



Containerboard Interlaboratory Testing Program

Participant Summary Report #636 (K) - September 2022

[Introduction to the Containerboard Program](#)

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

Analysis	Sample	Analysis Name
<u>201</u>	<u>BX16</u>	<u>Top to Bottom Box Compression Strength, Corrugated Boxes</u>
<u>202</u>	<u>EC14</u>	<u>Edgewise Compressive Strength, by T811, Corrugated Board</u>
<u>203</u>	<u>EC14</u>	<u>Edgewise Compressive Strength by T839, Corrugated Board</u>
<u>205</u>	<u>42H1</u>	<u>Bursting Strength (Mullen), 42 lb Linerboard</u>
<u>206</u>	<u>56G3</u>	<u>Bursting Strength (Mullen), 56 lb Linerboard</u>
<u>215</u>	<u>42H1</u>	<u>Ring Crush, 42 lb Linerboard</u>
<u>216</u>	<u>56G3</u>	<u>Ring Crush, 56 lb Linerboard</u>
<u>223</u>	<u>42H1</u>	<u>STFI, 42 lb Linerboard</u>
<u>224</u>	<u>56G3</u>	<u>STFI, 56 lb Linerboard</u>
<u>228</u>	<u>42H1</u>	<u>Roughness - Stylus Method, 42 lb Linerboard</u>
<u>229</u>	<u>42H1</u>	<u>Roughness - Sheffield Method, 42 lb Linerboard</u>
<u>231</u>	<u>42H</u>	<u>Internal Bond, 42 lb Linerboard</u>
<u>234</u>	<u>42H</u>	<u>COF Inclined Plane (Slide Angle), 42 lb Linerboard</u>
<u>237</u>	<u>42H</u>	<u>Air Resistance, 42 lb Linerboard</u>
<u>240</u>	<u>CM12</u>	<u>Flat Crush Strength (CMT), 26 lb Corrugating Medium</u>
<u>250</u>	<u>CM12</u>	<u>Fluted Edge Crush Strength (CFC), 26 lb Corrugating Medium</u>
<u>255</u>	<u>CM12</u>	<u>Ring Crush (RCT), 26 lb Corrugating Medium</u>
<u>261</u>	<u>CM12</u>	<u>STFI, 26 lb Corrugating Medium</u>

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; 35 lb. and 56 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
26# Corrugating Medium	CM12	July 2021 - Current
	CM11	April 2019 - June 2021
35# Corrugating Medium	35E3	June 2022 - Current
	35E2	June 2020 - April 2022
42# Corrugating Medium	42H1	April 2022 - Current
	42F4	August 2021 - March 2022
56# Corrugating Medium	56G3	July 2022 - Current
	56G2	May 2021 - May 2022

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, agriculture, hemp, 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 100 countries, currently participate in the CTS programs.

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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 cycle 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 SD - For each week, the average of the within-laboratory standard deviations (SD's) for all the participants, excluding those laboratories flagged with an 'X'. The Avg SD 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.
- SD - For each laboratory, the average of the weekly within-lab standard deviations (SD's) for all reported Weekly Means this month.
- SD Wk - 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 SD - For the current month, the average of the within-laboratory standard deviations (SD'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 btwn Group - For the current month, the standard deviation of the laboratory Means within the group about the Month Mean, excluding those laboratories flagged with an 'X'.
- SD btwn Wks - For the current month, the average of the laboratory between week standard deviations (SD Wks) for all the participants, excluding those laboratories flagged with an 'X'.

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 (SD's) for the weeks shown.
- SD Wk - 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.
- Inst - The two letter instrument code. Codes are summarized at the bottom of the last analysis page.

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 SD - For the cumulative period, the average of the within-laboratory standard deviations (SD'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 btwn Wks - For the cumulative period, the average of the laboratory between week standard deviations for all the participants, excluding those laboratories flagged with an 'X'.
- Labs Incd - 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 recommended.
- * 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 SD for each week is not shown, but laboratory average SD and consensus average SD values are shown.
- L Indicates low within-laboratory standard deviation. The laboratory SD for each week is not shown, but laboratory monthly average SD and consensus average SD 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).



Containerboard Interlaboratory Testing Program
 Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BX16
 TAPPI Official Test Method T804

