



Collaborative Testing Services, Inc. Containerboard Interlaboratory Testing Program

Participant Summary Report #475 (D)- April 2009

[Introduction to the Containerboard Program](#)

[Explanation of Tables and Definitions of Terms](#)

[Instrument Manufacturer Contacts](#)

Analysis	Sample Lot	Analysis Name
201	BOX3	Box Compression Strength, Corrugated Boxes
202	ECT3	Edgewise Compressive Strength, Wax (T811), Corrugated board
203	ECT3	Edgewise Compressive Strength by Clamp (T839), Corrugated board
205	42X1	Mullen Burst of Linerboard, 42 lb Linerboard
207	36U3	Mullen Burst of Linerboard, 36 lb Linerboard
215	42X1	Ring Crush of Linerboard, Rigid Platen Type, 42 lb Linerboard
217	36U3	Ring Crush of Linerboard, Rigid Platen Type, 36 lb Linerboard
223	42X1	STFI of Linerboard, 42 lb Linerboard
225	36U3	STFI of Linerboard, 36 lb Linerboard
228	42X	Roughness - Stylus Method, 42 lb Linerboard
231	42X1	Internal Bond Strength, Linerboard, 42 lb Linerboard
234	42X1	Coefficient of Static Friction - Inclined Plane, 42 lb Linerboard
237	42X1	Air Resistance - Gurley Method, Linerboard, 42 lb linerboard
240	CM71	Flat Crush Strength (CMT) of Medium, 26 lb Corrugating Medium
250	CM71	Fluted Crush of Medium, 26 lb Corrugating Medium
255	CM71	Ring Crush of Medium, 26 lb Corrugating Medium
261	CM71	STFI of Medium, 26 lb Corrugating Medium

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	July 2007 -

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:

Flag	Explanation
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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

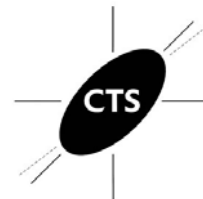


WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
I323ZD	909.6	-0.34	31.7	893.1	-0.89	29.0	3	XX
1BJ3JR	945.2	0.31	30.7	963.5	0.68	56.2	4	LG
54DA6S	880.4	-0.88	27.1	917.3	-0.35	58.3	4	ES
6P9A1M	907.9	-0.37	60.4	891.4	-0.93	46.3	4	TB
8GZ686	909.3	-0.35	48.1	942.7	0.22	69.6	4	LL
8HAGZD	958.8	0.56	36.0	994.4	1.38	51.6	4	LM
8PY84W	947.1	0.34	77.5	981.7	1.09	82.7	4	LG
9RHXA7	931.9	0.06	29.4	927.9	-0.11	66.9	4	RP
BKCATT	927.8	-0.01	66.3	923.6	-0.21	61.2	4	TP
BPBHHW	845.4	-1.52	21.2	867.0	-1.48	34.7	4	LG
D8E5Z6	1,029.2	1.85	66.0	979.7	1.05	65.7	4	LL
DAWFH2	852.9	-1.38	56.7	857.7	-1.69	48.2	2	XX
E6GTAV	1,005.5	1.41	127.5	967.4	0.77	102.0	4	TR
F2F2NF	969.8	0.76	74.7	949.2	0.36	68.9	4	MC
G14MRU	895.0	-0.61	43.3	920.6	-0.28	46.3	4	TC
KBZ2T5	829.6	-1.81	17.9	885.6	-1.06	64.1	4	EX
KJLE2A	994.9	1.22	108.2	1,003.3	1.57	83.9	4	XX
L4P5W7	877.8	-0.93	99.3	908.5	-0.55	75.2	4	LN
P5R2ZZ	903.4	-0.46	40.7	900.5	-0.73	48.8	4	XX
PZZ4E1	1,000.6	1.32	40.5	973.4	0.91	53.0	4	ER
Q9598D	932.7	0.08	72.0	978.3	1.02	59.7	3	LH
T5R5HA	893.0	-0.65	24.9	913.0	-0.45	68.5	4	XX
TEKRYX	867.5	-1.11	70.6	875.6	-1.28	62.7	4	LO
TMZ7TT	1,047.6	2.18 *	111.1	979.2	1.04	73.1	4	TS
TZQPES	942.0	0.25	28.8	1,001.2	1.53	55.5	4	ER
USRXVH	909.0	-0.35	46.0	893.8	-0.88	71.1	4	LH
WFKD49	914.3	-0.26	74.3	871.7	-1.37	69.7	4	LO
WHHB4V	966.3	0.69	64.3	962.3	0.66	62.6	4	ER

Consensus (All Labs) Results

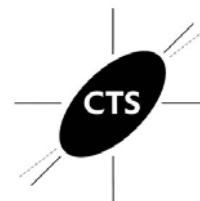
Month Mean	928.37	Grand Mean	932.98
Avg SDr	63.77	Avg SDr	63.72
SD btwn Labs	54.61	SD btwn Labs	44.65
Labs Incd	28	Labs Incd	28

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
45ZP17	37.4	-0.24	1.0	40.6	0.34	1.3	3	TC
9TC6LY	30.6	-1.57	2.6	37.8	-0.69	2.0	3	LX
BDSU3G	43.4	0.92	2.9	41.4	0.64	3.9	3	LC
FVU9BF	43.4	0.92	1.9	42.1	0.94	3.8	3	TD
MPRQGT	35.3	-0.64	1.0	35.2	-1.70	1.0	2	XX
SJKF2Z	41.7	0.60	2.0	40.9	0.47	1.9	3	LC

Consensus (All Labs) Results					
Month Mean	38.63		Grand Mean	39.67	
Avg SDr	2.02		Avg SDr	2.59	
SD btwn Labs	5.14		SD btwn Labs	2.64	
Labs Incd	6		Labs Incd	6	

Instrument Code List as Reported by the Labs

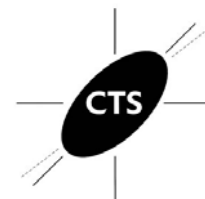
(LC) - L&W Crush Tester 48

(LX) - L&W 506

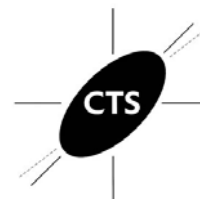
(TC) - TMI Monitor/Compression Tester, Model 17-37

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

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



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
1JEDQL	41.5	-0.08	3.7	41.5	-0.08	3.7	1	EM
33YUSH	30.9	-2.66 *	2.2	30.9	-2.66*	2.2	1	TD
3YCGZR	40.8	-0.24	2.7	40.8	-0.24	2.7	1	LX
4DU5WJ	43.9	0.53	1.7	43.9	0.53	1.7	1	LC
4N4U25	41.9	0.03	1.2	41.9	0.03	1.2	1	LX
4N4WN3	46.7	1.20	1.6	46.7	1.20	1.6	1	LC
4RJZE4	42.5	0.18	3.3	42.5	0.18	3.3	1	LC
7J8ER5	37.9	-0.94	1.1	37.9	-0.94	1.1	1	TC
7NMN69	47.1	1.31	3.2	47.1	1.31	3.2	1	LC
8AT3YT	41.0	-0.19	0.9	41.0	-0.19	0.9	1	TC
8FXV3W	37.3	-1.09	3.9	37.3	-1.09	3.9	1	EN
9LFXXD	35.4	-1.56	2.8	35.4	-1.56	2.8	1	LC
BBYK3D	43.6	0.44	3.5	43.6	0.44	3.5	1	EM
CE3GB2	40.3	-0.37	1.9	40.3	-0.37	1.9	1	TC
CTJX5P	49.3	1.83	0.8	49.3	1.83	0.8	1	TD
GNNUR4	41.8	0.00	0.9	41.8	0.00	0.9	1	XX
J934CF	42.2	0.10	1.5	42.2	0.10	1.5	1	EN
JCS8AU	43.4	0.39	1.0	43.4	0.39	1.0	1	TC
K9BQUY	44.7	0.70	2.2	44.7	0.70	2.2	1	TM
NC53N7	40.0	-0.44	2.4	40.0	-0.44	2.4	1	LX
PECQPH	41.4	-0.11	2.6	41.4	-0.11	2.6	1	EN
PELEE3	40.9	-0.22	1.6	40.9	-0.22	1.6	1	EM
PYPZRS	35.5	-1.54	1.9	35.5	-1.54	1.9	1	CT
PYXZHY	40.3	-0.36	2.0	40.3	-0.36	2.0	1	TA
R4QREF	43.6	0.46	1.5	43.6	0.46	1.5	1	LC
RN2D1N	42.2	0.10	1.2	42.2	0.10	1.2	1	LC
RSDYSP	36.2	-1.37	1.4	36.2	-1.37	1.4	1	XX
SLXKXD	40.8	-0.24	2.2	40.8	-0.24	2.2	1	TB
T5YMTJ	41.7	-0.03	1.4	41.7	-0.03	1.4	1	EM
UW47W7	45.2	0.83	2.8	45.2	0.83	2.8	1	EM
VJUAKR	41.6	-0.04	1.2	41.6	-0.04	1.2	1	EM
W2AELW	41.3	-0.12	2.5	41.3	-0.12	2.5	1	TC
WZFUNH	47.7	1.44	1.7	47.7	1.44	1.7	1	TD
XJZCPH	41.9	0.03	1.7	41.9	0.03	1.7	1	LX
Y9E47C	33.9	-1.94	1.5	33.9	-1.94	1.5	1	XX
YFEQV6	44.4	0.64	1.5	44.4	0.64	1.5	1	TL



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst

YJHLFU	49.7	1.93	1.5	49.7	1.93	1.5	1	LC
YMUUJH	40.5	-0.32	1.5	40.5	-0.32	1.5	1	LC
ZN88SH	48.6	1.68	2.0	48.6	1.68	2.0	1	EM

Consensus (All Labs) Results			
Month Mean	41.78	Grand Mean	41.78
Avg SDr	2.11	Avg SDr	2.11
SD btwn Labs	4.09	SD btwn Labs	4.09
Labs Incd	39	Labs Incd	39

