TB) - TMI Monitor/Compression Tester, Model 17-70 | (TC) - TMI Monitor/Compression Tester, Model 17-37 |
| (TD) - TMI Digital Crush Tester, Model 17-09 | (TK) - TLS Compression Tester, Model 5184 |
| (TL) - Tech-Lab Systems Compression | (TM) - TMI/Hinde & Dausch |
| (XX) - Instrument make/model not specified by lab | |

Containerboard Interlaboratory Testing Program
Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42X2
TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
2U942L	112.9	109.1	114.0	115.1	112.8	1.58	8.8	2.6	110.5	1.05	10.8	3.6	15	LA
2UMGGH	102.5	104.4	102.2	106.2	103.8	-0.76	6.3	1.9	104.2	-0.67	8.5	3.6	16	LC
3ZGM3Y	94.4*	103.7	97.9	101.7	99.4	-1.91	10.3	4.1	99.3	-2.00*	9.7	3.1	16	LA
4EC2G6	113.8	107.4	113.5	No Data	111.6	1.27	10.2	3.6	110.9	1.18	9.7	2.9	15	TB
4Q44VL	111.5	108.4	110.6	110.9	110.4	0.95	5.9	1.4	109.4	0.77	5.5	2.1	16	AX
6DT4KD	114.5H	109.4	109.2	103.6	109.2	0.64	12.5	4.5	108.4	0.47	10.1	2.8	16	AH
6EK6HN	101.0	101.5	103.6	112.2	104.6	-0.56	10.8	5.2	105.7	-0.25	10.2	4.6	10	LJ
7D8RFD	115.6	113.6	110.0	112.0	112.8	1.59	9.4	2.4	108.5	0.49	10.3	4.0	16	AH
7NCT4J	98.9	102.7	108.4	104.0	103.5	-0.85	12.1	3.9	101.7	-1.36	10.9	3.7	16	AH
8B6NPG	106.9	109.9	112.8	105.2	108.7	0.52	11.2	3.4	107.5	0.22	10.5	5.7	15	LA
8VP96R	111.5	111.3	103.2	110.5	109.1	0.63	9.5	4.0	106.3	-0.09	9.2	3.4	14	LA
9AM4AC	100.0	98.9	104.7	97.2*	100.2	-1.71	7.2	3.2	101.2	-1.50	7.3	3.4	16	AH
9LXNFQ	100.9H	102.3L	101.9	101.2	101.6	-1.35	9.9	0.6L	101.4	-1.45	9.5	1.1	16	AH
9N7L62	131.4X	142.8X	101.3	101.9	119.4	3.31X	13.1	21.0H	115.1	2.32*	12.0	13.1H	12	AX
A9BJ4M	107.5	106.6	112.4	99.8	106.6	-0.04	8.9	5.2	107.7	0.28	9.4	2.9	16	LZ
ADVFA6	123.3X	105.6L	108.2	106.5L	110.9	1.09	9.9	8.3H	111.2	1.24	8.9	6.0	16	LA
B2FYTX	109.3	114.2	110.0	114.0	111.9	1.35	11.6	2.6	114.4	2.13*	10.5	5.2	16	LA
DGCR8P	101.9	107.9	104.6	105.3	104.9	-0.47	9.7	2.5	104.7	-0.54	10.3	4.1	16	LC
E3JJGA	109.4	104.6	105.4	101.2	105.1	-0.42	12.0	3.3	106.6	-0.01	10.7	2.6	16	LA
E7XGMB	108.8	108.4	105.4	No Data	107.6	0.22	10.0	1.8	109.7	0.82	10.5	3.9	15	LA
ELVE6A	114.2	101.9	110.5	105.4	108.0	0.33	10.7	5.4	108.0	0.36	11.5	3.4	15	XX
F996XF	102.3	No Data	No Data	No Data	102.3	-1.15	11.8	0.0L	107.3	0.19	9.3	3.7	13	LZ
FHLFKL	109.0	107.2	106.8	110.0	108.3	0.40	11.1	1.5	107.1	0.13	9.3	2.0	16	TX
FKMU3D	110.1	106.4	106.1	106.6	107.3	0.14	6.7	1.9	107.0	0.09	7.4	1.8	16	TB
G8JRNN	108.2	102.7	106.6	102.1	104.9	-0.48	10.4	3.0	105.8	-0.24	10.7	4.2	8	TC
HJ8YKB	106.1	102.8	115.1	104.6	107.2	0.11	12.6	5.5	106.5	-0.03	11.8	5.0	16	XX
JP4N8Z	98.8	97.8	No Data	No Data	98.3	-2.21*	9.8	0.7	96.9	-2.66*	8.6	3.7	14	LA
K6N8BF	109.4	107.7	110.7	114.6	110.6	1.02	12.2	2.9	109.5	0.77	11.2	3.2	16	LJ
KA4QMV	100.7L	97.7	102.8	114.1	103.8	-0.76	8.4	7.2	103.2	-0.94	10.8	4.8	15	AH
LQ43MJ	102.3	101.3	101.1	101.6	101.6	-1.35	5.9	0.5L	101.4	-1.43	5.9	0.5L	16	LZ
M9WAC2	111.8	102.9	102.8	110.6	107.0	0.08	11.9	4.8	106.5	-0.03	11.6	3.3	16	AH
N43ZDM	112.7	113.1	109.4	104.2	109.9	0.82	9.6	4.1	108.2	0.42	9.6	3.6	16	AH
NKU2HC	105.7	115.1H	107.5	118.9*	111.8	1.33	12.3	6.3	110.7	1.11	11.1	4.4	12	LC
P3PDP8	109.1	106.7	111.3	108.4	108.9	0.57	12.2	1.9	107.7	0.29	11.8	4.8	16	LA

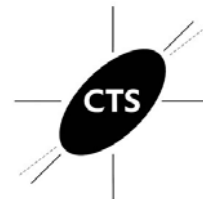
Containerboard Interlaboratory Testing Program
 Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X2
 TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
PEVTAG	111.3	107.6	103.5	113.8	109.1	0.61	10.9	4.5	111.9	1.45	10.2	3.5	16	TB
PJBWME	109.4	106.0	109.4	105.7	107.6	0.23	10.5	2.0	107.4	0.22	10.8	2.8	16	LA
PPWYJH	110.8	112.1	109.7	108.2	110.2	0.91	8.3	1.7	108.2	0.42	9.6	3.8	16	LA
Q24DTV	105.2	105.2	105.0	105.2	105.1	-0.42	10.1	0.1 L	105.8	-0.24	10.3	1.9	16	TB
REUBNR	111.3	101.1	107.2	107.7	106.8	0.02	10.0	4.2	106.3	-0.11	11.5	3.0	16	LC
RL9F46	110.5	116.0*	109.3	108.8	111.1	1.15	8.7	3.3	110.4	1.04	10.7	4.1	16	AA
UHK6DA	103.8	100.1	106.6	110.9	105.4	-0.36	13.2	4.5	107.0	0.10	10.4	3.9	16	AX
URCJGF	98.6	105.1	103.2	No Data	102.3	-1.16	9.6	3.4	102.6	-1.10	8.8	2.8	15	LJ
VCVPKV	109.5	106.5	108.9	112.2	109.3	0.67	10.1	2.3	108.7	0.56	9.1	1.7	8	TB
VH28HH	104.7	100.0	No Data	No Data	102.4	-1.14	7.2	3.3	100.8	-1.61	7.3	3.7	14	TC
VVHQTR	108.9	110.1	109.8 L	No Data	109.6	0.75	4.9	0.6 L	108.6	0.54	5.1	1.7	15	XX
WBG9M4	109.8	110.8	115.7	119.3*	113.9	1.88	9.3	4.4	108.7	0.56	9.9	5.4	16	LC
WNDP4N	106.3	111.1	113.0	111.4	110.4	0.97	11.3	2.9	107.8	0.31	11.5	4.7	16	LZ
X8U6CB	100.9	100.1	99.6	102.1	100.7	-1.58	9.7	1.1	100.7	-1.64	9.7	1.1	4	AH
XZKY6J	105.9	105.2	No Data	103.5	104.9	-0.49	10.8	1.2	103.8	-0.78	11.1	3.5	15	AH
Y44GXN	112.1	112.8	107.2	109.5	110.4	0.96	9.0	2.6	109.4	0.76	9.6	2.6	15	AA
Y8A7R4	103.9	104.6	No Data	108.4	105.6	-0.29	10.0	2.4	105.5	-0.32	10.4	2.3	14	TB
YTQXYR	100.0	101.2	98.1	105.4	101.2	-1.45	10.3	3.1	101.8	-1.34	9.7	4.1	16	LA
YU3XUZ	105.1	104.6	107.5	102.5	104.9	-0.48	8.1	2.0	104.2	-0.68	8.6	2.4	16	LB
YXGGTA	107.8	104.8	99.1	105.0	104.2	-0.67	11.0	3.7	108.3	0.47	11.2	4.6	16	TX
Z3B8W6	106.6	No Data	100.4	104.9	104.0	-0.72	8.4	3.2	107.5	0.24	9.3	4.0	15	LZ

Consensus (All Labs) Results											
Wk Mean	106.87	106.12	106.86	107.38	Month Mean	106.73				Grand Mean	106.65
Avg SDr	9.99	10.11	9.86	10.25	Avg SDr	10.04				Avg SDr	9.92
SD btwn Labs	4.90	4.58	4.51	4.99	SD btwn Labs	3.82				SD btwn Labs	3.65
Labs Includ	53	52	50	48	SD btwn Wks	3.57				SD btwn Wks	3.99
Labs Exclud	2	1	0	0	Labs Includ	54				Labs Includ	55
Labs not rcvd	0	2	5	7							

Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X2
TAPPI Official Test Method T807