Instrument Code List as Reported by the Labs

- | | |
|--|--|
| (CT) - Con-Ten | (EM) - Emerson 1200 Series |
| (EN) - Emerson 2200 | (LC) - L&W Crush Tester 48 |
| (LX) - L&W 506 | (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 | (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 - 42X1
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	
18K3NN	108.2	104.9 L	107.6	106.5	106.8	1.40	6.9	1.4	107.0	1.51	7.5	2.3	16	AX
1CHJ23	103.0	100.0	102.8	104.6	102.6	0.22	8.0	1.9	104.0	0.62	8.8	3.1	16	AH
1XXW8U	105.2	108.9	103.3	110.6 *	107.0	1.46	11.0	3.3	106.7	1.42	10.6	3.0	15	AA
2DK9MM	101.8	98.1	102.1	103.0	101.2	-0.16	10.3	2.2	101.4	-0.15	10.3	1.8	16	TB
2EQLUY	102.3	99.9	105.2	104.6	103.0	0.33	10.6	2.4	99.7	-0.67	10.2	2.9	14	LA
5CX4FJ	100.0	105.8 L	102.0	103.7	102.9	0.30	9.3	2.5	101.4	-0.15	7.7	3.0	16	LC
5PQGUB	107.1	No Data	No Data	No Data	107.1	1.49	9.3	0.0 L	104.0	0.61	11.5	2.8	11	LC
5SDTTH	102.7	99.2	103.7	91.1 *	99.2	-0.74	9.5	5.7	99.9	-0.59	11.4	4.6	14	AX
5XNNTS	103.7	106.2	103.7	104.3	104.5	0.75	7.4	1.2	103.7	0.53	10.0	2.4	16	LA
5XNNTS	98.6	102.2	99.6	102.1	100.6	-0.33	10.5	1.8	101.0	-0.28	10.2	3.2	16	TX
6JYG74	98.2	100.5	97.3	101.2	99.3	-0.70	8.0	1.8	98.9	-0.90	9.6	3.3	16	LA
6Z3HWP	95.2	94.7	90.4 *	98.2	94.6	-2.01 *	9.2	3.2	99.1	-0.83	9.2	4.6	16	LC
6ZJBHB	106.1	104.1 H	101.3	102.7	103.6	0.49	11.4	2.0	102.0	0.02	12.1	3.6	16	XX
72YTP5	99.5	98.3	100.0	96.7	98.6	-0.89	10.1	1.5	98.9	-0.89	10.5	2.6	16	LA
7H7LQE	103.6	106.7 L	96.9	96.4	100.9	-0.25	8.2	5.1	98.3	-1.09	9.8	3.1	16	LA
86BW5Z	103.8	101.8	105.3	100.0	102.7	0.26	9.0	2.3	101.7	-0.06	9.8	3.6	16	AH
86VTJL	102.2	101.1	91.5 *	100.3	98.8	-0.85	11.0	4.9	100.4	-0.45	10.0	4.0	13	LZ
86VTJL	100.1	102.0	97.1	99.0	99.6	-0.63	9.5	2.1	100.4	-0.45	9.6	2.1	13	LZ
8L8477	100.9	93.4	90.1 *	92.8	94.3	-2.10 *	9.5	4.6	93.9	-2.39 *	9.2	3.9	16	AH
8QFM1F	109.8	109.6	106.4	107.5	108.3	1.83	7.4	1.7	107.3	1.59	8.9	2.4	16	LZ
9ZY6VK	99.9	100.5	103.6	100.4	101.1	-0.20	6.9	1.7	101.4	-0.17	9.6	2.1	16	LJ
B6QSU9	90.8 * L	103.8	95.3	98.1	97.0	-1.35	7.6	5.4	98.3	-1.09	8.8	6.6 H	14	TB
C1Z6MV	107.4	102.8	108.8	104.7	105.9	1.15	8.8	2.7	105.8	1.15	10.5	3.2	16	LA
CJS2ZQ	106.3	107.1	107.8	105.5	106.7	1.36	10.4	1.0	107.1	1.54	10.4	1.8	15	TB
CNL19E	105.7	89.6 *	98.2	No Data	97.8	-1.12	11.6	8.1 H	94.8	-2.13 *	10.8	6.2 H	15	LJ
CYD6PZ	102.0	103.0	108.8	101.1	103.7	0.54	12.2	3.5	104.6	0.79	12.2	4.0	16	LA
DRQP62	101.4	100.3 L	101.9	102.4	101.5	-0.09	7.4	0.9	102.5	0.18	7.2	3.9	16	AH
DWTZEA	105.3 H	106.9	101.3	103.2	104.2	0.66	12.4	2.4	104.9	0.88	11.7	3.0	16	LA
DYNRN6	98.7	94.1	98.7	95.1	96.7	-1.44	9.8	2.4	98.5	-1.03	9.7	3.9	8	XX
HR9JW8	103.7	100.9	98.8	95.6	99.7	-0.58	9.0	3.4	102.4	0.14	10.7	3.7	16	AX
HSRT9Z	112.1 *	111.7	99.8	No Data	107.9	1.70	11.1	7.0	109.6	2.30 *	11.8	4.4	7	LC
HYMJ5Q	100.4	99.6	107.6	99.2	101.7	-0.03	12.3	4.0	98.9	-0.89	10.5	4.3	16	AH
JCSAZY	101.1	109.8	111.0 *	102.4	106.1	1.20	8.1	5.0	106.1	1.24	8.1	5.0	4	LJ
JWMFJM	106.6	96.2	96.1	No Data	99.6	-0.60	11.9	6.1	101.6	-0.10	10.6	4.0	12	TC

Containerboard Interlaboratory Testing Program
Analysis 205

Bursting Strength (Mullen), 42 lb Linerboard - 42X1
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
K4SAWQ	107.0	107.0	106.1	107.0	106.8	1.39	5.6	0.5 L	106.9	1.49	5.1	1.7	16	XX
KCTX71	105.7	98.5	102.1	100.2	101.6	-0.05	9.9	3.1	101.3	-0.20	9.5	2.8	14	LC
KY5ZZA	106.4	97.2	101.5	102.5	101.9	0.03	11.0	3.8	101.6	-0.10	11.2	4.3	14	TB
LK8A7Q	98.7	99.2	No Data	No Data	98.9	-0.81	5.6	0.3 L	100.2	-0.53	6.0	3.5	10	TC
LWFBDF	101.5	103.2	101.8	No Data	102.2	0.10	9.2	0.9	102.9	0.30	8.9	1.3	15	LA
NUIT6U	98.1	97.4	105.0	105.4	101.4	-0.10	10.7	4.3	99.5	-0.73	10.8	3.9	16	LA
P2AG9C	95.5	101.7 H	101.0	99.6	99.5	-0.66	12.8	2.8	99.0	-0.87	10.8	5.7	16	AX
PAW5XW	103.6	99.6	102.3	104.5	102.5	0.20	11.5	2.1	102.4	0.15	10.9	4.3	16	TB
PSE6PS	100.8	96.7	99.9	94.2	97.9	-1.09	9.5	3.0	98.2	-1.10	10.7	3.4	16	LA
PW6GLJ	94.3	105.1	97.5	103.0	100.0	-0.51	10.3	5.0	101.9	0.00	12.2	5.1	15	LA
QJMRKX	106.0	106.3	99.8	99.4	102.9	0.30	9.0	3.8	103.8	0.55	9.3	3.0	16	AH
QQ5LBB	93.8	104.0	102.5	95.3	98.9	-0.81	10.1	5.1	101.6	-0.10	10.2	4.0	15	LB
QUWFRJ	100.2	110.5	104.4	109.2 H	106.1	1.20	12.5	4.7	104.3	0.70	12.2	4.4	15	TB
R8BBTE	101.7	98.6	100.0 L	100.5	100.2	-0.45	10.1	1.3	97.8	-1.24	10.9	4.2	16	LC
SLYAAN	101.9	101.4	96.2	105.9	101.4	-0.13	9.0	4.0	100.8	-0.33	11.6	3.5	16	AH
THA3FT	105.3	108.2	104.6	110.1	107.1	1.47	9.5	2.6	104.5	0.77	9.7	4.0	12	AH
U313A1	109.8	110.6	106.8	104.4	107.9	1.71	10.9	2.8	107.1	1.55	11.6	4.9	16	TB
UE11TK	105.0	102.8 H	103.0	98.5	102.3	0.14	13.0	2.7	105.9	1.18	10.8	3.9	16	AA
VLU7L1	No Data	No Data	No Data	100.5	100.5	-0.35	8.8	0.0 L	100.3	-0.49	9.8	3.1	10	TB
WW169U	97.5	93.2	100.8	100.8	98.1	-1.04	10.8	3.6	100.5	-0.42	11.1	3.4	16	LZ
YCYNEV	105.4	107.2	104.3	108.7	106.4	1.29	10.6	1.9	107.0	1.52	11.1	2.0	16	TB
Z45CKD	100.1	99.3	97.0	96.4	98.2	-1.01	10.4	1.8	100.0	-0.58	10.2	3.9	16	XX
ZMX66J	91.7* L	99.0	94.1	95.3	95.0	-1.89	6.5	3.1	96.1	-1.73	7.4	3.0	16	AH

Consensus (All Labs) Results													
Wk Mean	102.20	102.01	101.39	101.46	Month Mean	101.80				Grand Mean	101.92		
Avg SDr	9.52	9.72	10.27	10.06	Avg SDr	9.86				Avg SDr	10.13		
SD btwn Labs	4.45	4.90	4.58	4.49	SD btwn Labs	3.57				SD btwn Labs	3.36		
Labs Includ	56	55	54	51	SD btwn Wks	3.48				SD btwn Wks	3.70		
Labs Exclud	0	0	0	0	Labs Includ	57				Labs Includ	57		
Labs not rcvd	1	2	3	6									

Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42X1
TAPPI Official Test Method T807



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

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	
1127VC	94.8	88.6	90.0	84.9	89.6	-0.59	10.6	4.1	89.4	-0.81	9.4	2.6	12	LA
1QQ1VW	91.8	87.2 L	87.5	94.9	90.3	-0.36	7.6	3.7	89.5	-0.78	9.4	3.6	9	LB
2J8AGM	97.1	94.7	86.9	93.7	93.1	0.53	10.6	4.4	93.7	0.77	10.1	2.8	12	LZ
2QHPLZ	88.4	94.1	No Data	86.3	89.6	-0.59	7.9	4.0	92.0	0.13	8.8	3.6	7	TC
2SZ4NM	92.2	96.5	95.9	93.3	94.5	0.96	11.0	2.1	95.0	1.26	11.2	2.2	12	LA
33BLZQ	89.4	83.8	89.1	No Data	87.4	-1.27	8.1	3.2	85.4	-2.30*	9.3	3.0	11	LJ
3A8NVA	82.4*	84.6	85.9	91.0	86.0	-1.73	8.5	3.6	87.9	-1.38	8.6	4.0	12	AH
4GXTKL	91.3	91.8	90.7	95.0 L	92.2	0.24	6.4	1.9	90.4	-0.44	7.3	2.6	12	LC
5S8P7D	101.5*	96.3	100.2*	No Data	99.3	2.50*	6.2	2.7	94.5	1.08	7.0	5.0 H	7	LC
6GWJ4G	89.1	89.1	84.7	86.3	87.3	-1.31	9.0	2.2	86.6	-1.86	9.6	1.8	12	LA
77XE8B	94.7	96.1	92.1	88.0	92.7	0.41	8.7	3.6	94.2	0.93	9.1	3.1	8	LJ
84YVZM	89.3	95.7	88.1	90.4	90.9	-0.18	11.8	3.4	91.0	-0.23	10.3	2.2	12	LJ
85VWUX	87.0	83.2*	87.7	84.7*	85.7	-1.82	10.0	2.1	88.9	-1.00	8.7	4.5 H	12	LC
8KHCM8	91.8 L	94.4	93.2	93.2	93.2	0.54	7.5	1.1	94.0	0.87	6.2	2.5	12	AH
A1TEU8	86.5	92.4	90.7	92.6	90.6	-0.28	9.5	2.8	90.5	-0.43	9.4	2.8	12	LA
AQQBEC	88.7	85.2	81.7*L	90.7	86.5	-1.55	8.2	4.0	88.8	-1.04	9.4	3.9	8	AX
BBD1WA	90.8	89.7	90.2	88.4	89.8	-0.53	8.3	1.0	91.0	-0.24	9.6	1.9	12	TB
BEDBQP	95.5	94.8	95.3	94.3	95.0	1.12	10.0	0.5	93.2	0.57	10.3	1.9	12	LZ
BEDBQP	94.0	96.9	96.4	95.5	95.7	1.35	9.7	1.3	93.3	0.61	10.0	2.3	12	LZ
CNB443	93.1	93.2	91.8	93.9	93.0	0.49	11.5	0.9	93.0	0.51	10.8	2.1	12	LA
CNB443	92.2	90.5	90.2	87.2	90.0	-0.45	9.1	2.1	90.3	-0.49	8.4	3.2	12	LA
DP2KZW	87.7	90.4	90.8	91.4	90.1	-0.43	10.8	1.6	90.6	-0.38	10.6	2.2	12	AH
DS1YC6	87.6	89.7 H	86.2	91.4	88.7	-0.86	11.4	2.3	88.7	-1.08	11.4	2.3	4	XX
DSKRAC	88.5	86.6	89.3	93.2	89.4	-0.64	11.7	2.8	91.2	-0.14	10.7	2.7	12	LZ
EDEKF4	93.1	93.7	91.1 H	91.3	92.3	0.27	12.5	1.3	92.2	0.22	10.9	2.9	12	XX
FZWFCH	89.2	87.8	90.3	87.2	88.6	-0.89	8.0	1.4	90.3	-0.48	10.1	2.5	12	LA
GDCVTM	93.6	91.0	88.8	93.8	91.8	0.11	7.0	2.4	92.8	0.45	7.3	4.3	11	AH
GVA71A	93.6	91.8	85.8	86.4	89.4	-0.65	11.5	3.9	92.3	0.26	10.5	3.4	12	AX
GXYJZF	No Data	No Data	No Data	90.4	90.4	-0.32	9.6	0.0 L	90.2	-0.52	8.9	2.0	6	TB
HD4QQT	91.7 L	89.9	91.0	92.4 L	91.3	-0.06	4.3	1.1	91.2	-0.16	4.2	0.9	12	XX
HRX52Q	96.7	93.7	95.5	94.3	95.0	1.14	10.8	1.3	94.8	1.16	10.9	1.3	10	LA
HUBM67	96.2	95.2	93.7	92.9	94.5	0.97	11.2	1.5	94.3	0.99	10.6	1.6	12	AH
HWQNAV	91.1	91.6	91.9	95.4	92.5	0.34	10.5	1.9	94.5	1.06	10.5	3.5	12	LA
JGKWKH	92.2	91.8	88.4	93.4	91.4	0.00	10.3	2.1	91.7	0.03	9.3	2.1	10	LA

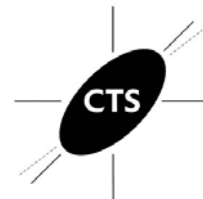
Containerboard Interlaboratory Testing Program
Analysis 207

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	
JQ7ZLQ	91.8	87.8	87.0	92.2	89.7	-0.55	8.7	2.7	90.0	-0.60	9.6	2.5	12	AH
L9WY45	81.7*	86.9	89.4	92.1	87.5	-1.24	8.3	4.4	89.1	-0.92	8.7	2.9	12	LC
MDCNB2	96.0	94.9	93.5	97.6	95.5	1.29	6.3	1.7	94.7	1.11	8.4	1.7	12	AX
NR3MY Y	90.7	87.8	88.3	90.7	89.4	-0.66	9.9	1.5	89.9	-0.66	9.4	2.7	8	LC
PBDQU5	91.0	88.4	91.8	94.0	91.3	-0.05	10.7	2.3	92.1	0.17	9.6	1.9	12	TB
PTZ9R6	97.8	95.2	97.6	96.5	96.8	1.68	8.8	1.2	96.6	1.85	8.9	2.1	12	TB
Q2NKFR	91.3	No Data	No Data	No Data	91.3	-0.03	14.7	0.0 L	93.4	0.66	13.0	3.1	8	LC
S9Q4D8	98.9	90.9	97.3	97.5	96.2	1.50	10.4	3.6	94.8	1.17	10.3	3.8	11	TB
SA8GA9	89.7	88.1	91.7	95.3	91.2	-0.08	9.5	3.1	88.5	-1.14	10.0	4.3	12	AX
SMN6E7	94.5	94.5	94.0	No Data	94.3	0.92	11.1	0.3 L	94.1	0.91	10.4	1.6	11	AA
T8K3LU	83.3*	81.9*	84.5	85.5	83.8	-2.42*	7.9	1.6	84.4	-2.66*	7.0	2.6	10	TB
TC19Y3	90.1	89.2	93.3	93.5	91.5	0.03	10.0	2.2	90.3	-0.50	9.1	2.8	12	TB
UD4LFG	88.8	84.8	87.8	87.4	87.2	-1.34	8.1	1.7	87.9	-1.37	8.7	2.3	8	LA
V2BHN1	92.4	91.6	92.6	No Data	92.2	0.24	8.3	0.5	92.6	0.36	8.4	0.8	11	LA
V9F6V8	94.6	90.9	94.0	91.7	92.8	0.43	11.3	1.8	93.2	0.57	10.6	3.0	12	AH
W73HT3	89.3	91.2	92.0	85.9	89.6	-0.58	6.8	2.7	91.3	-0.12	8.2	2.9	8	TX
WKSTJZ	90.1	90.2	No Data	No Data	90.2	-0.40	4.8	0.0 L	90.3	-0.51	5.4	3.3	9	TC
WX3B7M	88.3	92.7	88.5	90.6	90.0	-0.45	8.0	2.0	90.1	-0.55	8.5	2.8	12	AH
X51ABG	91.3	89.5	91.8	90.4	90.8	-0.22	9.4	1.0	89.9	-0.65	9.4	1.5	12	LA
XLXARP	94.7	96.7	97.0	96.8	96.3	1.54	8.7	1.1	96.3	1.72	8.7	1.1	4	AH
YQKNN4	90.5	94.9	93.5	102.7 X	95.4	1.25	9.1	5.2 H	95.9	1.56	9.7	3.7	11	TB
Z54DQ6	91.6	97.4	97.3	94.6	95.2	1.20	9.4	2.7	93.8	0.78	9.8	3.1	11	TB
ZY98CR	97.5	97.6	95.0 H	94.5	96.2	1.49	13.2	1.6	96.2	1.67	11.6	1.9	12	AA

Consensus (All Labs) Results											
Wk Mean	91.59	91.18	91.11	91.69	Month Mean	91.44				Grand Mean	91.63
Avg SDr	9.97	9.08	9.79	9.22	Avg SDr	9.56				Avg SDr	9.46
SD btwn Labs	3.86	3.93	3.83	3.47	SD btwn Labs	3.15				SD btwn Labs	2.71
Labs Includ	56	55	53	50	SD btwn Wks	2.52				SD btwn Wks	2.81
Labs Exclud	0	0	0	1	Labs Includ	57				Labs Includ	57
Labs not rcvd	1	2	4	6							



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

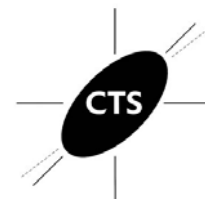
(LZ) - L & W (model not specified)

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

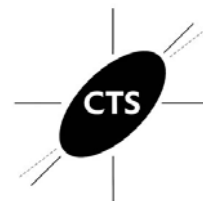
(XX) - Instrument make/model not specified by lab



WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
1FRWCW	96.8	99.4	95.3	90.9	95.6	0.76	4.1	3.6	94.7	0.61	4.4	3.1	14	LD
2QUGBE	98.2	99.0	94.1	97.8	97.3	1.08	4.9	2.2	97.1	1.15	4.7	3.0	8	XX
2RQ21Z	No Data	No Data	81.0	No Data	81.0	-2.01*	3.7	0.0 L	92.5	0.14	3.7	5.6	9	LC
38GR4V	98.2	98.4	98.7	100.4	98.9	1.39	4.7	1.0	98.6	1.45	4.5	1.0	14	LC
468TEK	92.2	97.0	95.2	96.0	95.1	0.67	3.9	2.1	93.8	0.44	3.9	2.6	16	LC
4GS5SH	75.2 X	85.9	84.2	91.2 H	84.1	-1.41	6.8	6.7 H	87.5	-0.92	6.5	7.4 H	16	LZ
5HJYBW	91.4	92.2	89.9	94.0	91.9	0.05	3.3	1.7	91.6	-0.04	3.5	1.8	16	EN
5JD5NS	97.8	96.8	95.5	92.8	95.7	0.78	4.7	2.2	96.9	1.09	4.8	2.0	14	LC
65KA7R	92.8	92.1	91.0	No Data	92.0	0.07	3.7	0.9	92.6	0.17	4.0	1.5	15	LC
6R2X15	95.8	95.7	93.7	96.1	95.3	0.71	4.7	1.1	94.6	0.59	4.9	2.5	16	LC
76YUAM	99.1	100.0	98.5	No Data	99.2	1.44	4.4	0.8	97.9	1.30	4.3	2.1	15	LC
7ZQ3G9	89.6	92.7	89.0	89.6	90.2	-0.25	4.7	1.6	86.8	-1.09	3.7	3.2	16	XX
81SHW1	90.1	89.4 L	88.4 L	87.5	88.9	-0.51	2.6	1.1	89.1	-0.59	3.2	1.5	15	TC
881855	95.3	91.4	92.5	92.6	92.9	0.26	4.0	1.7	92.1	0.06	4.0	1.9	16	LD
8M6NMK	86.8	83.9	84.5	83.9 L	84.8	-1.29	3.2	1.4	84.9	-1.50	3.4	2.5	16	TM
8QAC13	88.6	89.7	88.0	89.0	88.8	-0.52	6.0	0.7	89.3	-0.53	5.5	3.7	16	LC
8QAC13	85.0	81.2 H	82.9	88.0	84.3	-1.38	6.2	2.9	88.3	-0.76	5.3	4.3	16	LC
8RHDLV	95.9	94.1	94.6	94.6	94.8	0.60	4.7	0.8	95.5	0.79	4.1	1.9	16	EM
8SLRMG	83.9	83.3	80.6	81.6	82.4	-1.74	3.3	1.5	84.3	-1.62	4.4	3.9	12	EM
8XDE9A	89.2	No Data	No Data	No Data	89.2	-0.45	3.3	0.0 L	91.5	-0.07	4.3	3.8	11	LC
8Z2R8F	89.9	94.5	92.2	92.6	92.3	0.14	4.4	1.9	93.4	0.33	4.4	2.8	14	EX
97Q54X	92.7	94.2	92.9	91.4	92.8	0.23	4.5	1.1	92.8	0.21	4.5	2.0	14	LZ
9BNWR2	88.4 L	89.2 L	86.1	87.8	87.9	-0.70	2.2	1.3	87.6	-0.92	4.1	3.3	16	XX
9M65Z8	88.2	92.5	95.9	90.4	91.7	0.03	4.1	3.3	91.7	-0.02	4.1	3.3	4	LC
ALHTL4	91.6	93.8	97.3	93.8	94.1	0.48	3.3	2.4	93.6	0.37	3.9	2.0	16	LC
ALHTL4	92.0	98.8	97.1	93.8	95.4	0.73	3.5	3.1	94.5	0.58	3.3	2.3	16	LC
AQWYZK	93.7	96.3	96.5	95.6	95.5	0.75	4.3	1.3	96.5	1.00	4.0	2.0	16	LC
AWVYGE	94.2	94.6	92.7	94.1	93.9	0.44	3.6	0.8	94.4	0.55	4.0	1.4	15	LC
B12HN5	94.0	92.7	95.6	95.7	94.5	0.55	4.9	1.4	94.0	0.47	4.2	2.4	12	TC
B6VH67	67.1 XH	87.3	82.8	85.0 H	80.6	-2.08*	10.3	9.1 H	82.1	-2.09*	11.3	11.3 H	12	IM
B7WTE2	97.6	95.8	97.1	No Data	96.8	0.99	5.2	0.9	96.3	0.97	4.3	2.9	15	LC
BD74V1	100.0	88.2	97.5	93.2	94.7	0.60	4.2	5.2	95.5	0.79	4.3	3.9	16	XX
BYY8P2	79.8*	77.4*L	82.5	80.5*	80.1	-2.18*	3.8	2.1	83.4	-1.82	4.6	3.9	16	LD
DP3KXB	87.2	84.3 L	83.6	80.2*	83.8	-1.46	3.6	2.9	87.2	-0.99	3.1	3.2	16	LZ