Instrument Code List as Reported by the Labs

(AA) - Perkins Model A	(AH) - Perkins Model AH
(AX) - Perkins Mullen Tester (model not specified)	(LA) - L & W Bursting Strength Tester
(LB) - L & W Burst-O-Matic	(LC) - L & W Autoline
(LJ) - L & W Bursting Strength Tester J-Type	(LZ) - L & W (model not specified)
(TB) - TMI Monitor/Burst 1000	(TC) - TMI Monitor/Burst (Model 13-71)
(TX) - TMI Monitor/Burst (model not specified)	(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36U3
TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
2FCP4D	81.7*	83.8	No Data	No Data	82.7	-2.23*	7.0	1.5	86.4	-1.58	6.0	3.0	10	TC
2RBW3N	91.5	91.1	91.5 H	91.5	91.4	-0.06	10.7	0.2 L	91.3	-0.03	8.4	0.9	12	AH
374E88	87.4	88.1	90.3	88.3	88.5	-0.78	8.7	1.2	92.9	0.46	10.0	4.6	12	TX
6H9GJF	93.6	96.0	93.8	96.2	94.9	0.81	9.9	1.4	95.1	1.16	10.4	2.6	12	AH
6LPDAW	93.9	90.5	95.0	93.3	93.2	0.38	11.6	1.9	92.7	0.41	11.8	2.7	10	LC
6RDEFV	83.8	87.3	87.3	88.7	86.8	-1.21	6.2	2.1	87.4	-1.27	8.1	1.8	12	LB
6VTYE6	94.5	96.6	96.7	102.2*	97.5	1.46	10.0	3.3	95.0	1.13	10.0	5.0	12	LA
73AY3F	93.1	93.8	93.1	98.2	94.5	0.72	10.0	2.4	93.8	0.75	10.2	4.9	12	LZ
7JHY4W	92.3	91.3 L	89.6	90.5	91.0	-0.17	8.5	1.1	93.2	0.56	8.0	2.3	12	LA
7XH2Y4	114.8 X	110.2 X	90.3	90.0	101.3	2.42*	8.4	13.1 H	94.6	1.02	9.5	11.3 H	8	AX
8UE8HT	82.7	86.1	86.2	89.0	86.0	-1.41	11.1	2.6	89.0	-0.76	10.4	3.3	10	LA
93URNA	88.8	85.7	No Data	91.2	88.6	-0.77	10.0	2.8	90.3	-0.35	9.6	3.9	11	AH
9JAJ2F	94.6	92.8	90.2	87.1	91.1	-0.12	9.5	3.3	90.4	-0.31	9.7	2.7	11	LA
9KYY3B	93.6	93.0	95.1	85.4	91.8	0.03	8.2	4.3	90.2	-0.39	7.4	3.0	12	LC
9YEAGQ	90.9	98.1	96.7	100.3 L	96.5	1.21	8.0	4.0	93.0	0.51	10.1	3.9	12	LC
ACNJ3Z	94.8	100.1	98.0	No Data	97.6	1.50	9.8	2.7	96.8	1.71	9.2	3.1	11	TB
AHPURU	95.7	86.8	98.5	91.0	93.0	0.34	10.8	5.2	92.1	0.22	9.6	3.2	12	TX
BAUL22	97.2	96.1	95.6	98.0	96.7	1.27	9.8	1.1	95.2	1.19	9.8	1.8	12	AH
BP8JCY	87.7	82.3*	86.0	No Data	85.3	-1.58	9.5	2.8	87.1	-1.38	10.0	2.8	11	LJ
CHK3B9	91.9	92.3	86.2	78.4 X	87.2	-1.11	5.3	6.5	87.6	-1.21	6.5	5.3	12	AH
CL8U9W	85.3	87.9	84.9	No Data	86.0	-1.41	6.9	1.7	85.3	-1.95	8.2	1.6	11	LA
CW88KQ	93.3	89.5	No Data	91.9	91.6	-0.02	10.6	1.9	91.2	-0.07	10.8	2.6	8	TB
D6RLGM	95.3	96.0	97.7	92.1	95.3	0.91	8.6	2.4	93.0	0.50	9.7	2.8	12	LJ
D8YFJJ	92.5	95.9	92.6	94.5	93.9	0.56	9.8	1.6	94.0	0.82	9.1	2.4	12	LZ
DF2PKQ	91.8	88.6	86.7	92.4	89.9	-0.44	9.6	2.7	88.1	-1.05	9.2	3.0	12	LC
EJM7XB	92.3	92.3	96.7	92.3	93.4	0.44	10.0	2.2	91.9	0.15	10.1	2.1	12	AH
FJ4W7L	86.6	86.7	82.6*	87.6	85.9	-1.44	8.2	2.3	85.5	-1.89	8.7	2.7	12	LA
FJQ4T7	90.2	95.6	92.7	88.3	91.7	0.01	11.1	3.2	92.5	0.33	11.7	2.6	12	LA
HB64VX	90.5	90.2	91.6	91.6	91.0	-0.17	10.1	0.7	87.4	-1.29	9.4	3.1	12	AH
HKAY6P	90.7	94.3	93.2	98.3	94.1	0.62	10.7	3.2	96.6	1.66	10.2	3.7	12	TB
HRT2B7	90.2	92.1	90.8	88.0	90.3	-0.34	10.3	1.7	90.8	-0.20	10.2	2.0	11	LA
J6DKJ8	93.6	91.0	88.8	92.0	91.4	-0.07	8.1	2.0	91.4	-0.02	8.1	2.0	4	TB
K692ZW	90.6	98.1	92.6	No Data	93.8	0.54	11.1	3.9	93.1	0.53	10.1	2.4	11	LA
KV6RQL	91.9	91.0	91.8	90.6	91.3	-0.08	5.8	0.6	91.3	-0.04	6.0	0.8	12	LZ

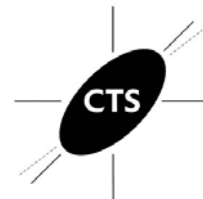
Containerboard Interlaboratory Testing Program
Analysis 207

Bursting Strength (Mullen), 36 lb Linerboard - 36U3
TAPPI Official Test Method T807



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
LB7ZZK	92.0	91.9	85.4	89.8	89.8	-0.46	9.4	3.1	89.1	-0.73	9.2	2.3	8	TC
LENFCX	91.3	98.0	92.6	96.0	94.5	0.71	8.7	3.1	92.9	0.46	9.4	2.4	12	AH
M6HQDT	99.8	92.7	96.5	91.5	95.1	0.87	11.0	3.8	95.4	1.26	10.1	3.6	12	LA
MMU8W7	90.6	95.1 H	97.1	92.3	93.8	0.53	11.6	2.9	90.1	-0.42	12.5	4.6	12	XX
MRXT8A	91.9	No Data	No Data	No Data	91.9	0.05	10.5	0.0 L	93.5	0.67	8.7	2.2	9	LZ
P36VQR	85.2	87.9	87.8	85.7	86.7	-1.25	10.2	1.4	88.6	-0.90	9.6	2.9	12	LA
P763WW	92.4	89.4	92.9	90.9	91.4	-0.06	10.2	1.6	91.7	0.10	9.2	1.4	12	TB
PDCTUF	83.9	91.5	89.8	90.1	88.8	-0.70	11.0	3.3	90.7	-0.21	9.8	3.2	12	AX
PVK6YZ	90.8	93.8 L	90.5	No Data	91.7	0.01	4.6	1.8	91.0	-0.14	4.7	1.4	11	XX
Q7LNWQ	79.1 *	87.5	85.0	92.0	85.9	-1.43	8.7	5.4	85.9	-1.76	9.4	3.7	12	AH
T9PDRD	93.1	No Data	85.0	93.0	90.4	-0.31	9.2	4.6	93.1	0.55	9.2	3.0	11	LZ
TGWAEV	92.5	92.9	95.9	96.6	94.5	0.71	8.7	2.1	91.3	-0.04	8.3	3.1	11	LA
UAPLXU	91.4	93.5	86.4	90.5	90.5	-0.30	10.1	3.0	90.2	-0.39	10.1	2.3	12	LA
UMGBVE	88.7	86.0	86.4	87.5	87.2	-1.12	8.1	1.2	87.3	-1.29	8.7	1.1	5	AH
UW6M9X	87.0	88.0	86.6	84.1 L	86.4	-1.31	4.8	1.6	86.2	-1.65	5.2	1.3	12	TB
WHGJZM	92.1	91.6	89.3	85.5	89.6	-0.50	10.3	3.0	90.5	-0.30	10.3	3.2	12	LC
WTTZHT	100.0 *	101.4 *	102.3 *	103.9 *	101.9	2.56 *	5.8	1.6	98.3	2.18 *	5.9	3.3	12	AX
Y2WUQB	95.9	95.0	92.4	94.1	94.4	0.68	11.5	1.5	95.3	1.25	11.2	2.4	12	LA
Y9CTYV	83.6 L	87.1	89.4	97.6 H	89.4	-0.55	11.0	5.9	90.3	-0.36	9.9	4.1	8	LJ
YWGNLN	99.9	97.4	96.9	94.2	97.1	1.36	8.8	2.3	96.7	1.67	9.1	2.4	11	AA
ZY4P3W	94.3	92.5	93.5	97.8	94.5	0.71	8.9	2.3	93.8	0.77	9.6	2.5	12	AA

Consensus (All Labs) Results													
Wk Mean	91.11	91.81	91.46	92.20	Month Mean	91.64				Grand Mean	91.41		
Avg SDr	9.75	9.05	9.09	9.75	Avg SDr	9.38				Avg SDr	9.33		
SD btwn Labs	4.43	4.24	4.45	4.43	SD btwn Labs	4.00				SD btwn Labs	3.14		
Labs Includ	54	52	51	47	SD btwn Wks	3.36				SD btwn Wks	3.31		
Labs Exclud	1	1	0	1	Labs Includ	55				Labs Includ	55		
Labs not rcvd	0	2	4	7									



Instrument Code List as Reported by the Labs

(AA) - Perkins Model A

(AX) - Perkins Mullen Tester (model not specified)

(LB) - L & W Burst-O-Matic

(LJ) - L & W Bursting Strength Tester J-Type

(TB) - TMI Monitor/Burst 1000

(TX) - TMI Monitor/Burst (model not specified)

(AH) - Perkins Model AH

(LA) - L & W Bursting Strength Tester

(LC) - L & W Autoline

(LZ) - L & W (model not specified)

(TC) - TMI Monitor/Burst (Model 13-71)

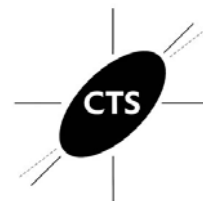
(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
22W6KQ	82.8	82.0*	90.1H	90.1	86.3	-1.41	5.2	4.5	86.5	-1.47	5.9	6.6H	8	LZ
2KAPF9	94.6	95.5L	91.9	88.3	92.6	-0.09	3.1	3.2	92.5	-0.02	3.6	2.1	16	LX
3EULP7	104.4*	107.5*	103.8*	100.3	104.0	2.28*	4.0	3.0	99.7	1.75	3.9	3.6	16	LD
3J2DBP	62.2X	72.1X	69.9X	70.4X	68.7	-5.06X	3.9	4.4	73.3	-4.71X	4.3	4.3	12	TB
4BY6B3	94.9	No Data	97.1	95.8	95.9	0.60	3.1	1.1	94.0	0.36	3.4	2.5	15	LC
4TTEXZ	100.6	98.1	97.8	98.5	98.8	1.19	3.7	1.3	96.6	1.00	3.5	1.8	16	LD
4V96PN	91.9	92.6	92.7	90.5	91.9	-0.23	3.2	1.0	91.3	-0.31	3.3	1.6	16	TD
679QX8	95.1	95.6	96.8	96.7	96.0	0.62	5.1	0.8	96.5	0.96	4.5	2.5	16	TC
6KY8T7	93.2	98.7	93.2	No Data	95.0	0.42	4.8	3.2	94.6	0.51	4.7	3.1	15	LC
6NE4KV	94.8	95.8	95.3	96.0	95.5	0.51	4.5	0.6	98.2	1.38	4.3	3.2	16	LC
9CMVYX	90.2	84.7	86.7	85.9	86.9	-1.28	4.5	2.3	88.7	-0.95	4.3	2.2	16	TB
9PT2W3	93.8	91.9	94.5	94.3	93.6	0.12	3.7	1.2	94.5	0.49	3.6	1.4	16	LD
9Q7FKC	98.1	100.1	102.2	100.9	100.3	1.51	4.4	1.7	96.8	1.05	5.8	3.3	16	LC
ANU8QH	87.6L	87.6	87.5	88.2	87.7	-1.10	3.1	0.3L	86.7	-1.42	3.3	2.1	16	LD
BDFX74	98.3H	105.2*H	94.3	87.9	96.4	0.70	6.5	7.3H	91.8	-0.19	5.8	5.0H	15	LC
BJ4HAJ	90.1	89.0	91.2	89.3	89.9	-0.65	3.5	1.0	91.2	-0.33	3.9	2.6	16	LZ
BVP4UU	94.3	94.8	93.7	103.8*	96.6	0.75	4.2	4.8	98.0	1.35	4.3	3.5	16	MB
BX2FUP	96.6	93.6	93.6	95.6	94.9	0.38	3.9	1.5	94.1	0.38	4.1	1.7	16	LC
D7NEWK	90.9H	88.9	91.0	90.8	90.4	-0.55	5.8	1.0	90.8	-0.42	4.5	2.5	16	LC
EF8LZ2	92.1	92.6	98.1	100.4	95.8	0.57	4.0	4.1	92.7	0.05	4.0	3.3	16	LC
FCZV2L	79.2*H	79.1*H	86.3	80.7*	81.3	-2.43*	7.2	3.4	78.3	-3.48X	8.0	9.7H	16	IM
GGJ66A	89.8L	92.3L	91.3L	91.7	91.3	-0.36	1.6	1.1	85.1	-1.82	1.7	4.9H	16	XX
GLAVHK	97.9	96.6	95.3	100.3	97.5	0.93	3.6	2.1	95.4	0.70	4.0	3.2	12	LC
HEKGTY	99.3	98.5	99.5	No Data	99.1	1.26	4.6	0.5	96.7	1.01	4.2	2.5	15	LC
HKC89N	88.3	89.4	88.0	86.5	88.0	-1.04	3.7	1.2	91.8	-0.18	4.0	2.7	16	EM
HRBRGB	99.0	93.3	92.9	94.2	94.9	0.38	5.0	2.8	94.1	0.39	4.3	2.4	16	LX
JWG97K	83.9	84.4	83.0*L	83.0	83.6	-1.96	3.3	0.7	83.5	-2.22*	3.5	2.2	16	XX
KQZA26	90.5	91.6	91.8	90.8	91.2	-0.39	3.2	0.6	90.9	-0.40	3.9	1.5	16	TD
KXZB3D	No Data	No Data	87.9L	88.2L	88.0	-1.03	1.3	0.2L	88.0	-1.10	1.3	0.2L	2	XX
L9J3C9	91.2	88.1	89.8	90.1	89.8	-0.67	4.0	1.3	89.3	-0.80	4.4	3.6	15	EM
LF6EMA	98.2	94.4	95.6	92.3	95.1	0.44	4.1	2.5	94.4	0.47	3.8	5.5H	10	LC
LMLYNZ	89.4L	90.9	88.0	91.1	89.8	-0.66	3.9	1.4	88.5	-0.99	3.9	2.4	16	TX
M9NPQR	100.7H	89.6	93.4	89.0	93.2	0.03	6.5	5.4H	91.3	-0.30	5.3	3.1	15	LC
MP6JW2	99.8	99.3	96.4	100.4	99.0	1.23	4.1	1.8	95.5	0.73	4.7	3.5	15	LC



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
MRVFRM	95.3	95.4	93.9	95.8	95.1	0.43	4.1	0.9	95.1	0.63	4.1	0.9	4	LC
N43QRH	91.6 H	90.0	89.7	89.4 H	90.2	-0.59	6.2	1.0	90.5	-0.50	5.9	0.9	16	LC
N8K3C7	87.8	91.4 L	91.8	90.9 L	90.5	-0.53	3.1	1.8	88.6	-0.95	3.8	2.2	16	EN
NFX4PU	101.3 H	95.9	95.7	98.7	97.9	1.01	5.8	2.6	94.6	0.50	4.7	3.0	15	LC
NRMZP7	97.0	94.7	95.2	No Data	95.6	0.54	4.2	1.2	93.3	0.19	4.5	3.6	10	MZ
NVE9G2	93.6 L	92.5 L	91.8 L	92.4	92.6	-0.10	2.2	0.7	91.3	-0.31	3.4	1.9	16	LC
NZ2MZV	93.5	93.5	94.8	95.2	94.2	0.25	3.9	0.9	96.1	0.87	3.8	2.2	16	LC
PQ6XDL	93.2	88.1	90.2	89.8	90.3	-0.56	3.8	2.1	90.4	-0.53	3.8	2.3	16	EN
QEVXHY	83.7	84.2	83.9 H	81.8*H	83.4	-2.00	6.8	1.1	84.0	-2.09*	4.8	2.0	16	TQ
QUUT6Q	92.2	93.7	91.0	90.7	91.9	-0.23	4.4	1.4	92.9	0.08	3.9	2.0	16	LC
R4DA2B	94.2	95.5	No Data	93.0	94.2	0.25	2.8	1.3	92.7	0.05	3.5	1.9	14	LD
RWP3FQ	95.0	93.7	91.6	93.1	93.3	0.07	4.7	1.4	93.8	0.32	4.6	1.4	16	LC
TNQTNT	89.6	93.2	89.5	89.7	90.5	-0.52	3.0	1.8	89.4	-0.76	3.1	1.8	16	EM
TUZ9XG	87.8	88.3	87.9	93.7	89.4	-0.75	4.7	2.9	92.4	-0.03	4.4	3.0	16	LD
U3RR7N	90.1	96.7	91.4 L	92.4	92.7	-0.08	3.3	2.9	94.2	0.41	3.5	2.5	16	LC
UDG2RG	96.2	100.9	102.3*	No Data	99.8	1.40	4.8	3.2	98.2	1.38	4.3	2.6	15	LC
V2EKCT	101.3	103.2	102.3*	101.1	102.0	1.86	3.9	1.0	102.4	2.43*	4.2	1.3	16	LD
V9R72H	86.5	89.4	85.1	86.5	86.9	-1.28	3.8	1.8	90.3	-0.55	4.2	2.6	16	TD
VA7LNH	91.7	91.7 L	92.1	89.8	91.3	-0.35	2.9	1.0	90.2	-0.58	2.8	1.2	15	TC
VA8ZYC	84.7	89.0	89.7	95.4	89.7	-0.69	4.7	4.4	91.7	-0.20	4.9	3.4	16	LC
VRHXVU	90.4 L	89.5 L	90.4 L	90.8 L	90.3	-0.57	1.1	0.5	91.6	-0.24	2.7	2.1	16	LZ
W6XW6M	82.8	86.7	88.6	89.2	86.8	-1.29	3.2	2.9	85.5	-1.73	3.6	2.2	16	TM
WGX9X6	85.9	88.9	88.5	87.0	87.6	-1.13	4.6	1.4	85.8	-1.65	4.1	2.2	16	LZ
WTWT48	98.0	97.0	97.7	98.3	97.7	0.98	3.5	0.6	97.1	1.11	3.6	1.4	16	LC
XJF6HY	86.3	88.1	89.0	86.7	87.5	-1.15	4.7	1.3	85.3	-1.76	4.7	3.5	16	EM
XRW3PC	94.6	91.9	92.5	91.4	92.6	-0.09	4.8	1.4	96.4	0.94	4.0	2.7	16	LC
XXJBVH	100.2	98.6	96.4	100.3	98.9	1.21	4.5	1.8	95.1	0.64	4.4	3.3	16	LC
YPN6XF	101.8	100.9	No Data	No Data	101.4	1.73	3.5	0.6	97.8	1.29	4.3	4.2	14	LC
ZB2XBK	99.2	101.2	95.9	95.5	97.9	1.02	4.5	2.7	97.3	1.17	4.1	1.8	16	EM
ZRH9JE	96.8	94.4	104.0*	No Data	98.4	1.11	4.0	5.0 H	93.5	0.24	4.0	4.7 H	15	XX



Consensus (All Labs) Results

Wk Mean	93.12	93.11	92.84	92.46	Month Mean	93.03	Grand Mean	92.54
Avg SDr	4.51	4.37	4.10	4.11	Avg SDr	4.25	Avg SDr	4.14
SD btwn Labs	5.52	5.47	4.69	5.14	SD btwn Labs	4.82	SD btwn Labs	4.08
Labs Includ	62	61	61	57	SD btwn Wks	2.39	SD btwn Wks	2.86
Labs Exclud	1	1	1	1	Labs Includ	63	Labs Includ	62
Labs not rcvd	1	2	2	6				