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
DTVTR3	84.9 L	85.2 L	85.1 L	85.5 L	85.2	-1.21	1.8	0.2 L	81.4	-2.24*	2.7	4.0	8	XX
E9ZCAB	98.4	94.5	97.2	102.3*	98.1	1.23	4.0	3.2	99.8	1.73	4.6	3.4	8	LZ
EG12YP	96.4	98.5	100.6	102.0*	99.4	1.47	5.7	2.5	100.9	1.96	5.1	6.1 H	16	LC
F6244Y	97.6	100.4	97.5	89.1	96.1	0.86	3.6	4.9	96.2	0.95	4.5	4.0	16	LD
FAFT9T	93.6	96.6	96.8	88.8	94.0	0.45	4.9	3.7	94.6	0.60	4.5	3.4	16	MZ
GC2T7N	96.7	93.5	94.1	96.8	95.3	0.70	4.1	1.7	96.7	1.05	4.9	3.0	16	LC
GWW5XE	100.3	100.7	No Data	No Data	100.5	1.69	4.2	0.3 L	97.8	1.28	4.3	4.0	10	LC
HAX1TM	97.4	96.4	95.8	92.7	95.6	0.76	4.1	2.0	94.2	0.52	4.2	2.0	16	LC
HRLBFP	88.8	90.3	87.5 L	88.9	88.9	-0.51	4.5	1.1	91.9	0.01	4.2	3.1	16	LC
JDH4LP	93.4	93.8	94.2	98.1	94.9	0.62	5.1	2.2	92.6	0.18	4.1	3.1	16	MB
JF6FKU	98.8	99.4	99.0	99.9	99.3	1.46	5.1	0.5	96.6	1.03	4.5	2.1	16	LD
K48727	87.3	81.3 H	89.8	90.9	87.3	-0.80	5.0	4.3	90.2	-0.36	4.2	2.8	16	LX
LMXUYF	87.5	88.4	85.0	90.3	87.8	-0.72	5.1	2.2	86.7	-1.10	4.9	2.6	13	LC
MHB2W6	86.0	85.0	86.8	86.4	86.0	-1.04	3.9	0.8	84.8	-1.51	3.5	3.3	16	LD
MLQ5N7	86.4	85.7	85.3	86.5	86.0	-1.06	3.4	0.6	86.5	-1.15	4.0	2.3	16	TX
MLU26D	88.8	88.6	89.2	89.1	88.9	-0.50	4.1	0.3 L	88.3	-0.76	4.0	1.9	16	EX
NJM4J5	88.7	88.4	87.4	87.3	87.9	-0.69	3.6	0.7	87.9	-0.85	3.7	1.2	16	EM
NW7L3E	90.0	89.5	83.5 L	87.1	87.5	-0.77	4.4	3.0	88.3	-0.75	4.4	2.4	16	EM
PQ1W62	94.5	96.1	92.1	91.0	93.4	0.34	3.5	2.3	91.6	-0.04	3.9	2.3	16	LC
PUGK2E	87.5	84.6	89.7	89.2	87.8	-0.72	4.5	2.3	86.3	-1.19	4.4	2.5	13	TB
QRPVJ9	94.4	92.6	91.7	92.4	92.8	0.23	3.9	1.2	90.7	-0.24	4.2	2.4	15	LC
R3NQYY	84.9	85.9	81.3	82.1	83.5	-1.52	3.7	2.2	88.7	-0.68	4.1	5.1	16	EN
RDRSGA	91.7	93.1	92.2	95.5	93.1	0.29	4.2	1.7	93.4	0.34	5.0	2.7	16	LC
S3W5FX	95.1	92.0	93.5	96.8	94.3	0.52	4.3	2.1	92.3	0.11	4.1	1.8	16	LC
THNHB5	100.9	95.8	99.0	96.5	98.1	1.22	4.9	2.3	95.8	0.86	4.7	4.7	16	TD
TL1TTQ	86.3	84.8	83.7	85.7	85.1	-1.22	4.3	1.1	86.0	-1.25	4.6	1.2	16	LZ
TX1RB8	93.3	95.5	98.9	96.0	95.9	0.82	5.5	2.3	95.4	0.76	4.8	2.1	16	TD
URAYAM	92.3 L	93.7	91.9	91.0	92.2	0.12	3.0	1.1	90.5	-0.28	3.2	1.7	16	LC
UX2CNG	83.4	81.7	82.4	82.4 L	82.5	-1.72	2.5	0.7	83.5	-1.79	2.5	1.2	16	TQ
V7CZPR	92.4	96.0	95.3	96.5	95.1	0.66	4.0	1.8	94.6	0.60	4.0	4.7	16	MB
VQCSSD	94.6 H	97.1	95.1	98.0	96.2	0.87	5.5	1.6	95.3	0.74	5.1	2.0	16	LC
WY5HS8	88.4	101.1	No Data	90.5	93.3	0.33	3.7	6.8 H	92.3	0.10	5.1	7.8 H	7	MB
YFDTKA	88.8	92.1	90.0	91.8	90.7	-0.17	4.3	1.5	90.3	-0.32	4.2	1.8	15	TD



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
YFNG9Y	106.1 X	100.6	103.8 *	97.2	101.9	1.95	4.5	3.9	103.1	2.42 *	4.7	3.0	15	LC
YS8ZNA	91.0	91.6	90.7	89.4	90.7	-0.17	4.7	0.9	91.4	-0.09	5.5	3.6	12	EM
ZLNBNR	87.8	85.6	88.7	92.2	88.6	-0.57	4.1	2.8	88.2	-0.79	3.3	2.2	16	XX

Consensus (All Labs) Results														
Wk Mean	91.88	92.02	91.37	91.50	Month Mean	91.57			Grand Mean	91.82				
Avg SDr	4.30	4.47	4.01	4.74	Avg SDr	4.43			Avg SDr	4.48				
SD btwn Labs	4.79	5.63	5.67	5.14	SD btwn Labs	5.29			SD btwn Labs	4.64				
Labs Includ	66	68	67	64	SD btwn Wks	2.64			SD btwn Wks	3.46				
Labs Exclud	3	0	0	0	Labs Includ	70			Labs Includ	70				
Labs not rcvd	1	2	3	6										

Instrument Code List as Reported by the Labs

- (EM) - Emerson 1200
- (EX) - Emerson (model not specified)
- (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
- (EN) - Emerson 2200
- (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)

Containerboard Interlaboratory Testing Program
Analysis 217

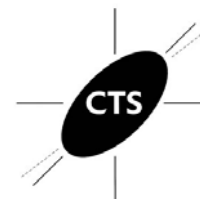
Ring Crush, 36 lb Linerboard - 36U3
TAPPI Official Test Method T822



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	
17W16L	75.3	80.0	79.7	80.5	78.9	0.06	3.4	2.4	78.9	0.07	3.7	1.7	12	LC
1GZFYQ	83.4	83.7	83.1	82.6	83.2	1.05	4.4	0.5 L	83.6	1.40	4.5	1.0	9	LC
1WWHG4	85.1	86.4	84.2	86.6	85.6	1.60	5.1	1.2	83.4	1.33	4.5	2.1	12	EM
1WZVHQ	77.2	78.3	75.8	76.7	77.0	-0.37	4.2	1.1	77.4	-0.36	4.6	1.5	12	EM
2Y2A7W	83.2	84.4	78.4	81.3	81.8	0.73	4.0	2.6	81.7	0.85	4.1	2.2	10	LD
3FLDMP	90.2*	85.8	87.9*	82.9	86.7	1.86	4.4	3.1	87.9	2.61*	4.5	4.3	12	LC
3R59N3	75.0	91.2*	No Data	88.2*	84.8	1.43	3.2	8.6 H	81.2	0.71	3.4	9.8 H	5	MB
42HTHJ	76.7	76.9	76.9	75.2	76.4	-0.51	3.1	0.8	75.6	-0.86	2.9	1.4	12	LC
46GNKD	78.6	79.5	80.7	79.6	79.6	0.22	3.4	0.9	79.6	0.27	3.4	0.9	4	TC
4CAYAA	84.9	83.4	84.2	No Data	84.2	1.28	4.1	0.8	82.5	1.09	4.4	1.7	11	LC
4F63WW	80.8	82.0	83.6	83.9	82.6	0.91	3.5	1.5	78.8	0.04	3.5	7.3 H	11	LC
4H8V4Z	84.3	84.1	83.2	84.0	83.9	1.21	4.2	0.5 L	81.8	0.91	3.6	2.8	12	TD
4JM5EL	74.1	80.6	76.3	72.1	75.8	-0.66	3.7	3.6	77.7	-0.26	4.0	4.4	8	LC
4XM1EY	78.9	79.1	81.2	81.5	80.2	0.35	3.4	1.4	80.4	0.50	3.6	1.2	12	TD
641H47	77.0	No Data	No Data	No Data	77.0	-0.38	5.1	0.0 L	75.5	-0.89	3.7	1.4	8	LC
657HSF	77.9	81.4	82.6	81.6	80.9	0.52	3.5	2.1	79.7	0.31	3.9	1.8	12	LC
6ALR7G	81.0	80.6	81.9	78.8	80.6	0.45	4.8	1.3	80.3	0.48	4.5	3.1	12	MB
6X44KE	73.4 L	78.4	73.0	75.2	75.0	-0.83	3.2	2.4	76.0	-0.76	2.9	2.5	12	LZ
7A1SQL	77.8	69.2	74.3	74.8	74.0	-1.06	4.1	3.6	77.0	-0.45	3.9	3.1	12	LX
7SMSWQ	76.2	76.1	76.9	79.3	77.1	-0.35	4.9	1.5	76.5	-0.62	4.6	2.2	8	LC
852UJ1	80.8	80.6	77.6	80.0	79.7	0.26	4.4	1.5	78.8	0.04	4.1	2.1	12	LD
865HA5	86.7	85.4	78.7	80.6	82.8	0.97	4.8	3.8	81.3	0.75	4.4	2.8	12	LD
87AYGU	76.2	77.8 H	73.1	72.4	74.9	-0.86	5.1	2.6	76.0	-0.73	4.9	2.4	12	EM
8U6QK1	75.2	73.9	72.5	74.0	73.9	-1.09	2.5	1.1	74.7	-1.12	2.9	1.1	11	TC
9G95EU	83.5	84.8	81.5	78.5	82.1	0.79	5.0	2.7	82.1	0.97	4.4	1.9	10	LC
9LAW5R	75.7	73.5	75.8	74.0	74.7	-0.89	3.5	1.2	74.3	-1.21	4.0	1.1	8	EX
AFB6QU	81.1	80.2	82.5	82.5	81.6	0.68	4.0	1.1	80.7	0.59	3.8	3.3	12	LC
AJHXCR	80.0	78.8	79.1	78.1	79.0	0.09	3.0	0.8	78.5	-0.03	3.1	1.8	12	EN
AQ8KLF	74.4	73.9	73.8	73.8	74.0	-1.07	2.6	0.3 L	73.5	-1.44	3.4	1.2	12	EM
B3CBT6	75.0	76.6 L	74.4	75.1	75.3	-0.77	3.0	1.0	73.0	-1.58	3.3	2.9	8	XX
D9FBMD	70.2	68.8*	66.9*	66.4*	68.1	-2.43*	4.4	1.7	72.2	-1.82	4.7	6.1 H	12	EN
DZTEG6	77.0	73.7	70.4	71.0	73.0	-1.29	4.0	3.0	74.6	-1.13	4.4	4.1	12	LZ
E1QLNF	79.6	78.5	78.1	77.9	78.5	-0.02	4.6	0.7	77.7	-0.28	4.2	1.4	12	LC
EACDFT	81.0	81.5	80.9	81.7	81.3	0.61	4.7	0.4 L	82.6	1.12	4.6	2.9	10	LZ