Instrument Code List as Reported by the Labs

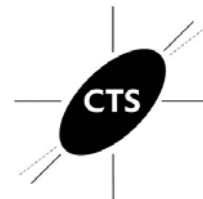
(EM) - Emerson 1200	(EN) - Emerson 2200
(IM) - Instron 4486	(LC) - L & W Crush Tester 48
(LD) - L&W Crush Tester 248	(LX) - L & W 506
(LZ) - L & W Crush Tester (model not specified)	(MB) - Messmer Buchel K440
(MZ) - Messmer Buchel (model not specified)	(TB) - TMI Monitor/Compression Tester, Model 17-70
(TC) - TMI Monitor/Compression Tester, Model 17-37	(TD) - TMI Digital Crush Tester, Model 17-09
(TM) - TMI/Hinde & Dauch	(TQ) - Thwing-Albert QC-II Series
(TX) - TMI Digital Crush Tester (model not specified)	(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
2M33ER	55.0 X	65.0 XH	63.2 X	60.9 X	61.0	-3.87 X	6.1	4.4	64.6	-3.54 X	5.6	3.7	12	TB
2TJPJ4	83.7	81.4	81.2	82.9	82.3	0.75	3.0	1.2	83.7	1.39	3.2	1.8	12	LC
3ADD4T	74.7	76.3	76.0	74.7	75.4	-0.75	5.1	0.8	73.5	-1.25	4.6	3.8	12	EM
3HDA74	77.4	74.7	76.3	76.4	76.2	-0.58	5.3	1.1	76.7	-0.42	5.4	1.0	12	LC
3UUDVT	77.9	79.1	80.1	77.4	78.6	-0.06	4.2	1.2	78.6	0.08	4.7	1.8	12	LZ
44QA63	73.1	73.3	73.5	71.9	73.0	-1.28	3.3	0.7	72.7	-1.44	3.4	0.7	12	TB
4Y9TD6	89.3 *	89.4 *	93.5 X	92.8 X	91.3	2.69 *	4.7	2.2	85.8	1.94	4.4	4.7	12	LD
6M3UMA	73.6	75.1	72.4	75.0	74.0	-1.05	3.3	1.3	75.1	-0.84	2.8	1.5	11	TC
6ZMXM9	75.2	78.2	79.2	78.6	77.8	-0.23	3.7	1.8	78.8	0.13	4.4	2.7	12	TC
73AUUY	70.2	71.4	68.1 *	70.8	70.1	-1.90	4.0	1.4	71.3	-1.82	4.0	1.7	12	XX
77AXN7	79.7	79.5	80.0	78.6	79.4	0.13	3.1	0.6	80.3	0.52	3.9	1.9	12	LD
7YTHVW	73.5	70.8	73.9	72.8	72.8	-1.32	4.3	1.4	71.4	-1.79	5.2	1.9	12	LZ
8TDKCE	78.0	75.9	77.9	77.1	77.2	-0.36	5.0	1.0	76.2	-0.55	3.8	1.5	12	TX
A7YJR9	79.1	77.9	77.2	77.4	77.9	-0.21	3.2	0.9	78.1	-0.06	3.7	2.2	12	LC
AMXBZH	74.5 L	75.5 L	80.5	76.2	76.7	-0.47	2.0	2.6	72.8	-1.42	1.9	3.6	12	XX
B39AQZ	76.5	79.3	77.9	78.5	78.0	-0.18	4.4	1.2	77.7	-0.15	4.1	1.4	12	EN
B9D7CL	79.0	75.1 H	76.1	75.9	76.5	-0.51	5.3	1.7	74.3	-1.05	4.8	3.6	12	EM
BAGNUG	72.0	69.5 *	85.8	73.3	75.2	-0.80	3.7	7.3 H	75.2	-0.81	3.7	7.3 H	4	LZ
BCJ38T	84.4	83.7	84.8	84.5	84.4	1.19	4.0	0.4 L	84.0	1.48	4.5	2.5	12	LD
BGD2FW	69.1	81.5	72.2	77.0	75.0	-0.85	3.6	5.5	76.1	-0.56	4.3	4.8	12	LC
BYCUNP	79.5	79.0	78.0	78.4	78.7	-0.03	4.1	0.7	78.4	0.03	3.8	1.1	12	LC
D2C6B4	83.8	81.1	81.6	No Data	82.2	0.72	3.8	1.4	80.1	0.46	4.5	2.7	11	LC
DBEC2W	74.4 L	72.9	74.9	75.1	74.3	-0.99	2.9	1.0	76.9	-0.36	3.6	2.6	12	LD
DFT6YG	80.3	81.4	No Data	84.6	82.1	0.71	4.9	2.2	79.5	0.32	4.6	2.9	9	MZ
DQUA9J	82.6	81.2	83.2	80.4	81.8	0.65	4.7	1.3	77.5	-0.20	4.2	4.8	8	LC
DXR8RE	74.7	75.2	74.7	78.0	75.6	-0.70	3.3	1.6	75.2	-0.79	2.9	1.7	12	LD
DZU638	73.8	73.0	72.0	72.0	72.7	-1.34	3.5	0.9	73.5	-1.24	3.3	1.0	12	EM
F9KDV3	76.0	75.6	76.1	80.8	77.1	-0.38	3.5	2.5	77.2	-0.30	3.8	1.7	12	LC
G6T8LK	76.2	75.2	69.5	68.0 *	72.2	-1.44	4.3	4.1	75.9	-0.63	3.7	4.5	9	LC
GN7QF3	71.1	71.3	78.6	77.1	74.5	-0.94	3.8	3.9	73.0	-1.36	3.5	2.7	12	TM
H8KK3T	87.8	86.2	85.1	81.4	85.1	1.36	4.2	2.7	84.2	1.54	4.1	2.8	12	EM
J2PR8X	85.6	79.0	80.6	76.5	80.4	0.33	5.3	3.8	79.7	0.36	4.7	2.9	12	LC
J4ZE3R	77.8	78.5	77.7	77.1	77.8	-0.24	4.1	0.6	79.7	0.37	4.3	3.8	12	LC
KPW4UG	77.1	81.3	79.5	85.2	80.8	0.42	3.8	3.4	80.0	0.43	3.8	2.6	11	LC



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
KWYVJD	80.4	79.6	79.0 H	78.4	79.4	0.11	5.6	0.8	78.8	0.14	4.7	2.0	12	LC
L4TF3K	79.6	No Data	83.1	80.8	81.2	0.50	3.9	1.8	78.4	0.03	4.2	2.5	11	LC
L7JG99	82.0	79.8	81.5	79.0	80.6	0.37	4.1	1.4	81.2	0.74	4.0	1.6	12	LX
LN7XDQ	81.9	87.1	77.8	No Data	82.3	0.74	3.9	4.7	82.4	1.06	4.3	2.4	11	LC
LTA7AK	79.2	79.7	82.6	78.7	80.1	0.26	3.6	1.8	80.1	0.46	4.2	1.4	12	EM
MKPF6T	81.2	85.1	85.5	85.8	84.4	1.20	4.1	2.2	81.6	0.85	4.5	3.0	12	LC
ML68Z2	82.9	82.7	83.9	82.0	82.9	0.87	4.1	0.8	81.0	0.71	4.1	2.6	11	LC
MVD2TN	78.8	81.7	76.2	77.4	78.5	-0.08	4.3	2.4	77.9	-0.10	4.1	2.2	12	LX
NNQ8ZH	81.1	76.9	80.9	87.8 *	81.7	0.61	4.3	4.5	77.9	-0.12	4.1	4.7	12	LC
P2PRJT	79.0	76.3	74.6	78.0	77.0	-0.41	4.0	1.9	76.9	-0.35	3.9	1.3	12	LC
PXA2Q6	70.1	74.3	78.2	78.8	75.4	-0.76	4.3	4.0	74.3	-1.05	4.6	3.0	12	EN
PZUK8N	73.1	78.1	73.0	71.5	73.9	-1.07	5.3	2.9	75.2	-0.81	5.0	2.1	12	TD
Q8EY6D	76.8	76.4	No Data	77.0	76.7	-0.47	4.1	0.3 L	74.2	-1.07	3.7	6.7 H	8	LD
QFBL6P	89.3 *	80.8	76.9	79.0	81.5	0.57	5.1	5.4	81.0	0.69	5.5	4.5	11	LC
T4NVCR	77.0	76.9	79.5	82.8	79.1	0.04	3.4	2.8	80.0	0.44	3.9	2.8	12	LC
T7Z7CM	90.5 *	91.8 XH	81.9	77.4	85.4	1.42	6.2	6.9 H	81.0	0.71	5.5	6.0 H	11	LC
THZ2Y7	No Data	No Data	67.8 *L	68.3 *L	68.0	-2.35 *	1.5	0.4 L	67.8	-2.72 *	1.9	0.8	6	XX
TV867L	80.3	78.2	86.1	No Data	81.5	0.58	5.3	4.1	78.5	0.05	4.9	4.8	11	XX
UCFREK	87.6	84.5	No Data	No Data	86.1	1.56	3.4	2.2	80.7	0.61	4.0	6.1 H	10	LC
UMEZDV	78.7	79.2	78.4	78.2	78.6	-0.05	5.3	0.4 L	76.2	-0.54	3.9	2.0	12	LC
VC7F4T	78.3	76.4	76.7	76.7 H	77.0	-0.40	5.6	0.9	77.6	-0.18	4.3	1.6	12	TQ
VVQGMG	82.3	83.7	84.2	No Data	83.4	0.98	3.6	1.0	83.1	1.25	4.3	1.5	11	LC
WJMBJN	86.2	84.8	87.8	87.2	86.5	1.66	4.6	1.3	82.8	1.17	5.1	3.5	12	LC
X2HPH9	82.8	80.3	80.1	87.8 *	82.8	0.84	5.2	3.6	83.1	1.24	4.5	3.3	12	MB
X9JF34	72.3 H	53.7 X	71.5	72.7	67.5	-2.45 *	5.7	9.2 H	62.4	-4.12 X	7.1	7.8 H	12	IM
XHMK6T	78.1	72.6	77.6	79.9	77.0	-0.40	3.9	3.2	75.9	-0.63	3.7	3.0	12	TD
XNFKHT	81.4	83.4	79.4	81.9	81.5	0.58	2.9	1.7	84.7	1.66	3.6	3.2	12	LC
XU49BD	79.3 H	81.6	83.0	83.6	81.9	0.65	5.0	1.9	80.5	0.58	4.6	3.4	5	LC
XVCJVV	81.9	81.5	79.2	80.1	80.7	0.39	3.7	1.3	79.4	0.29	3.4	2.4	12	TD
YADJDQ	89.3 *	88.2 *	88.6 *	89.3 *	88.9	2.17 *	4.2	0.5	88.5	2.64 *	4.5	1.5	12	LD
ZV678P	78.6 L	78.1 L	79.7	79.1 L	78.9	0.01	1.8	0.7	79.4	0.28	2.2	1.6	12	LZ



Consensus (All Labs) Results

Wk Mean	79.07	78.77	78.65	78.49	Month Mean	78.86	Grand Mean	78.30
Avg SDr	4.54	3.92	4.03	4.28	Avg SDr	4.21	Avg SDr	4.14
SD btwn Labs	5.04	4.40	4.64	4.65	SD btwn Labs	4.61	SD btwn Labs	3.86
Labs Includ	63	60	60	58	SD btwn Wks	2.85	SD btwn Wks	3.14
Labs Exclud	1	3	2	2	Labs Includ	64	Labs Includ	63
Labs not rcvd	1	2	3	5				

Instrument Code List as Reported by the Labs

(EM) - Emerson 1200

(IM) - Instron 4486

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(MZ) - Messmer Buchel (model not specified)