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	
EFJQU1	80.6	82.4	83.0	No Data	82.0	0.78	3.2	1.2	81.9	0.93	4.6	2.0	11	LC
EQSHNS	81.8	75.6	82.4	79.3	79.8	0.26	3.9	3.1	81.4	0.77	4.5	2.7	12	XX
F5H2VG	72.0	71.2	75.4	76.0	73.7	-1.15	4.4	2.4	75.0	-1.02	4.7	2.6	8	LC
FLTJUE	74.3	74.2	73.5	75.3	74.3	-0.99	3.8	0.8	74.0	-1.29	3.8	1.5	12	TX
FR6255	77.1	76.8	76.5	76.3	76.7	-0.45	2.4	0.3 L	77.0	-0.46	2.5	0.5 L	8	XX
G7UBR8	50.9 XH	49.8 XH	41.1 X	43.2 X	46.2	-7.46 X	7.2	4.8	62.8	-4.46 X	9.8	16.0 H	12	IM
JZM6SZ	75.7	78.5	85.2 H	80.1	79.9	0.29	6.1	4.0	80.7	0.58	5.3	2.8	8	EX
K5EGR5	80.9	79.0	77.7	77.9	78.9	0.06	4.0	1.5	79.5	0.24	3.5	2.2	12	LC
K8HFXG	79.0	75.8	76.8	81.1	78.2	-0.10	4.2	2.4	79.1	0.14	4.1	3.2	11	LC
KLFJZF	81.4	80.6 L	80.3	80.0	80.6	0.45	4.0	0.6	77.6	-0.28	3.9	3.2	11	LC
L4TZVH	75.0	76.9	77.0	73.9	75.7	-0.68	3.7	1.5	74.7	-1.10	3.5	1.8	8	TB
LGVNJJ	75.7	77.9	76.4	77.3	76.8	-0.42	4.3	1.0	77.2	-0.40	4.7	1.2	12	TD
LQBZAA	79.8	78.9	79.0	79.2	79.2	0.14	3.1	0.4 L	82.0	0.95	4.3	3.2	12	LC
MBRCNA	78.2	77.9	76.9	No Data	77.7	-0.22	3.6	0.7	77.8	-0.24	3.3	0.6 L	11	LC
MG1ZA7	76.9	71.1	77.3	77.9	75.8	-0.66	3.7	3.2	74.6	-1.12	3.4	2.3	12	LD
MX8ZGQ	81.2	82.7	79.0	80.2	80.8	0.49	5.3	1.6	81.3	0.74	4.8	2.6	12	LC
NMF3ML	83.0	77.4	79.1	82.4	80.5	0.43	5.2	2.7	79.6	0.28	4.7	2.2	11	MB
PJUY7M	72.8	75.2 L	75.0	77.6	75.1	-0.81	2.8	2.0	76.0	-0.74	2.6	1.8	8	XX
PK85T4	87.0	83.1	82.3	87.4	84.9	1.45	5.0	2.6	86.4	2.17*	4.8	2.8	12	LZ
PYRZ1N	67.1*	67.0*L	67.4*	66.4*	67.0	-2.69*	2.4	0.4 L	67.0	-3.29 X	2.4	0.4 L	4	XX
RK8BKA	75.4	73.7	74.8	99.1 XH	80.7	0.48	6.4	12.2 H	77.3	-0.38	5.0	7.1 H	12	LC
UAGNPY	75.5	76.8 L	79.2	77.8	77.3	-0.31	3.4	1.6	78.2	-0.13	4.6	1.8	8	EM
UTFVX2	76.6	76.9	No Data	79.4	77.7	-0.23	3.7	1.6	73.2	-1.52	3.8	4.9	10	LC
UTY9AY	73.4	72.2	69.0	70.0	71.1	-1.73	3.6	2.0	71.1	-2.14*	3.4	2.4	12	TM
UUMAQ5	70.5	68.4*	72.5	68.6*	70.0	-1.99	3.2	1.9	74.2	-1.25	3.7	3.9	12	LD
UVXKUH	82.7	77.3 L	74.8	78.6	78.4	-0.06	2.7	3.3	77.5	-0.32	2.8	2.8	12	TQ
UXTQEN	63.8 X	74.4	69.0 H	79.5 H	71.7	-1.60	5.9	6.8 H	73.4	-1.47	5.9	5.1	12	LZ
VMYMFJ	78.3	80.6	81.2	83.1	80.8	0.50	4.1	2.0	78.4	-0.07	4.7	4.5	12	MZ
WCKMZ7	85.8	84.7	86.3	82.3	84.8	1.42	4.7	1.8	83.3	1.32	5.1	1.7	12	LC
X4MYCB	83.3	82.5	84.3	80.6	82.7	0.93	4.4	1.6	80.1	0.41	4.5	2.9	12	LC
Y18RDX	72.5 H	77.2	76.7	75.2	75.4	-0.75	5.4	2.1	77.9	-0.19	4.1	3.0	12	LC
YYRGNY	82.1	88.0	No Data	No Data	85.1	1.48	3.5	4.2	83.8	1.45	4.0	3.9	9	LC
ZH2RBD	84.7	86.4	85.9	86.7	85.9	1.68	4.4	0.9	82.3	1.03	5.2	3.7	12	LD

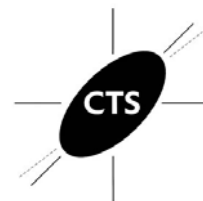


WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	Inst
ZSGM78	76.8	76.1	77.5	75.7 L	76.5	-0.49	2.9	0.8	78.9	0.07	3.4	2.6	12	LC
ZTZZ49	80.9	78.6	79.7	84.7	81.0	0.54	4.3	2.7	81.2	0.72	4.7	5.7 H	12	LC
ZZ6W5G	90.7*	85.1	85.3	78.9 H	85.0	1.47	5.1	4.8	85.0	1.79	5.1	4.8	4	XX

Consensus (All Labs) Results														
Wk Mean	78.76	78.68	78.23	78.42	Month Mean	78.63			Grand Mean	78.64				
Avg SDr	3.82	4.26	4.31	3.85	Avg SDr	4.12			Avg SDr	4.13				
SD btwn Labs	4.68	4.91	4.69	4.67	SD btwn Labs	4.34			SD btwn Labs	3.55				
Labs Includ	68	68	65	63	SD btwn Wks	2.85			SD btwn Wks	3.27				
Labs Exclud	2	1	1	2	Labs Includ	69			Labs Includ	68				
Labs not rcvd	0	1	4	5										

Instrument Code List as Reported by the Labs

- | | |
|--|---|
| (EM) - Emerson 1200 | (EN) - Emerson 2200 |
| (EX) - Emerson (model not specified) | (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	
1CWFF1	21.7*L	22.5L	23.2L	22.5L	22.5	-2.29*	0.3	0.6	24.1	-1.05	1.3	1.5	16	LA
1VU8E1	24.4	25.8	24.7	25.9	25.2	0.22	2.4	0.7	25.6	0.56	2.4	1.5	16	LW
2V5YS5	25.3	26.7	No Data	27.9*	26.6	1.49	2.3	1.3	26.6	1.61	2.3	0.9	7	BK
4BQJ6E	24.5	26.8	26.7	25.9	26.0	0.91	2.7	1.1	25.4	0.34	2.6	1.0	14	LZ
5X6CC8	24.3	24.1	24.2	24.4	24.3	-0.66	2.0	0.1L	25.3	0.19	2.3	0.9	16	LW
658KCD	25.5	23.5	25.1	26.3	25.1	0.11	2.6	1.1	24.2	-0.95	2.2	1.6	16	LU
7BEBRW	23.5	24.3	24.9	25.8	24.6	-0.33	2.0	1.0	24.5	-0.63	2.1	0.8	13	LU
7BMQMQ	30.5X	30.8X	No Data	No Data	30.7	5.18X	1.6	0.2L	30.3	5.51X	2.0	1.1	10	LZ
7DA2LW	27.8	26.7H	27.4	29.2X	27.8	2.54*	3.9	1.0	27.0	2.05*	5.5	3.7H	16	LW
7QVSLH	22.3L	23.2L	23.5L	22.9L	23.0	-1.83	0.4	0.5	23.0	-2.17*	0.4	0.7	16	XX
7V2SSR	24.0	24.8	24.9	23.8	24.4	-0.56	1.7	0.6	24.4	-0.77	2.0	1.0	13	LW
9C5HBH	24.1	23.3	23.9	25.3	24.2	-0.75	2.3	0.8	24.3	-0.86	2.3	0.5	15	LW
A4ZSV8	23.3	24.1	26.0	26.5	25.0	0.00	3.1	1.5	25.1	0.02	2.6	1.0	16	LZ
BCWU1J	24.7	25.0	26.1	24.0	25.0	-0.03	2.4	0.9	24.8	-0.26	2.2	0.7	16	LU
BR8HSZ	26.2	24.7	26.8	No Data	25.9	0.83	2.4	1.1	26.2	1.16	2.4	0.8	15	XX
BR8HSZ	25.3	24.9	24.7	No Data	25.0	-0.01	1.9	0.3	25.1	0.00	2.3	0.9	15	XX
CA21GJ	25.2	24.5	25.5	24.9	25.0	0.06	2.7	0.4	25.1	0.05	2.4	0.5	16	LU
D93BS9	25.5	25.8	25.6	25.8	25.7	0.61	1.2	0.2L	25.1	-0.01	1.4	0.8	16	LW
DTQ969	25.5	24.7	24.6	25.3	25.0	0.02	2.2	0.4	24.5	-0.62	2.0	0.6	16	XX
E5GA4V	24.3	24.5	24.4	24.3	24.3	-0.59	2.1	0.1L	24.4	-0.69	2.2	0.7	16	LW
G4C5D6	23.3	23.2	24.0	22.4	23.2	-1.59	1.9	0.7	23.6	-1.61	2.0	0.5	16	XX
JE7CQM	27.8	27.4*	27.9*	25.7	27.2	2.02*	2.7	1.0	26.7	1.66	2.2	0.9	14	XX
JV331E	24.3L	25.3L	26.0L	24.4L	25.0	0.00	0.4	0.8	25.3	0.21	0.5	1.0	12	LA
K29NLS	25.3	24.7	23.8L	23.8	24.4	-0.54	1.6	0.7	24.8	-0.29	1.7	0.7	16	LU
K8597C	22.5L	22.6L	26.4L	22.5L	23.5	-1.35	0.5	1.9H	23.5	-1.63	0.5	1.2	15	XX
KZ4163	25.1	24.5	25.0	24.0	24.6	-0.30	1.8	0.5	25.0	-0.09	1.9	0.6	16	LU
LHKY8K	25.8	26.0	25.2	25.0	25.5	0.48	2.7	0.5	25.2	0.07	2.5	0.9	16	LW
MX8PCS	23.9	24.7	24.9	25.5	24.7	-0.22	2.1	0.6	24.7	-0.39	1.9	0.6	15	LW
N159K3	26.3	23.9	23.4	23.6	24.3	-0.65	2.1	1.3	25.3	0.27	2.2	1.1	16	LZ
N6NHRM	25.6	26.5	25.4	25.2L	25.7	0.63	1.9	0.6	25.3	0.21	2.0	0.7	15	BK
NSP857	24.3	25.6	25.6	23.5	24.8	-0.20	2.5	1.1	25.3	0.26	2.4	0.9	16	LW
PA7MMP	27.6	26.0	26.0	24.9	26.1	1.05	1.7	1.1	26.2	1.13	1.8	0.8	16	LU
Q3RYB1	No Data	No Data	24.9	25.7	25.3	0.25	1.7	0.6	25.0	-0.10	2.1	0.5	14	LW
R3N1QQ	26.3	27.4	25.5	25.6	26.2	1.12	2.3	0.8	26.2	1.13	2.3	1.1	14	LA