(TC) - TMI Monitor/Compression Tester, Model 17-37

(TM) - TMI/Hinde & Dauch

(TX) - TMI Digital Crush Tester (model not specified)

(EN) - Emerson 2200

(LC) - L & W Crush Tester 48

(LX) - L & W 506

(MB) - Messmer Buchel K440

(TB) - TMI Monitor Compression Tester, Model 17-70

(TD) - TMI Digital Crush Tester, Model 17-09

(TQ) - Thwing-Albert QC-II Series

(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
2U2X9C	25.9	27.2*	26.1	No Data	26.4	1.78	2.6	0.7	26.2	2.13*	2.5	0.8	15	XX
2WCYKN	25.2	24.6	26.4	25.7	25.5	0.86	1.5	0.8	24.7	0.33	1.7	1.0	15	LU
34M4Q9	26.9L	27.2*L	25.8L	26.2L	26.5	1.91	0.4	0.6	25.4	1.25	0.4	1.1	12	LA
36RZKX	24.0	24.9	24.4	24.4	24.4	-0.22	2.2	0.4	24.4	0.01	2.1	0.5	14	LW
6ZL6ME	23.5L	22.9L	23.2L	22.9L	23.1	-1.56	0.4	0.3	23.1	-1.46	0.4	0.7	16	XX
79DT8A	21.8*	20.5X	No Data	No Data	21.2	-3.57X	1.7	1.0	20.8	-4.16X	1.7	0.5	14	LZ
8XFQHR	27.0	27.0	25.9	26.4	26.6	1.98	2.1	0.6	25.0	0.74	2.1	1.3	16	LW
A9N97Z	25.8	25.0	24.6	No Data	25.1	0.50	1.8	0.6	24.5	0.13	2.1	0.7	15	LW
AKDQJY	23.7	26.2	24.5	24.4H	24.7	0.07	4.1	1.1	25.1	0.83	4.0	1.0	16	LW
AQN3X7	24.7	24.1	25.1	24.7	24.7	0.02	1.8	0.4	24.6	0.22	1.9	0.5	15	BK
AZCQF9	24.1	24.0	24.4	22.8	23.8	-0.85	2.1	0.7	23.8	-0.72	2.1	0.7	16	XX
B2FP8T	24.7	22.9	24.2	24.0	24.0	-0.71	1.7	0.8	24.4	0.04	1.9	0.8	16	LU
B6W8EC	23.6	24.5	23.6	25.0	24.2	-0.47	2.1	0.7	23.5	-1.04	2.2	1.2	16	LZ
E7Y2NT	24.0	22.9	24.1	24.5	23.9	-0.79	2.0	0.7	23.7	-0.83	2.1	0.4	16	LU
EP36FG	26.9L	25.6L	25.2L	25.6L	25.8	1.19	0.0	0.7	26.0	1.89	1.1	1.1	16	LZ
FNYJ2V	24.6	24.3	24.5	26.5	25.0	0.34	2.1	1.0	25.0	0.70	2.1	1.0	4	LW
G44BG6	24.0	23.2	22.8*	22.7	23.2	-1.52	1.8	0.6	23.7	-0.83	1.8	0.7	16	LW
G6K9TG	41.4XL	43.9XL	43.3XL	44.3XL	43.2	18.98X	0.0	1.3	41.7	20.15X	0.0	1.6H	12	LU
G8R6FC	24.8	22.0	24.6	24.2	23.9	-0.75	2.4	1.3	23.8	-0.67	2.3	1.1	8	LZ
GL9M8A	25.3	24.9	26.1	25.9	25.5	0.93	1.6	0.6	24.8	0.51	1.5	0.8	15	LU
GVNQ48	23.3	23.1	25.2	23.2	23.7	-0.97	2.1	1.0	23.7	-0.74	2.2	0.7	15	LW
JHYEY2	28.2*L	23.5L	23.9L	22.4L	24.5	-0.17	0.6	2.5H	23.2	-1.31	0.5	1.5H	16	LA
JT3N8C	22.5	24.1	23.5	22.7	23.2	-1.47	1.8	0.8	22.8	-1.88	1.9	0.6	16	LU
JZKXV9	24.0	24.4	25.1	25.4	24.7	0.08	2.3	0.6	25.3	1.12	2.5	1.0	16	XX
K9U67M	25.3	No Data	24.8	24.7	24.9	0.29	1.8	0.3	24.5	0.14	2.0	0.8	15	LW
KLVJM6	23.9L	24.5	24.7	25.3	24.6	-0.05	1.5	0.6	23.8	-0.62	1.6	1.1	15	XX
L34AMU	25.9L	22.9L	23.2L	23.0L	23.7	-0.93	0.5	1.5	22.9	-1.66	0.4	1.3	15	XX
MNVVWG	25.0	24.6	No Data	24.3	24.6	-0.02	2.0	0.4	24.7	0.39	2.0	0.5	14	LW
NUD77W	24.1	25.5	25.4	24.1	24.8	0.12	2.6	0.8	24.0	-0.42	2.3	0.9	16	LW
P7KCXB	23.9	24.9	25.1	24.8	24.7	0.03	2.3	0.5	24.5	0.19	2.3	0.8	16	LA
PJB2VV	24.9	26.0	25.1	26.7	25.7	1.03	2.9	0.8	24.9	0.61	2.5	0.8	16	LW
QYWUEE	25.7L	24.7L	25.4L	24.6L	25.1	0.47	0.1	0.5	25.1	0.90	0.1	0.7	16	TS
TAMTCF	24.3	24.5	25.2	24.8	24.7	0.04	2.0	0.4	25.1	0.84	2.2	0.6	16	LU
TLHVWW	25.8	24.8	24.8	24.5	25.0	0.35	2.4	0.5	24.3	-0.13	2.3	0.6	16	LW



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
TRFNGX	25.2	25.4	25.1	25.4	25.3	0.65	1.4	0.2	25.1	0.89	1.3	0.3	16	LW
UT39J3	25.8	25.4	26.2	25.8	25.8	1.17	1.7	0.3	25.6	1.40	1.6	0.9	16	LZ
V9QXWB	23.4	23.7	25.2	25.8	24.5	-0.12	2.4	1.1	24.1	-0.33	2.1	1.0	16	LW
WDYQF8	22.4	22.1	23.5	22.7	22.7	-2.01*	1.5	0.6	22.8	-1.81	1.8	0.5	16	XX
Y4DD3E	22.7	24.1	21.6X	No Data	22.8	-1.89	2.2	1.3	23.5	-0.98	2.2	1.3	15	XX
YFVXV3	24.5	26.2	26.0	24.6	25.3	0.71	2.1	0.9	24.5	0.19	2.0	0.7	16	LU

Consensus (All Labs) Results									
Wk Mean	24.64	24.53	24.80	24.58	Month Mean	24.64	Grand Mean	24.37	
Avg SDr	1.85	2.02	1.93	2.05	Avg SDr	1.97	Avg SDr	1.97	
SD btwn Labs	1.35	1.31	0.92	1.22	SD btwn Labs	0.98	SD btwn Labs	0.86	
Labs Includ	39	37	36	35	SD btwn Wks	0.85	SD btwn Wks	0.89	
Labs Exclud	1	2	2	1	Labs Includ	38	Labs Includ	38	
Labs not rcvd	0	1	2	4					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LA) - L & W Autoline

(LU) - L & W 52 without moisture correction (was 53)

(LW) - L & W 53 with moisture correction (was 53M)

(LZ) - L & W (model not specified)

(TS) - TMI Monitor/STFI Compression Tester, 17-33

(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 225

STFI, 36 lb Linerboard - 36U3
TAPPI Provisional Test Method T826



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
27GDN6	21.9L	22.2L	22.0L	22.1L	22.1	0.82	0.1	0.1L	21.8	0.83	0.1	0.6	12	TS
39QP4W	20.9	21.1	20.6	No Data	20.9	-0.26	1.7	0.2	21.3	0.22	1.7	0.5	11	LW
3N4HXP	24.4*	24.3*	21.9	22.5	23.3	1.91	1.8	1.3	22.8	1.85	1.8	1.0	12	XX
42MRTT	19.5	23.7	20.0	20.0L	20.8	-0.36	1.0	1.9H	20.8	-0.27	1.1	1.4	12	LZ
4634RV	40.7XL	40.6XL	40.4XL	40.6XL	40.6	17.46X	0.0	0.1L	38.9	19.21X	0.0	1.9H	8	LU
7M33C9	20.0	21.1	23.4	No Data	21.5	0.31	2.4	1.7	20.8	-0.24	1.9	1.0	11	XX
7YTDMF	18.7	18.6	19.7	20.4	19.4	-1.61	1.4	0.8	19.5	-1.67	1.5	0.9	12	LU
88AC36	23.6L	22.1L	22.4L	22.0L	22.5	1.21	0.3	0.7	21.5	0.47	0.3	1.3	12	LA
8D8LZA	23.7L	19.7L	20.1L	19.5L	20.7	-0.38	0.4	2.0H	20.2	-0.89	0.3	1.4	11	XX
A88HZV	19.4	19.3	19.1	18.9	19.2	-1.78	1.5	0.2	19.2	-2.00*	1.4	0.3	12	XX
AUMGKV	21.0	21.7	20.2	No Data	21.0	-0.18	1.7	0.7	20.9	-0.14	1.7	0.7	8	LW
BNDJVA	23.3L	19.6L	18.5L	19.1L	20.1	-0.93	0.3	2.2H	19.7	-1.44	0.3	1.4	12	LA
D8YUUD	21.2	20.9	21.5	21.3	21.2	0.05	1.5	0.2	21.4	0.38	1.7	0.5	10	LW
DUCPKV	22.2	21.5	21.7	20.7	21.5	0.32	2.5	0.6	21.8	0.80	2.9	0.6	11	LW
E7Y9NZ	19.4	19.2	19.4	20.0	19.5	-1.51	1.7	0.4	20.1	-1.08	1.8	0.7	11	LW
ETYBWM	22.0	19.9	21.0	22.4	21.3	0.15	1.5	1.1	21.2	0.15	1.6	1.0	5	LW
FHQAML	21.3	21.3	21.4	20.8	21.2	0.02	1.9	0.3	21.1	0.06	1.7	0.7	12	LU
G4TUJC	21.5	21.5	21.8	22.3	21.8	0.53	1.5	0.4	21.8	0.76	1.5	0.4	4	LZ
H34NBQ	21.3	21.1	21.5	21.7	21.4	0.20	1.5	0.3	21.4	0.36	1.6	0.3	12	BK
HNQ7R4	23.0	23.1	21.2	21.2	22.1	0.86	2.0	1.1	21.6	0.64	2.2	0.8	12	LW
KKKGZ7	22.2	22.9	22.7	21.6	22.3	1.06	1.2	0.5	22.3	1.30	1.4	0.8	11	LU
KMDM2C	22.8L	23.4L	22.1L	22.3L	22.6	1.33	0.0	0.6	22.8	1.87	0.8	1.2	12	LZ
L6F42F	19.6	19.2	19.1	No Data	19.3	-1.67	1.5	0.2	20.3	-0.85	1.7	1.1	8	LU
L8QHT2	20.0	20.1	20.0	21.7	20.5	-0.63	1.6	0.8	20.5	-0.65	1.6	0.8	12	LW
MLLA44	21.0	21.5	21.3	20.6	21.1	-0.05	1.8	0.4	20.8	-0.31	1.8	0.5	12	LW
NBK22D	20.5	20.7	21.5	22.1	21.2	0.02	1.9	0.8	21.8	0.78	2.0	0.9	12	LA
NGR48J	22.1	No Data	21.3	21.2	21.5	0.31	1.6	0.5	21.2	0.11	1.7	0.5	11	LW
NMREUX	21.6	21.3	20.7	21.6	21.3	0.11	1.9	0.5	21.0	-0.08	2.1	0.7	12	LW
PCUJLU	20.8	19.7	19.5	20.4	20.1	-0.96	1.7	0.6	20.4	-0.69	1.7	0.7	12	XX
PMQLU4	21.7	21.8	21.0	21.6	21.5	0.30	1.4	0.4	21.2	0.13	1.5	1.2	11	XX
QLE7Z4	22.6	22.9	24.0*	23.9*	23.4	1.97	1.3	0.7	22.4	1.45	1.5	1.4	11	LU
R4GR9M	22.8	23.2	24.3*	No Data	23.5	2.06*	1.9	0.7	22.5	1.52	1.7	0.7	11	XX
TH3DQD	20.4	20.4	22.3	23.5	21.6	0.42	1.8	1.5	20.9	-0.16	1.8	1.4	12	LW
UD746D	20.3	20.5	20.0	20.7	20.4	-0.73	1.6	0.3	20.4	-0.72	1.7	0.3	12	LU



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
WPEFJJ	20.7	18.9	No Data	No Data	19.8	-1.21	0.9	1.3	18.9	-2.27*	1.1	0.9	10	LZ
WR7XWJ	21.2	22.0	21.4	21.2	21.4	0.25	1.5	0.4	21.5	0.46	1.6	0.3	12	BK
X6ZAHM	19.8 _L	18.8 _L	18.9 _L	18.6* _L	19.0	-1.92	0.3	0.5	19.7	-1.41	0.3	0.9	12	XX
X7D3DP	19.8	20.0	20.6	21.4	20.4	-0.64	1.8	0.7	20.8	-0.26	1.9	1.5 _H	12	LZ
YM3WTR	21.4	21.5	21.4	21.1	21.3	0.15	1.2	0.2	21.1	0.04	1.1	0.3	12	LW
Z3UVDZ	21.3	22.7	22.3	22.3	22.2	0.89	1.7	0.6	22.3	1.31	1.9	1.4	12	LW
ZPLUG4	21.1	21.9	19.4	20.4	20.7	-0.42	1.5	1.1	20.7	-0.34	1.7	0.8	12	LU

Consensus (All Labs) Results									
Wk Mean	21.30	21.15	21.05	21.21	Month Mean	21.16		Grand Mean	21.05
Avg SDr	1.50	1.57	1.46	1.64	Avg SDr	1.55		Avg SDr	1.59
SD btwn Labs	1.33	1.47	1.36	1.20	SD btwn Labs	1.11		SD btwn Labs	0.93
Labs Includ	40	39	39	34	SD btwn Wks	0.91		SD btwn Wks	0.92
Labs Exclud	1	1	1	1	Labs Includ	40		Labs Includ	40
Labs not rcvd	0	1	1	6					

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

(LU) - L & W 52 without moisture correction (was 53)

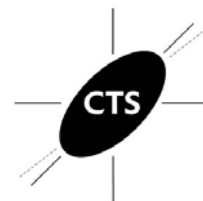
(LZ) - L & W (model not specified)

(XX) - Instrument make/model not specified by lab

(LA) - L & W Autoline

(LW) - L & W 53 with moisture correction (was 53M)

(TS) - TMI Monitor/STFI Compression Tester, 17-33



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
4Z98ZJ	104.8	-1.29	10.9	106.3	-0.99	13.5	3	EV
76RUAZ	122.4	-0.13	11.7	123.3	0.06	11.4	2	EV
9MQYDT	100.0	-1.60	14.2	100.0	-1.38	14.2	1	XX
AKEVRF	0.3	-8.15 X	0.0	47.6	-4.62X	5.3	2	EV
AYX9EN	127.1	0.18	2.4	129.4	0.44	3.1	3	EV
B2YRWG	107.1	-1.13	8.2	105.3	-1.05	13.0	3	EV
BUXBCA	121.8	-0.17	8.7	121.5	-0.05	11.2	3	EV
EP4KZ2	104.2	-1.33	34.0	92.4	-1.85	21.7	3	EV
FUNW64	151.9	1.81	18.2	151.3	1.79	17.9	3	EV
GT6QPC	111.6	-0.84	12.7	112.7	-0.59	12.7	2	EV
J4E3XQ	130.6	0.41	6.6	137.7	0.95	9.1	3	EV
MH7RWK	126.9	0.17	9.5	108.6	-0.85	9.3	3	EV
NDBKNW	114.7	-0.63	23.3	124.1	0.11	17.9	3	XX
NF2XRT	130.7	0.42	4.5	118.4	-0.24	13.2	2	XX
TXFGJV	157.2	2.16 *	18.3	206.2	5.19X	22.9	3	EV
U78AD8	120.6	-0.25	13.7	115.8	-0.40	13.9	3	LA
UE6WBX	133.7	0.61	12.6	140.0	1.09	16.7	3	XX
V4V2JC	133.3	0.59	13.9	138.1	0.97	12.8	3	EV
W2B6CJ	118.4	-0.39	12.8	117.6	-0.29	10.8	3	EV
WZZ3PK	115.7	-0.57	14.7	116.4	-0.37	13.7	3	EV
Z6DD86	141.8	1.14	15.6	147.5	1.56	16.3	3	EV
ZYM9CA	137.1	0.84	14.3	140.0	1.09	13.3	3	EV

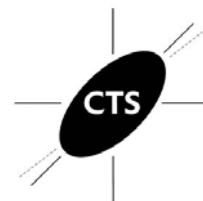
Consensus (All Labs) Results			
Month Mean	124.35	Grand Mean	122.32
Avg SDr	14.89	Avg SDr	13.81
SD btwn Labs	15.22	SD btwn Labs	16.17
Labs Incd	21	Labs Incd	20

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgage Model 210-R

(LA) - L & W Autoline

(XX) - Instrument make/model not specified by lab



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
4X8FCW	100.5	-0.88	7.7	101.9	-0.52	7.7	3	SC
6KGM6G	109.2	0.25	1.6	104.3	-0.22	4.4	3	TM
872MU8	113.2	0.78	4.2	114.6	1.09	7.0	2	TM
94U4GQ	90.2	-2.23 *	10.4	87.9	-2.30*	7.3	3	TM
9T9H4L	107.2	-0.01	7.4	103.5	-0.32	5.6	2	TM
A88RKZ	108.0	0.10	4.8	109.0	0.37	3.8	3	HY
BN9UZK	111.0	0.49	2.4	109.9	0.49	4.0	2	TM
H44GBK	117.4	1.33	3.2	115.1	1.14	6.7	3	HZ
H9XLW2	111.0	0.49	3.8	94.7	-1.44	4.9	3	TM
JD4TKJ	112.8	0.73	3.1	111.9	0.75	4.8	3	SC
KF6636	107.7	0.06	6.2	161.4	7.02X	12.1	3	SC
KU4ZCQ	108.2	0.12	7.8	105.4	-0.08	5.7	3	HY
NERV6U	116.4	1.20	5.5	115.8	1.24	6.8	2	SC
UDM8LQ	101.4	-0.77	8.4	107.9	0.24	8.4	3	SC
VHZ3A2	94.6	-1.66	4.8	102.7	-0.43	6.5	3	SC

Consensus (All Labs) Results			
Month Mean	107.25	Grand Mean	106.03
Avg SDr	5.95	Avg SDr	6.13
SD btwn Labs	7.64	SD btwn Labs	7.89
Labs Incd	15	Labs Incd	14

Instrument Code List as Reported by the Labs

(HY) - Huygen Digitized Scott Internal Bond Tester

(HZ) - Huygen Internal Bond Tester with AccuPress

(SC) - Scott Internal Bond Tester (Manual)

(TM) - TMI Monitor/Internal Bond Tester

Containerboard Interlaboratory Testing Program
 Analysis 234
COF Inclined Plane (Slide Angle), 42 lb Linerboard - 42X
 TAPPI Official Test Method T815



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
24MB2G	29.0	0.31	3.0	28.8	0.47	4.1	3	ZZ
32NBUB	31.6	1.01	2.6	31.9	1.83	2.9	3	ZZ
3MTKJ8	28.2	0.09	4.0	29.7	0.89	3.6	3	ZZ
3V2CPV	26.7	-0.30	1.7	27.8	0.01	1.4	3	ZZ
4LNRWJ	23.6	-1.15	1.5	23.1	-2.07*	3.1	3	ZZ
4M27KT	26.8	-0.28	2.5	25.7	-0.90	2.5	2	ZZ
8G324K	27.6	-0.07	1.1	27.5	-0.12	3.1	3	ZZ
AUX84T	34.8	1.87	3.1	30.1	1.07	2.8	3	ZZ
BKUA2B	29.4	0.42	3.8	28.0	0.14	3.7	3	ZZ
GR8HGT	26.4	-0.39	0.4	26.5	-0.54	0.4	3	ZZ
HWP3UE	23.2	-1.26	4.7	24.9	-1.25	4.4	3	ZZ
JQ8W6D	26.6	-0.34	4.0	26.2	-0.68	3.4	2	ZZ
LPNWYT	28.1	0.07	5.4	26.9	-0.35	4.8	2	ZZ
NZLH74	37.4	2.58*	1.8	38.6	4.82X	3.3	3	ZZ
PTTR98	27.4	-0.12	2.7	27.6	-0.06	2.2	2	ZZ
QQRFBR	30.6	0.74	2.3	30.5	1.21	3.1	3	ZZ
RC3JCK	27.2	-0.18	0.8	29.1	0.59	1.9	3	ZZ
RL97JZ	26.0	-0.50	5.1	26.2	-0.68	4.1	3	ZZ
U63DRN	21.8	-1.63	2.6	27.3	-0.21	2.2	2	ZZ
U6VMPQ	30.0	0.58	5.0	31.0	1.44	3.3	3	ZZ
YDR3CY	28.2	0.09	2.9	29.2	0.65	3.1	3	ZZ
YW8HKL	22.2	-1.54	1.6	24.4	-1.45	1.3	3	ZZ