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
RJCBCT	23.6 L	25.5 L	28.2 *L	27.0 L	26.1	0.98	0.0	1.9 H	26.0	0.91	0.0	1.2	16	LZ
SGFCF6	24.6	24.1	24.4	24.2	24.3	-0.60	1.8	0.2	24.7	-0.44	1.7	0.7	16	XX
STRNXM	29.9 XL	29.0 XL	30.4 XL	29.6 XL	29.7	4.32 X	0.1	0.6	26.4	1.37	0.1	2.3 H	16	TS
SZ9ABP	28.9 *	25.3	25.2	26.3	26.4	1.34	3.1	1.7	27.1	2.07 *	3.3	1.4	8	XX
XXMU4L	24.7	24.3	23.2	No Data	24.0	-0.86	1.7	0.8	23.8	-1.33	2.1	0.6	7	LA
YUMX2Y	24.7	24.2	25.0	23.7	24.4	-0.56	2.1	0.6	24.7	-0.43	2.2	0.7	16	LW
ZYHKE6	24.6	23.9	23.7	24.6	24.2	-0.72	2.1	0.4	24.2	-0.96	2.1	0.9	15	LW

Consensus (All Labs) Results										
Wk Mean	24.91	24.86	25.15	24.82	Month Mean	24.98	Grand Mean	25.09		
Avg SDr	2.15	2.46	2.03	1.93	Avg SDr	2.15	Avg SDr	2.19		
SD btwn Labs	1.52	1.25	1.22	1.30	SD btwn Labs	1.10	SD btwn Labs	0.95		
Labs Includ	38	38	38	35	SD btwn Wks	0.93	SD btwn Wks	1.14		
Labs Exclud	2	2	1	2	Labs Includ	39	Labs Includ	40		
Labs not rcvd	1	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	
1U57YX	19.8	20.7	19.4	19.2	19.8	-1.31	1.6	0.7	19.6	-1.70	1.8	0.8	12	LW
35VCFF	21.3	20.7	20.2	20.3	20.6	-0.55	1.8	0.5	21.4	0.11	1.9	0.8	12	LW
4BF9Z2	22.2	21.7	21.8	22.2	22.0	0.68	2.1	0.2	21.5	0.19	2.0	0.7	12	LW
543XT2	22.0	22.6	No Data	23.4	22.7	1.29	2.1	0.7	22.6	1.29	1.9	0.7	5	BK
65WMUG	20.7	21.1	20.8	21.5	21.0	-0.22	1.3	0.3	21.0	-0.28	1.4	0.5	12	LU
695ENQ	22.3	22.0	22.2	21.4	22.0	0.67	1.9	0.4	21.3	0.03	1.8	0.6	12	BK
6LZ686	22.0	21.0	22.5	No Data	21.8	0.54	1.6	0.8	22.2	0.91	1.8	0.8	11	XX
6YGCSK	21.0	20.1	19.5	22.5	20.8	-0.44	1.3	1.3	20.8	-0.46	1.5	0.8	12	LU
74JBG9	21.6	23.3	23.9	20.8	22.4	1.05	1.9	1.4	23.1	1.78	1.9	1.8 H	8	LA
81CDG2	20.3	20.1	21.2	20.1	20.4	-0.74	1.6	0.5	20.9	-0.44	1.7	0.7	8	LU
81VLMB	19.2	21.2	18.0*	No Data	19.5	-1.61	2.2	1.6	20.7	-0.60	2.1	2.0 H	7	LA
85MMHP	21.2	18.3*	20.6	20.7	20.2	-0.94	1.5	1.3	19.5	-1.80	1.7	1.3	11	LU
89L45R	20.2 L	19.3 L	20.4 L	19.2 L	19.8	-1.34	0.4	0.6	20.0	-1.27	0.4	1.3	8	XX
99RA9E	20.1	19.6	19.2	19.3	19.5	-1.54	1.7	0.4	19.6	-1.68	1.7	0.4	8	XX
9PA8Y5	26.7 XL	25.6 XL	24.8* L	25.3* L	25.6	3.97 X	0.1	0.8	22.5	1.22	0.1	2.6 H	11	TS
ADZXGP	22.5	20.7	21.2	21.1	21.4	0.12	1.7	0.8	21.6	0.30	1.6	0.7	12	LU
B2TMZZ	21.9	21.4	21.1	21.3	21.4	0.14	1.5	0.3	21.3	-0.02	1.6	0.3	11	BK
BW5EN9	19.0 L	19.4 L	18.9 L	19.9 L	19.3	-1.79	0.3	0.4	19.5	-1.77	0.3	0.9	12	XX
D64R8J	21.2	20.1	20.9	20.9	20.8	-0.44	1.5	0.5	21.1	-0.18	1.5	0.5	12	LW
D8YKX1	20.1	20.6	19.7	19.8	20.1	-1.08	1.4	0.4	20.5	-0.85	1.6	0.5	10	LW
DBCNQ4	26.2 XH	22.7	21.9	24.1	23.7	2.27*	2.9	1.9	23.7	2.46*	2.9	1.9 H	4	XX
DFSRNE	20.8	20.4	20.1	19.7	20.3	-0.90	1.7	0.4	20.6	-0.74	1.9	0.5	12	LW
EAZDKS	20.4	19.9	21.2	19.9	20.3	-0.82	1.4	0.6	20.7	-0.64	1.7	1.1	11	LW
EE4D53	20.8	20.2	21.2	21.8	21.0	-0.21	1.8	0.7	20.9	-0.41	1.7	0.6	12	XX
FPHZLH	23.1	23.7* H	23.4	21.9	23.0	1.61	3.1	0.8	22.3	0.99	2.9	1.3	10	LW
FQD8MM	19.2 L	22.7 L	23.7 L	19.3 L	21.2	-0.02	0.4	2.3 H	21.4	0.10	1.2	1.6	11	LA
HP9MVY	22.7	21.1	22.7	22.5	22.3	0.93	2.1	0.8	22.1	0.77	1.9	0.6	12	LW
HUS1DG	19.0 L	20.6 L	21.5 L	20.7 L	20.4	-0.72	0.4	1.0	20.2	-1.12	0.4	1.1	12	LA
J7DTC5	21.1	21.4	21.1	21.4	21.3	0.02	1.0	0.2	21.1	-0.19	1.1	0.4	12	LW
K1KPR8	31.4 X	31.0 X	No Data	No Data	31.2	9.08 X	2.2	0.3	31.0	9.84 X	1.9	0.5	9	LZ
KLJFQE	22.4	23.4	22.7	19.8	22.1	0.76	2.2	1.6	22.1	0.84	1.6	1.0	12	LU
LC4442	21.4	21.5	19.9	19.7	20.6	-0.55	1.9	0.9	21.0	-0.30	2.0	0.8	12	LZ
LCKUXY	23.4	23.1	22.1	21.6	22.6	1.19	1.8	0.8	22.4	1.07	1.6	0.8	8	LZ
NJCJ3N	20.0	21.2	21.0	21.4	20.9	-0.34	1.8	0.6	20.6	-0.69	1.7	0.6	12	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
NJUK2H	23.5	23.4	24.2	24.0	23.8	2.29*	1.9	0.4	23.1	1.86	1.7	0.8	9	XX
PLU6A1	20.4	21.5	21.9	22.9	21.7	0.42	2.2	1.0	21.2	-0.14	2.0	0.8	12	LZ
QJVXBA	22.2	21.0	21.8	19.8	21.2	-0.03	1.5	1.1	21.6	0.31	1.3	0.9	12	XX
SSSSWK	21.5	20.7	21.4	No Data	21.2	-0.04	1.7	0.4	21.1	-0.21	1.9	0.9	11	XX
T18DB8	22.8	21.8	22.6	21.1	22.1	0.76	1.9	0.8	22.1	0.84	1.9	0.8	11	LW
U4KFFW	No Data	No Data	22.0	21.9	22.0	0.68	1.5	0.1 L	21.6	0.33	1.6	0.6	10	LW
WGNTYN	20.2 L	20.3 L	22.6 L	24.3 L	21.9	0.56	0.0	2.0 H	21.8	0.56	0.0	1.5	8	LZ
YJFPFX	21.4	19.7	21.1	21.3	20.9	-0.34	1.8	0.8	20.8	-0.45	1.7	0.7	12	LU

Consensus (All Labs) Results									
Wk Mean	21.17	21.12	21.41	21.26	Month Mean	21.24		Grand Mean	21.29
Avg SDr	1.61	1.89	1.53	1.65	Avg SDr	1.72		Avg SDr	1.70
SD btwn Labs	1.22	1.28	1.48	1.54	SD btwn Labs	1.10		SD btwn Labs	0.99
Labs Includ	38	39	40	38	SD btwn Wks	0.96		SD btwn Wks	1.04
Labs Exclud	3	2	0	0	Labs Includ	40		Labs Includ	41
Labs not rcvd	1	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 228

Roughness - Stylus Method, 42 lb Linerboard - 42X
TAPPI Provisional Test Method T575



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
19W2KH	0.3	-5.49 X	0.0	0.3	-8.53 X	0.0	4	EV
37Z58T	109.2	-1.00	4.8	109.6	-1.22	10.9	4	EV
44G6UY	118.4	-0.63	15.2	111.5	-1.09	12.2	4	EV
4KKCVY	118.0	-0.64	11.7	125.3	-0.17	13.0	3	XX
738AVB	110.6	-0.95	7.6	117.8	-0.67	19.1	4	LA
7HQSTB	155.1	0.88	3.8	149.3	1.44	12.0	4	EV
9898CE	191.0	2.36 *	5.9	190.9	4.22 X	16.8	4	EV
BAK5D8	113.2	-0.84	12.2	122.7	-0.34	9.7	4	EV
BGRTA8	153.8	0.83	9.8	141.1	0.89	7.3	4	EV
BS38SM	148.4	0.61	20.6	138.1	0.69	17.3	4	EV
CKBTDU	171.4	1.56	18.1	148.1	1.36	15.6	4	EV
D5QSRA	145.5	0.49	20.3	133.2	0.37	15.1	4	XX
D93ASF	131.2	-0.10	12.5	128.1	0.02	14.0	4	EV
DTEZ5D	157.6	0.99	12.8	156.6	1.93	11.2	4	EV
GF7UAC	260.0	5.20 X	14.5	251.5	8.28 X	14.5	2	EV
J3HNHU	120.0	-0.56	9.9	124.0	-0.25	12.1	4	EV
R61RDV	118.8	-0.61	9.5	120.5	-0.48	9.7	4	EV
RL8S25	125.5	-0.33	12.1	123.4	-0.29	8.1	4	EV
SMZSDJ	108.4	-1.04	5.4	109.2	-1.24	6.7	4	EV
W73KD1	102.8	-1.27	16.2	104.5	-1.56	10.3	4	EV
ZGD1TB	139.0	0.22	7.7	136.6	0.59	8.8	4	EV

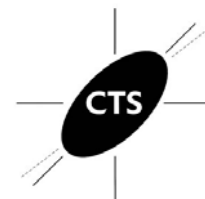
Consensus (All Labs) Results			
Month Mean	133.57	Grand Mean	127.74
Avg SDr	12.37	Avg SDr	12.29
SD btwn Labs	24.30	SD btwn Labs	14.95
Labs Incd	19	Labs Incd	18