Consensus (All Labs) Results			
Month Mean	27.85	Grand Mean	27.73
Avg SDr	3.18	Avg SDr	3.11
SD btwn Labs	3.71	SD btwn Labs	2.26
Labs Incd	22	Labs Incd	21

Instrument Code List as Reported by the Labs

(ZZ) - Instruments No Longer Tracked

Containerboard Interlaboratory Testing Program
Analysis 237

Air Resistance, 42 lb linerboard - 42X
TAPPI Official Test Method T460



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
B7E4UH	15.4	-0.78	2.9	15.2	-0.80	3.0	3	XX
C7PJA4	19.0	1.40	5.2	18.8	1.44	4.6	2	HG
E2JXBV	15.5	-0.71	2.4	15.5	-0.62	2.4	3	HG
ERYGQ2	20.1	2.07 *	3.4	18.6	1.28	4.3	3	XX
J8UDBV	16.2	-0.32	2.4	16.8	0.19	2.0	3	XX
JKL4UD	13.9	-1.68	2.1	14.2	-1.42	1.9	2	LA
K9NALB	14.1	-1.60	1.2	14.6	-1.22	3.6	3	TL
KHC6KQ	17.1	0.24	4.3	16.4	-0.08	3.6	3	LP
KJKNZD	14.9	-1.11	2.6	14.9	-1.00	2.8	3	GS
MME969	17.5	0.49	2.0	16.0	-0.29	2.1	3	LP
MWL274	15.8	-0.54	2.4	14.2	-1.42	1.9	3	XX
N86N3B	23.8	4.30 X	1.5	19.8	2.05*	1.4	3	LW
PF93K3	17.4	0.45	1.5	16.7	0.12	2.6	3	GA
RJPJBR	18.0	0.80	3.9	18.1	0.98	3.5	2	LW
TUW3JM	17.1	0.23	2.5	17.4	0.54	3.3	3	GG
YT4L4Y	17.1	0.26	1.8	16.2	-0.18	1.7	2	XX
YW4WZY	17.1	0.25	2.4	16.6	0.06	2.7	2	XX
Z34NNM	17.6	0.55	1.7	17.1	0.37	2.2	3	LA

Consensus (All Labs) Results			
Month Mean	16.69	Grand Mean	16.51
Avg SDr	2.83	Avg SDr	2.89
SD btwn Labs	1.64	SD btwn Labs	1.60
Labs Incd	17	Labs Incd	18

Instrument Code List as Reported by the Labs

- (GA) - Gurley Precision #4340 Automatic Densometer
- (GS) - Gurley Hill S-P-S Tester #4190
- (LA) - L & W Autoline
- (LW) - L & W Gurley Densometer, Oil Flotation
- (XX) - Instrument make/model not specified by lab

- (GG) - Gurley Precision #4320 Densometer
- (HG) - Technidyne - Hagerty Model #1
- (LP) - L & W Air Permeance Tester SE 166
- (TL) - Teledyne Gurley Densometer #4110, Oil Flotation

Containerboard Interlaboratory Testing Program
Analysis 240

Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM71
TAPPI Official Test Method T809



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
2YPMU	63.2	60.5	No Data	61.6	61.8	-0.71	2.3	1.4	61.9	-0.72	2.7	1.2	15	LD
3CPP3N	68.6	69.0*	69.1*	69.0	68.9	2.06*	3.4	0.2 L	69.1	3.04X	3.7	1.2	16	LD
3WWDPY	59.0	60.9	58.9	59.3	59.5	-1.58	3.4	0.9	59.1	-2.18*	2.8	1.4	16	LX
4E4A34	62.1	61.8	61.5	62.1	61.9	-0.67	3.6	0.2 L	61.0	-1.19	3.8	2.3	16	MB
63TARN	62.5	62.8	61.8	60.8	62.0	-0.63	2.1	0.9	62.0	-0.66	2.0	0.8	16	LC
63THCT	60.6	60.4	61.4	62.4	61.2	-0.94	3.3	0.9	61.5	-0.92	3.3	0.8	16	LZ
7D9HU9	42.7 X	35.5 X	47.8 X	37.1 XH	40.8	-8.84 X	3.2	5.6 H	46.9	-8.54 X	3.8	10.5 H	6	LC
7HV2LJ	64.2	66.3	62.6	62.5	63.9	0.12	3.4	1.8	64.7	0.77	3.1	1.7	16	LC
7K8AUP	70.1*H	68.3	69.5*	No Data	69.3	2.20*	3.8	0.9	64.4	0.58	6.2	5.9 H	10	LZ
7UV6U6	55.6*	54.6 X	56.7*	55.3*	55.6	-3.12 X	3.5	0.9	60.8	-1.27	3.0	3.2	16	LC
8B9PPU	68.5	64.3	67.7	67.9	67.1	1.36	2.7	1.9	66.8	1.88	2.6	2.2	15	LC
92LCG4	64.2	63.2	63.6	66.3	64.3	0.28	2.9	1.4	63.3	0.02	3.2	1.4	16	LC
998DRE	59.8	57.7*	58.4	58.9 L	58.7	-1.91	1.6	0.9	60.4	-1.50	1.9	1.6	16	LC
9QDYTU	63.8	65.2	No Data	62.1	63.7	0.04	2.3	1.6	64.2	0.48	3.0	1.9	11	TM
ANKPVX	66.9	No Data	63.7	66.8	65.8	0.84	2.4	1.8	64.2	0.49	2.5	1.8	15	LC
B8P29Z	61.0	61.3	60.9	62.7	61.5	-0.82	2.6	0.8	63.2	-0.02	3.1	2.2	16	LC
E4TNVX	63.0	66.5	66.3	66.2	65.5	0.74	3.8	1.7	65.8	1.35	3.8	1.4	8	LZ
ENJZJH	62.6	63.4	61.9	61.1	62.3	-0.52	2.0	1.0	62.5	-0.40	2.7	1.0	16	LD
EUJVD6	67.4	61.9	63.7	64.8	64.5	0.33	2.9	2.3	62.2	-0.54	2.9	2.3	16	LC
F6LZ8C	66.8	66.1	67.2	68.0	67.0	1.32	3.9	0.8	66.6	1.74	4.0	2.0	9	XX
FA9HYN	63.7	64.6 L	63.6	63.4	63.8	0.08	2.6	0.5	64.3	0.56	2.8	1.0	16	XX
HZXGRY	63.5 L	62.9	62.8	64.2	63.4	-0.09	2.3	0.7	63.5	0.12	3.0	1.0	15	LC
J6PXQB	64.7	66.0 H	64.6	68.7 H	66.0	0.93	4.0	1.9	64.0	0.39	3.8	7.6 H	16	LC
JMDXXA	61.6	62.5	62.5	64.7	62.8	-0.30	3.1	1.3	62.0	-0.66	2.8	1.0	16	TD
JMRFYU	62.0	62.1	61.5	62.1	61.9	-0.65	2.3	0.3	62.8	-0.25	2.5	1.0	16	LD
KCPJAX	63.3	62.0	62.9	62.4	62.7	-0.37	2.7	0.6	62.5	-0.41	3.0	0.8	16	LC
L7QPMF	62.0 L	61.6	64.0 H	62.9	62.6	-0.38	3.5	1.1	62.9	-0.16	3.3	1.0	16	LC
LUUHG7	63.1	62.3 L	62.2	62.3	62.5	-0.43	2.1	0.4	62.5	-0.38	2.7	0.8	16	LC
NBFBR3	67.3	66.7	63.7	No Data	65.9	0.88	3.0	1.9	65.1	1.00	3.2	2.4	15	LZ
NBK6AU	62.4	63.0	62.6	62.5	62.6	-0.38	2.5	0.3	62.0	-0.63	2.6	0.9	16	TB
NGP6M6	65.6 H	67.5	65.4	69.0	66.9	1.27	3.9	1.7	65.6	1.26	3.3	1.5	16	LC
PK42T7	62.9	56.0*H	54.5 X	57.4	57.7	-2.29*	3.5	3.7 H	59.7	-1.83	3.1	3.4	10	LC
QKX6W2	62.8	63.6	62.6	61.9 L	62.7	-0.34	2.2	0.7	62.9	-0.19	2.3	0.9	16	TA
RF44CJ	66.4	67.1	65.4	67.2	66.5	1.14	3.8	0.8	66.5	1.71	3.5	1.1	16	EM



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
RT733W	60.1	61.5	61.9	59.7	60.8	-1.09	2.6	1.1	61.7	-0.79	2.7	1.1	15	LC
UQWNUG	58.9	63.3	58.8	68.0	62.2	-0.53	3.4	4.4 H	61.9	-0.70	4.6	3.8 H	16	LC
WF8TC6	68.3	66.3	66.7	67.4	67.2	1.38	2.4	0.9	67.2	2.05*	2.4	0.9	4	LC
XQNZNY	59.8	59.2	63.9	61.5	61.1	-0.98	2.2	2.1	62.2	-0.56	2.3	2.4	15	LC
YCFGNJ	65.5	62.4	63.3	64.9	64.0	0.16	3.3	1.4	63.6	0.20	3.1	1.3	16	LC
YKWGD9	65.1	62.4	65.3	67.2	65.0	0.54	2.6	1.9	64.5	0.67	3.1	1.6	16	LZ
YQ7RCV	63.9	60.9	60.7	63.1	62.1	-0.57	3.2	1.6	63.1	-0.08	3.2	1.4	16	LD
Z33DQD	63.8	64.9	61.8 H	62.2	63.2	-0.16	3.6	1.5	62.7	-0.30	3.3	1.7	16	TD
Z4JV8J	65.0	65.4 L	66.1	65.2 L	65.4	0.71	1.5	0.4	65.3	1.07	2.8	1.0	16	LD

Consensus (All Labs) Results									
Wk Mean	63.61	63.35	63.25	63.64	Month Mean	63.60	Grand Mean	63.24	
Avg SDr	2.83	3.00	3.23	2.91	Avg SDr	2.97	Avg SDr	3.16	
SD btwn Labs	2.99	2.82	2.77	3.28	SD btwn Labs	2.58	SD btwn Labs	1.91	
Labs Includ	42	40	39	40	SD btwn Wks	1.53	SD btwn Wks	2.26	
Labs Exclud	1	2	2	1	Labs Includ	41	Labs Includ	41	
Labs not rcvd	0	1	2	2					