Instrument Code List as Reported by the Labs

(EV) - Emveco Microgag 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
1F8LLS	120.4	1.53	7.2	118.0	1.46	7.1	4	TM
384V3W	110.8	0.64	12.2	101.1	-0.52	8.9	4	TM
6ZT3MW	102.4	-0.13	7.8	97.5	-0.95	12.4	4	TM
763BCR	103.7	-0.01	16.8	102.5	-0.36	10.9	4	SC
C5ABWG	97.0	-0.63	8.9	120.1	1.70	7.1	4	SC
E8QF34	118.2	1.32	10.8	118.5	1.52	7.4	3	SC
GG7TVG	79.0	-2.29 *	1.6	88.0	-2.06 *	6.3	4	TM
HH6WSF	108.6	0.44	3.6	101.9	-0.43	7.0	3	TM
HT9NEU	104.4	0.05	3.8	102.4	-0.37	5.5	4	SC
KJHXXX	101.5	-0.22	9.7	101.3	-0.50	6.7	3	SC
PKK4KV	84.0	-1.83	5.1	107.3	0.20	7.2	4	XX
QNL462	107.0	0.29	2.0	108.3	0.32	5.6	4	HY
QYQGQC	101.4	-0.23	4.4	105.7	0.02	5.5	4	TM
TJL42S	100.4	-0.32	5.7	101.6	-0.47	5.3	4	HY
TSB846	110.2	0.59	5.9	156.2	5.94 X	23.0	4	SC
YEQ24T	112.6	0.81	9.7	109.4	0.45	9.0	4	HZ

Consensus (All Labs) Results			
Month Mean	103.85	Grand Mean	105.57
Avg SDr	8.19	Avg SDr	7.73
SD btwn Labs	10.84	SD btwn Labs	8.53
Labs Incd	16	Labs Incd	15

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

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

Containerboard Interlaboratory Testing Program
 Analysis 234
COF Inclined Plane (Slide Angle), 42 lb Linerboard - 42X1
 TAPPI Official Test Method T815



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
355WYN	25.5	-0.91	3.2	28.6	0.63	4.6	4	ZZ
6JQ64Z	36.6	1.94	7.1	35.2	7.20X	5.2	4	ZZ
8H3J5F	38.6	2.45 *	2.4	37.0	9.01X	2.0	4	ZZ
8NEHXM	31.7	0.68	0.9	27.5	-0.51	2.4	4	ZZ
9C8GNF	52.0	5.87 X	3.7	41.2	13.16X	2.8	2	ZZ
BMJX4B	29.6	0.15	1.7	29.6	1.59	2.1	4	ZZ
EH72T6	28.6	-0.11	3.0	29.1	1.04	3.0	4	ZZ
G8VMZ3	30.6	0.40	0.5	29.0	0.99	3.2	4	ZZ
G9FBP3	24.6	-1.13	4.0	27.4	-0.61	4.9	4	ZZ
HCLCSS	29.0	-0.01	1.4	28.5	0.44	1.4	4	ZZ
J79XM1		No Data		20.9	-7.16X	2.2	3	
KMWCVK	28.4	-0.16	3.0	27.1	-0.91	3.0	4	ZZ
L28MFR	27.0	-0.52	3.2	28.3	0.24	2.9	4	ZZ
QMA3K3	27.2	-0.47	0.6	27.2	-0.86	0.8	4	ZZ
QXEF4E	30.2	0.30	1.6	27.4	-0.66	2.7	4	ZZ
RFQUYD	20.2	-2.26 *	1.6	22.9	-5.12X	2.8	4	ZZ
RQNPLX	30.5	0.37	4.1	28.7	0.66	2.8	4	ZZ
RX2HU8	27.6	-0.36	3.1	25.6	-2.41 *	4.0	4	ZZ
UEQNAJ	29.0	-0.01	1.9	27.6	-0.41	3.9	4	ZZ
UQF4WR	32.0	0.76	2.2	29.3	1.27	4.5	4	ZZ
VFVHJP	29.4	0.10	3.0	28.1	0.12	3.4	3	ZZ
VL1JHX	25.4	-0.93	1.3	27.1	-0.96	3.8	4	ZZ
YF3Y6C	27.9	-0.29	1.4	28.4	0.37	3.2	4	ZZ

Consensus (All Labs) Results			
Month Mean	29.02	Grand Mean	28.01
Avg SDr	2.84	Avg SDr	3.32
SD btwn Labs	3.91	SD btwn Labs	1.00
Labs Incd	21	Labs Incd	18

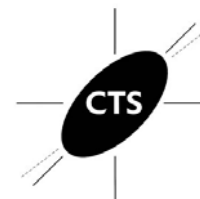
Instrument Code List as Reported by the Labs

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(ZZ) - Instruments No Longer Tracked

Containerboard Interlaboratory Testing Program
Analysis 237

Air Resistance, 42 lb linerboard - 42X1
TAPPI Official Test Method T460



WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SDr	Mean	CPV	SDr	Months	Inst
1RPZE5	15.8	0.22	3.0	14.9	-0.62	2.5	3	LP
2LL18Z	16.3	0.50	6.2	14.8	-0.67	3.8	4	LA
4QXJML	18.3	1.50	2.4	16.5	0.19	2.4	4	XX
4XAP8R	17.6	1.15	1.0	19.5	1.79	1.5	4	XX
67JPG9	13.8	-0.77	2.0	14.4	-0.88	1.6	2	LA
6RXRXP	13.0	-1.19	2.5	18.7	1.37	1.9	4	LW
BFLZ23	22.6	3.63 X	2.7	15.4	-0.38	2.1	4	GA
BVFL69	14.6	-0.37	4.0	15.8	-0.13	3.9	4	XX
C7DPHC	17.0	0.82	2.2	18.3	1.18	3.4	4	HG
CPUTSP	14.6	-0.39	2.3	15.1	-0.50	2.7	4	XX
GH8W4U	12.0	-1.68	3.7	12.0	-2.17*	3.7	1	TL
JZSBRB	14.7	-0.32	2.1	16.1	-0.02	2.8	2	TL
LJ78VL	14.9	-0.21	1.5	15.3	-0.41	2.1	4	GS
SV1V89	14.0	-0.69	1.6	15.0	-0.58	2.0	4	XX
TTNKRW	17.8	1.22	6.3	16.8	0.35	4.8	2	GA
UQXAVZ	12.4	-1.46	2.6	14.9	-0.65	2.8	4	HG
VRNTEB	15.8	0.23	3.3	17.2	0.60	3.8	4	GG
WVDZF4	18.2	1.43	3.0	19.0	1.53	4.4	4	LW

Consensus (All Labs) Results

Month Mean	15.34	Grand Mean	16.09
Avg SDr	3.26	Avg SDr	3.05
SD btwn Labs	2.00	SD btwn Labs	1.90
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



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	
1K4DPB	59.9	63.0	No Data	64.6	62.5	-0.14	3.0	2.4	61.8	-0.63	2.8	2.1	7	MB
1TLR33	61.4	60.5	66.2	62.0	62.5	-0.14	2.9	2.5	62.7	-0.27	2.9	1.6	16	LC
2BU8D7	59.2	63.9	61.5	62.7	61.8	-0.37	3.4	2.0	62.5	-0.34	3.7	1.7	14	LD
3PMG1N	62.5	62.8	63.3	63.8	63.1	0.07	2.7	0.6	63.9	0.24	2.6	1.2	16	LC
582779	62.3	No Data	No Data	No Data	62.3	-0.21	2.4	0.0 L	63.6	0.10	2.8	3.2	11	TM
6DTE6G	62.7	60.8	62.1	62.1	61.9	-0.34	2.8	0.8	62.7	-0.26	2.6	1.5	16	LC
6R85NU	57.8	57.4	57.4	57.6	57.6	-1.85	2.3	0.2 L	60.3	-1.30	2.9	3.0	15	LC
6RJ8JA	61.2	61.3	61.1	62.9	61.6	-0.45	2.3	0.9	61.3	-0.85	3.0	1.9	16	LC
79U5S8	63.4	61.6	61.8	60.6	61.8	-0.37	2.1	1.2	61.0	-0.98	3.4	1.4	16	TB
7WS72M	67.5	67.0	67.0	70.0	67.9	1.71	3.8	1.4	66.2	1.20	3.9	1.8	16	LZ
8KN3UY	59.8	63.0	60.9	60.8	61.1	-0.62	2.9	1.4	60.8	-1.08	2.6	1.2	13	LZ
8NAK CJ	64.6	63.5	63.9	62.0	63.5	0.20	3.4	1.1	63.9	0.25	3.0	1.3	16	LC
9LYQ1X	63.5	59.2	69.9*	68.2	65.2	0.79	4.0	4.8 H	65.2	0.79	4.0	4.8 H	4	LC
AMCDEV	60.7	60.9	62.4	61.8	61.5	-0.51	2.7	0.8	64.0	0.29	3.3	2.5	16	LC
BFF62M	60.7	60.4	60.8	61.0	60.7	-0.76	1.9	0.3 L	61.4	-0.80	2.2	1.0	16	LC
BS8Y69	56.2	60.3	56.1*	59.6	58.1	-1.68	3.1	2.2	62.3	-0.43	3.8	3.4 H	16	LC
CDKLJL	64.3	66.8	66.1	68.5	66.4	1.22	2.9	1.7	67.2	1.62	2.8	1.8	16	LC
DM9TEW	61.9	62.0	60.6	59.8	61.1	-0.64	2.5	1.1	61.6	-0.74	2.9	1.2	14	TD
FAR8GX	65.7	64.6	63.2	65.0	64.6	0.59	2.9	1.1	66.3	1.27	3.2	2.5	16	LC
G1PTE1	62.4	62.8	62.8	62.6	62.7	-0.09	2.9	0.2 L	62.8	-0.24	2.9	1.2	16	LC
G43323	63.9	64.0	59.5	63.0	62.6	-0.10	3.2	2.1	63.5	0.07	3.2	2.8	12	TD
GDMUMH	59.7	61.1	61.8	61.7	61.1	-0.63	3.1	1.0	60.0	-1.41	2.7	1.4	16	LX
JH4RPR	68.2	65.6	65.5	67.4	66.7	1.31	3.9	1.4	67.6	1.80	3.9	1.9	16	LZ
KKGF65	57.2	58.3	59.0	58.8	58.3	-1.59	3.0	0.8	58.3	-2.12*	3.0	0.8	4	LC
KM4MFB	No Data	66.4	No Data	No Data	66.4	1.22	2.0	0.0 L	65.0	0.70	2.9	1.3	8	LD
LDBLLK	67.4	66.1	68.2	68.3	67.5	1.58	3.3	1.0	66.2	1.21	3.3	1.5	16	EM
MGSTP2	54.4*	57.9 H	62.2 H	55.5*	57.5	-1.87	4.5	3.5	60.2	-1.34	4.0	2.6	16	MB
NAWUDM	60.6	60.7	60.7	60.0	60.5	-0.83	2.1	0.3	61.3	-0.87	2.3	1.1	16	TM
NFH37S	61.2	No Data	58.6	59.2	59.6	-1.13	2.1	1.4	62.7	-0.28	2.0	2.0	14	LC
NLVBQ4	61.6	62.4	60.6	60.5	61.3	-0.57	2.5	0.9	61.8	-0.64	3.0	1.9	15	LC
PHYSVF	62.9	61.7	62.1	59.7	61.6	-0.45	3.9	1.4	61.5	-0.78	3.6	1.3	15	LC
PPHKYL	63.4	64.2	65.3	61.7	63.7	0.26	2.3	1.5	63.8	0.21	2.9	1.4	16	XX
QECADU	67.8	62.1	No Data	68.8	66.2	1.14	3.8	3.6	66.3	1.26	3.9	3.0	15	LZ
RKN8M4	67.0 L	66.9	67.0	65.7	66.6	1.29	1.8	0.6	66.0	1.14	2.4	1.1	16	LD



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	
RKN8PP	61.2	61.9 _L	61.6	61.6	61.6	-0.46	1.9	0.3 _L	62.0	-0.57	2.3	1.2	16	TA
RU7H23	61.5	69.6*	62.2 _H	69.3	65.7	0.95	4.6	4.4 _H	67.7	1.84	4.0	4.9 _H	16	LX
SY7LPH	61.6	63.2	61.3	61.9	62.0	-0.33	2.1	0.8	61.8	-0.64	2.7	0.8	16	LC
T5QE96	68.7	68.6	67.1	67.3 _H	67.9	1.73	3.7	0.9	67.9	1.92	3.4	1.1	15	LC
TUS5BX	66.6	63.9	70.5*	69.2	67.6	1.60	3.9	2.9	65.2	0.79	3.2	3.4 _H	16	LZ
V92QQ7	65.1	63.5	64.6	64.7	64.5	0.54	2.5	0.7	64.0	0.30	2.8	0.7	16	LD
X461PH	62.6	64.8	64.0	62.5	63.5	0.19	3.2	1.1	63.3	-0.02	3.3	1.5	16	LC
XVH19N	64.0	64.0	64.1	63.5	63.9	0.34	2.2	0.3 _L	63.3	-0.02	2.4	1.0	16	LC
Y9CJDH	59.3	56.0*	59.8	60.8	59.0	-1.37	3.8	2.1	60.6	-1.17	3.1	1.7	16	MB
YWYGF2	68.5 _H	66.8	67.6	67.4	67.6	1.61	4.2	0.7	66.9	1.49	4.0	1.5	16	LD
ZVPPH7	60.1	62.4	No Data	59.2	60.6	-0.82	3.3	1.6	61.6	-0.71	2.7	1.8	15	LC

Consensus (All Labs) Results									
Wk Mean	62.55	62.88	63.00	63.10	Month Mean	62.91	Grand Mean	63.33	
Avg SDr	2.90	3.26	3.00	3.17	Avg SDr	3.06	Avg SDr	3.12	
SD btwn Labs	3.33	2.95	3.28	3.55	SD btwn Labs	2.89	SD btwn Labs	2.37	
Labs Includ	44	43	40	43	SD btwn Wks	1.79	SD btwn Wks	2.09	
Labs Exclud	0	0	0	0	Labs Includ	45	Labs Includ	45	
Labs not rcvd	1	2	5	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
2N6FEK	68.9	70.7	70.6	71.5	70.4	-1.18	2.7	1.1	67.0	-1.84	3.0	5.9 H	12	XX
3M8MX6	79.9	82.8*	80.8	81.0	81.1	1.69	3.2	1.2	79.9	1.45	3.2	2.8	16	MB
41VPCD	77.2	75.0	78.0	74.9	76.3	0.39	2.3	1.6	76.6	0.61	2.2	1.7	16	LD
559XLF	65.6*	72.5	68.2	73.1	69.9	-1.33	3.3	3.6 H	71.5	-0.68	2.6	2.5	15	XX
7LF537	77.3	76.9	77.2	77.3	77.2	0.63	3.0	0.2 L	78.2	1.03	2.9	1.4	16	LC
93942T	79.6	78.4	No Data	73.8	77.3	0.66	3.3	3.0	77.1	0.73	2.9	2.4	15	LZ
95S1ZC	69.6	69.8	70.4 L	68.5	69.6	-1.40	1.5	0.8	68.6	-1.43	2.0	1.2	16	XX
E1KRZB	78.1	79.4	77.6	76.1 H	77.8	0.80	3.2	1.4	76.2	0.52	3.0	2.3	16	LZ
FE6WXP	73.2	73.0	73.5	72.8	73.1	-0.45	2.5	0.3 L	73.6	-0.16	2.6	1.1	16	TD
HUSQA9	No Data	73.9	No Data	No Data	73.9	-0.25	2.8	0.0 L	74.5	0.07	3.1	1.2	8	LD
J1GEVX	79.0	77.2	77.7	80.2	78.5	0.99	3.4	1.3	70.7	-0.88	5.6	6.7 H	16	TB
L9HEHM	79.4	77.6	80.7	77.9	78.9	1.09	2.9	1.4	79.3	1.29	2.6	1.1	16	XX
MF1ML6	77.6	77.6	78.9	77.3	77.9	0.81	2.7	0.7	78.3	1.04	2.5	1.4	16	LC
NNVMBP	76.1	77.0	77.6	76.2	76.7	0.52	1.9	0.7	76.3	0.55	2.2	0.7	16	XX
QVLFU	72.0	73.7	72.4	71.9 L	72.5	-0.62	1.6	0.8	72.3	-0.49	1.9	0.8	16	LC
WLM5YU	70.7	71.1	71.0	68.8	70.4	-1.18	2.0	1.1	69.9	-1.10	2.0	1.0	16	LD
Z27CYU	74.3	69.4	69.3	69.2	70.5	-1.15	3.4	2.5	71.5	-0.69	3.9	2.5	16	LZ

Consensus (All Labs) Results

Wk Mean	74.90	75.06	74.94	74.42	Month Mean	74.82	Grand Mean	74.19
Avg SDr	2.58	2.73	2.64	3.04	Avg SDr	2.76	Avg SDr	2.95
SD btwn Labs	4.42	3.74	4.31	3.87	SD btwn Labs	3.74	SD btwn Labs	3.93
Labs Includ	16	17	15	16	SD btwn Wks	1.63	SD btwn Wks	2.72
Labs Exclud	0	0	0	0	Labs Includ	17	Labs Includ	17
Labs not rcvd	1	0	2	1				

Instrument Code List as Reported by the Labs

(LC) - L & W Crush Tester 48

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

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

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

(LD) - L&W Crush Tester 248

(MB) - Messmer Buchel K440

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

Containerboard Interlaboratory Testing Program
Analysis 255

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



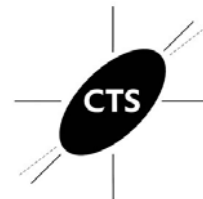
WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SDr	SD Wk	Mean	CPV	SDr	SD Wk	Wks	
1Q38R7	41.6	44.2	39.8	42.6	42.1	0.00	2.0	1.9	42.3	0.16	2.3	1.5	13	TB
48HBN6	39.5	41.9	44.1	40.1	41.4	-0.27	2.3	2.1	42.5	0.23	2.5	1.6	16	MB
4GW1KT	41.5	41.0	41.0	41.6 L	41.3	-0.32	1.4	0.3	41.1	-0.37	1.7	1.1	16	EN
4Z9HTC	40.2	41.8	40.1	39.9	40.5	-0.65	2.1	0.9	41.7	-0.11	2.1	1.0	16	LC
53JQ4Z	45.4	42.8	40.8	44.1	43.3	0.50	1.9	2.0	43.1	0.53	2.0	1.2	16	LC
7S9PCJ	41.6	41.7	40.7	43.1	41.8	-0.12	3.0	1.0	41.3	-0.26	2.9	0.8	16	LC
F26YE5	44.0	38.7 H	37.8	44.8	41.3	-0.30	3.2	3.6 H	42.7	0.33	3.0	3.0	15	LC
GNDXSN	39.8 H	38.6	40.5	38.3	39.3	-1.15	3.7	1.0	37.2	-2.09*	3.8	3.0	15	LC
KQCM2W	40.9	42.4	43.4	44.9	42.9	0.34	2.8	1.7	38.2	-1.63	3.6	5.4 H	16	TB
MKSLBG	40.0	41.0	40.5	41.4	40.7	-0.55	2.3	0.6	41.1	-0.35	2.4	0.8	16	LD
MWCFFP	47.7	48.1	47.3*	45.8	47.2	2.12*	2.1	1.0	44.9	1.32	2.6	2.3	16	MZ
PDUR7M	40.9	42.5	41.7	41.9	41.7	-0.13	1.9	0.7	41.6	-0.15	1.9	0.7	16	LC
Q9K6KR	44.6	45.9	44.0	44.3	44.7	1.08	2.8	0.8	43.9	0.88	2.9	1.1	16	LC
QS5SGG	47.0	48.5*	44.6	43.7	46.0	1.60	2.5	2.2	46.0	1.77	2.5	2.2	4	LZ
RNLPR4	34.3*	35.9*	38.2	36.2*	36.1	-2.44*	2.9	1.6	38.2	-1.62	3.1	2.9	16	LX
TYCQ5W	41.4	43.1	46.1	40.6	42.8	0.30	2.8	2.5	42.8	0.38	2.8	2.5	4	LC
UG8DAE	41.5	40.4	43.3	44.2	42.4	0.12	2.4	1.7	43.9	0.85	2.6	1.6	14	LZ
W326B7	41.0	41.9	41.9	42.4	41.8	-0.12	1.9	0.6	42.2	0.13	1.9	1.2	16	TD

Consensus (All Labs) Results

Wk Mean	41.82	42.24	41.98	42.21	Month Mean	42.06	Grand Mean	41.93
Avg SDr	2.56	2.34	2.47	2.71	Avg SDr	2.53	Avg SDr	2.65
SD btwn Labs	3.09	3.11	2.59	2.51	SD btwn Labs	2.43	SD btwn Labs	2.28
Labs Includ	18	18	18	18	SD btwn Wks	1.66	SD btwn Wks	2.20
Labs Exclud	0	0	0	0	Labs Includ	18	Labs Includ	18
Labs not rcvd	0	0	0	0				

Instrument Code List as Reported by the Labs

- (EN) - Emerson 2200 Series
- (LD) - L&W Crush Tester 248
- (LZ) - L & W Crush Tester (model not specified)
- (MZ) - Messmer Buchel (model not specified)
- (TD) - TMI Digital Crush Tester, Model 17-09
- (LC) - L & W Crush Tester 48
- (LX) - L & W 506
- (MB) - Messmer Buchel K440
- (TB) - TMI Monitor/Compression Tester, 17-70



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
1S7RXF	14.7	14.6	14.5	14.4	14.6	-0.26	1.1	0.1	15.1	1.06	1.2	0.6	16	LW
5SU3KF	14.9	15.1	No Data	14.9	14.9	0.83	0.9	0.1	14.3	-1.43	1.0	1.0	H 15	LW
6BUA2U	14.7	14.7	15.4	14.6	14.9	0.63	1.1	0.4	14.8	0.06	1.2	0.6	16	XX
86ZMN6	14.9	15.2	No Data	14.8	15.0	1.02	1.1	0.2	15.4	1.70	1.2	0.4	7	BK
9RZ9P6	15.1	14.9	15.0	15.2	15.0	1.22	1.2	0.1	14.8	0.15	1.1	0.5	16	LU
BSBZ9X	14.6	14.4	14.3	14.7	14.5	-0.46	1.2	0.2	14.8	0.19	1.6	0.6	13	LU
J2MUXJ	14.5	14.5	15.2	14.2	14.6	-0.16	1.2	0.4	14.7	-0.29	1.2	0.5	16	XX
UDULTM	14.0	14.2	14.2	14.7	14.3	-1.15	1.2	0.3	14.7	-0.10	1.0	0.4	15	LW
ZHSCJT	14.1	14.4	14.1	13.9	14.1	-1.66	1.3	0.2	14.3	-1.34	1.2	0.7	15	LW

Consensus (All Labs) Results														
Wk Mean	14.62	14.67	14.67	14.61	Month Mean	14.66			Grand Mean	14.77				
Avg SDr	1.08	1.24	1.15	1.09	Avg SDr	1.13			Avg SDr	1.22				
SD btwn Labs	0.37	0.33	0.53	0.38	SD btwn Labs	0.32			SD btwn Labs	0.34				
Labs Includ	9	9	7	9	SD btwn Wks	0.26			SD btwn Wks	0.60				
Labs Exclud	0	0	0	0	Labs Includ	9			Labs Includ	9				
Labs not rcvd	0	0	2	0										

Instrument Code List as Reported by the Labs

(BK) - Buchel Strip Compression Tester BK-155

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

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

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