Instrument Code List as Reported by the Labs

- (EM) - Emerson 1200 Series
- (LD) - L&W Crush Tester 248
- (LZ) - L & W Crush Tester (model not specified)
- (TA) - Thwing-Albert Model QC II-XDS
- (TD) - TMI Digital Crush Tester, Model 17-09
- (XX) - Instrument make/model not specified by lab
- (LC) - L & W Crush Tester 48
- (LX) - L & W 506
- (MB) - Messmer Buchel K440
- (TB) - TMI Monitor/Compression Tester, 17-70
- (TM) - TMI/Hinde & Dauch



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
6CEJT4	74.6	74.4	73.9	77.1	75.0	0.53	2.5	1.5	74.6	0.31	3.1	3.2	16	TB
BP3PBY	68.5	72.9	69.5 H	70.0	70.2	-0.75	2.2	1.9	68.7	-1.23	2.4	6.7 H	16	XX
C4KE4F	72.5	72.4	71.9	71.2 L	72.0	-0.27	1.5	0.6	72.1	-0.35	1.7	0.6	16	LC
DEGC4E	70.5	70.7	71.8	70.9	71.0	-0.54	2.5	0.6	70.8	-0.69	2.5	0.8	16	XX
DG4P67	78.8	77.6	78.9	77.6	78.2	1.39	2.5	0.7	79.0	1.45	2.5	0.8	16	LD
FQFJVB	67.9	73.8	72.1	68.8	70.7	-0.63	2.4	2.8 H	73.8	0.10	2.7	4.2 H	16	LC
G2XFDM	78.5	77.5 H	78.2	79.1	78.3	1.42	3.0	0.7	79.1	1.50	2.6	1.2	16	XX
GJJBFG	77.0	75.1	76.5	79.5	77.0	1.07	2.5	1.8	78.0	1.21	2.5	1.4	15	LZ
HNPFC9	68.3 L	68.6	69.6	69.1 L	68.9	-1.10	1.7	0.6	69.1	-1.14	1.6	1.1	16	XX
HXWP4D	75.1	73.8	No Data	75.2	74.7	0.45	2.6	0.8	74.9	0.38	2.8	1.4	15	LD
JMRPJY	69.0	69.7	69.7	69.0	69.3	-0.99	1.7	0.4	69.6	-1.00	1.8	1.1	16	LD
KP83J8	69.8	65.8 L	65.3	66.5	66.8	-1.65	1.1	2.0	69.8	-0.97	1.1	2.3	16	XX
P73GEN	77.5	78.7	77.5	76.8	77.6	1.23	3.0	0.8	78.0	1.21	3.0	1.6	8	LZ
PTCFQ2	75.0	73.4	73.7	73.4	73.9	0.23	2.3	0.8	72.7	-0.20	2.4	1.3	16	TD
THBLAF	68.9	69.0	68.7	69.5	69.0	-1.07	2.2	0.3	68.6	-1.27	2.1	1.1	16	LZ
U7TJ8E	75.6	No Data	75.8	75.3	75.6	0.68	2.3	0.3	76.0	0.68	2.5	2.5	15	LC

Consensus (All Labs) Results

Wk Mean	72.96	72.90	72.87	73.06	Month Mean	73.02	Grand Mean	73.42
Avg SDr	2.27	2.50	2.24	2.21	Avg SDr	2.31	Avg SDr	2.40
SD btwn Labs	3.98	3.64	3.96	4.17	SD btwn Labs	3.74	SD btwn Labs	3.80
Labs Includ	16	15	15	16	SD btwn Wks	1.25	SD btwn Wks	2.50
Labs Exclud	0	0	0	0	Labs Includ	16	Labs Includ	16
Labs not rcvd	0	1	1	0				

Instrument Code List as Reported by the Labs

(LC) - L & W Crush Tester 48

(LD) - L&W Crush Tester 248

(LZ) - L & W Crush Tester (model not specified)

(TB) - TMI Monitor/Compression Tester, 17-70

(TD) - TMI Digital Crush Tester, Model 17-09

(XX) - Instrument make/model not specified by lab

Containerboard Interlaboratory Testing Program
Analysis 255

Ring Crush (RCT), 26 lb Corrugating Medium - CM71
TAPPI Official Test Method T822



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
68N683	41.2	39.5	41.0	40.4 H	40.5	-0.75	3.0	0.8	41.0	-0.54	3.3	1.0	15	LC
6NV74P	43.9	45.0	45.7	46.0	45.2	1.32	2.1	1.0	43.4	0.71	2.1	1.5	16	LC
6W8GFP	39.7	41.6 L	42.0	40.4 L	40.9	-0.56	1.4	1.1	41.3	-0.37	1.6	0.7	16	LC
7XTQG2	41.9	41.7	41.3	40.4	41.3	-0.38	2.5	0.7	41.4	-0.34	2.8	1.0	16	TB
8Q8CEB	37.6	36.4 *	35.6 *	37.4	36.7	-2.41 *	1.8	0.9	37.3	-2.44 *	1.6	1.4	16	WK
D6TCWH	45.7	40.8	44.0 L	39.9	42.6	0.17	1.8	2.7	44.6	1.30	2.7	6.4 H	16	LZ
EBC2LK	41.4	40.5	41.1	41.7	41.2	-0.45	1.6	0.5	41.1	-0.46	2.0	1.0	16	TB
FEBTF3	42.1	41.4	43.7	43.0	42.6	0.17	1.8	1.0	41.7	-0.17	2.0	1.0	16	LC
FRZ7V4	43.8	44.1	42.7	41.2	43.0	0.34	2.2	1.3	43.9	0.93	2.1	1.2	16	LZ
GMF2DF	46.6	44.9	47.0	No Data	46.2	1.78	2.2	1.1	45.7	1.85	3.1	1.9	10	MZ
JWGYKF	40.2	40.7	39.9	41.3	40.5	-0.74	2.4	0.6	40.3	-0.87	2.3	0.6	16	LD
KU46K8	40.7	42.3	41.8	42.4	41.8	-0.18	2.0	0.8	41.3	-0.40	2.0	1.0	16	TD
NQXPYD	44.6	44.4	45.6	46.7	45.3	1.38	2.0	1.1	45.3	1.66	2.0	1.1	4	LC
PWRMWV	40.9	42.6	47.8	47.2	44.6	1.07	1.9	3.4	41.0	-0.55	2.7	3.6 H	16	LC
R44KHK	40.2	40.8	39.7	41.2	40.5	-0.76	1.7	0.7	40.9	-0.59	1.9	1.1	16	EN
VHEJE2	46.2	45.4	43.2	39.3	43.5	0.60	2.3	3.1	43.1	0.51	2.6	2.4	10	LC
WFGFF7	41.7	41.7	42.8	42.7	42.2	0.03	1.7	0.6	41.6	-0.24	2.0	0.8	16	LC
WYEX7F	45.1 H	43.8	40.7	43.2	43.2	0.44	3.0	1.9	42.6	0.30	2.9	1.1	16	LC
YK9UJC	38.2	46.8	37.3	36.8	39.8	-1.07	2.1	4.7 H	41.5	-0.29	2.4	3.5 H	16	LC

Consensus (All Labs) Results

Wk Mean	42.21	42.33	42.25	41.73	Month Mean	42.19	Grand Mean	42.04
Avg SDr	2.18	2.05	2.02	2.22	Avg SDr	2.12	Avg SDr	2.36
SD btwn Labs	2.63	2.47	3.08	2.84	SD btwn Labs	2.26	SD btwn Labs	1.96
Labs Includ	19	19	19	18	SD btwn Wks	1.86	SD btwn Wks	2.19
Labs Exclud	0	0	0	0	Labs Includ	19	Labs Includ	19
Labs not rcvd	0	0	0	1				

Instrument Code List as Reported by the Labs

(EN) - Emerson 2200 Series

(LD) - L&W Crush Tester 248

(MZ) - Messmer Buchel (model not specified)

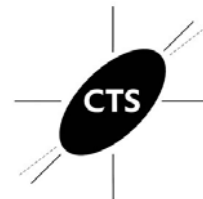
(TD) - TMI Digital Crush Tester, Model 17-09

(LC) - L & W Crush Tester 48

(LZ) - L & W Crush Tester (model not specified)

(TB) - TMI Monitor/Compression Tester, 17-70

(WK) - Zwick Z005 Crush Tester



WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
4H98XB	23.4 X	20.2 X	24.8 X	23.9 X	23.1	22.89 X	1.6	2.0 H	23.4	17.87 X	1.8	1.4 H	8	LZ
4ZBRXJ	14.8	14.3	14.0	14.6	14.4	-0.77	0.9	0.4	14.6	0.10	1.0	0.3	16	LW
8PYUKQ	15.7	15.2	15.0	14.8	15.2	1.32	1.0	0.4	15.0	0.92	1.2	0.5	16	XX
K9NH8F	14.6	14.7	14.4	14.7	14.6	-0.28	1.2	0.1	14.6	0.04	1.2	0.2	16	LU
LKRPK7	14.0	14.3	14.2	No Data	14.1	-1.53	1.2	0.2	14.2	-0.62	1.2	0.9 H	15	LW
PLHELA	15.5	14.8	14.8	14.7	15.0	0.66	1.1	0.4	14.7	0.26	1.2	0.4	16	XX
VNJFZM	15.0	14.8	14.5	15.3	14.9	0.51	1.4	0.3	14.8	0.53	1.2	0.4	16	LW
XFWVP2	15.1	15.2	14.9	15.0	15.0	0.92	1.0	0.1	15.0	0.91	1.1	0.3	16	LU
XXJR9L	14.7	14.3	14.3	14.4	14.4	-0.83	1.1	0.2	13.5	-2.14*	1.1	0.9 H	16	LZ

Consensus (All Labs) Results										
Wk Mean	14.92	14.69	14.52	14.77	Month Mean	14.71	Grand Mean	14.55		
Avg SDr	1.20	1.11	1.03	1.14	Avg SDr	1.12	Avg SDr	1.17		
SD btwn Labs	0.55	0.39	0.36	0.30	SD btwn Labs	0.37	SD btwn Labs	0.49		
Labs Includ	8	8	8	7	SD btwn Wks	0.28	SD btwn Wks	0.55		
Labs Exclud	1	1	1	1	Labs Includ	8	Labs Includ	8		
Labs not rcvd	0	0	0	1						

Instrument Code List as Reported by the Labs

(LU) - L & W 52 without moisture correction (was 53)

(LW) - L & W 53 with moisture correction (was 53M)

(LZ) - L & W (model not specified)

(XX) - Instrument make/model not specified by lab