Report #636 (K)
September 2022

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
2QPFQDQ	754.2	1.38	22.71	711.9	1.93 *	59.88	2	ER
3DB3BG	651.4	-0.61	15.76	649.7	-0.58	2.39	2	LS
3E7EEW	608.2	-1.45	31.90	629.8	-1.39	14.58	4	ER
4QKQDC	723.5	0.78	53.82	686.8	0.92	31.51	4	LO
68KC2Q	715.6	0.63	40.22	665.4	0.05	39.60	4	LG
6JELT7	712.5	0.57	64.21	674.8	0.43	41.76	4	EX
72C4H2	676.9	-0.12	37.57	665.8	0.07	10.49	4	EX
98BCTL	670.8	-0.24	77.76	678.2	0.56	11.82	4	EX
AN8GBE	586.5	-1.87	34.41	612.4	-2.09 *	29.85	4	ET
AZRET6	660.9	-0.43	67.25	670.5	0.26	16.34	4	LM
C29PCU	679.2	-0.07	39.01	656.4	-0.32	21.20	4	ER
CC99XU	649.8	-0.64	41.30	643.4	-0.84	12.74	4	LG
CR3UAN	719.7	0.71	49.48	638.9	-1.02	73.38 H	4	LL
EVCKUA	668.6	-0.28	20.80	665.5	0.05	13.45	4	ES
HK62NB	520.3	-3.15 X	37.72	513.2	-6.09 X	29.23	4	LL
HN2W34	749.9	1.29	52.98	749.9	3.46 X	0.00	1	LH
J4A7M4	721.0	0.73	68.70	644.9	-0.78	54.79	4	ER
KE7D2Z	624.7	-1.13	15.34	646.5	-0.71	16.94	4	TE
LE7Q6M	730.2	0.91	52.05	699.9	1.44	31.53	4	EX
N2ALNL	684.4	0.03	25.32	695.0	1.24	34.39	4	EX
NGK3X9	660.1	-0.44	28.97	624.0	-1.62	30.13	4	LM
NK3ADV	691.0	0.15	56.54	652.5	-0.47	39.50	4	LL
PWPXLZ	747.7	1.25	57.30	679.8	0.63	51.12	4	LS
RDPPFZ	711.7	0.56	39.88	672.7	0.34	45.91	4	LS
TQFPYG	665.4	-0.34	22.39	673.7	0.38	5.87 L	4	LG
TY32LT	637.6	-0.88	29.72	676.9	0.51	30.58	4	LG
VEQWBP	573.0	-2.13 *	27.41	664.2	0.00	71.05	4	LS
W4RBNQ	620.6	-1.21	54.89	644.3	-0.80	23.25	3	ER
WDDLWV	774.2	1.76	98.24 H	792.2	5.17 X	33.59	4	EM
YR9MNN	738.9	1.08	26.43	708.8	1.80	32.62	4	TB

Consensus (All Labs) Results			
Month Mean	683.04	Grand Mean	664.16
Avg SD	47.42	Avg SD Months	36.50
SD btwn Labs	51.71	SD btwn Labs	24.77
Labs Incd	29	Labs Incd	27



Containerboard Interlaboratory Testing Program
Analysis 201
Top to Bottom Box Compression Strength, Corrugated Boxes - BX16
TAPPI Official Test Method T804

Report #636 (K)
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Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Hot melt adhesive sealing	691.99	45.44	8.95	8
Water based adhesive sealing	774.20	0.00	91.16	1
Clip sealing	670.73	49.16	12.31	19
Staple sealing	754.22	0.00	71.18	1

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	ER	Emerson 6200 Series
ES	Emerson 8510	ET	Emerson 7200
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	LO	Lansmont 152-30k
LS	Lansmont Squeezer	TB	TMI Monitor/Compression Tester, Model 17-70
TE	Testometric M500 - 25 KN		



Containerboard Interlaboratory Testing Program
 Analysis 202
Edgewise Compressive Strength, by T811, Corrugated Board - EC14
 TAPPI Official Test Method T811

Report #636 (K)
September 2022

WebCode	Monthly Results				Cumulative Results					
	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst	
6JELT7	42.3	1.04	1.98		41.9	1.33	0.51	4	LC	
98BCTL	40.2	0.22	1.74		39.3	0.14	0.82	4	LC	
BMB3NL	38.1	-0.65	0.72	L	38.7	-0.13	1.07	4	TD	
C69Z8U	42.3	1.07	2.21		42.6	1.63	0.75	4	XX	
CVLW3F	143.9	42.24	2.83	X	145.1	48.25	2.19	4	LD	
E4EM62	38.4	-0.54	4.66	H	38.4	-0.29	1.03	4	LD	
PWPXLZ	36.0	-1.51	2.57		37.2	-0.84	1.05	4	LD	
TQFPYG	37.3	-0.99	2.10		36.7	-1.04	0.53	4	LE	
W4RBNQ	39.8	0.05	2.26		37.2	-0.82	2.86	H	3	EN
XZKG4Q	42.9	1.32	1.83		55.6	7.54	22.55	H	3	TD

Consensus (All Labs) Results			
Month Mean	39.69	Grand Mean	39.01
Avg SD	2.44	Avg SD Months	1.29
SD btwn Labs	2.47	SD btwn Labs	2.20
Labs Incd	9	Labs Incd	8

Key to Instrument Codes Reported by Participants

EN	Emerson 2200	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LE	L&W Crush Tester 840
TD	TMI Digital Crush Tester, Model 17-09	XX	Instrument make/model not specified by lab



Containerboard Interlaboratory Testing Program
 Analysis 203
Edgewise Compressive Strength by T839, Corrugated Board - EC14
 TAPPI Official Test Method T839

Report #636 (K)
September 2022

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
2DZL2X	46.2	1.86	0.86	46.8	2.29 *	0.76	2	TH
2QPFDQ	40.3	-1.11	1.33	42.5	0.15	1.96	4	LD
3DB3BG	40.5	-1.00	0.88	38.3	-1.89	1.63	4	EM
3E7EEW	41.6	-0.46	1.05	41.4	-0.36	0.35	4	EM
4QKQDC	38.9	-1.79	1.28	40.5	-0.83	1.08	4	LD
68KC2Q	44.1	0.78	1.24	45.9	1.87	1.27	4	MK
6JELT7	44.0	0.74	2.11	44.1	0.94	0.36	4	LC
6UTHRH	44.3	0.88	1.13	43.9	0.87	1.10	4	LC
72C4H2	43.6	0.53	1.04	40.9	-0.63	2.15	4	LD
7QVEJV	44.6	1.03	2.49 H	44.2	1.02	1.03	4	TG
84EJ4X	38.1	-2.20 *	2.12	39.3	-1.39	3.25	4	TK
98BCTL	42.4	-0.04	0.99	41.6	-0.29	1.48	4	LC
A9EHRR	29.8	-6.34 X	2.26	37.4	-2.36 *	5.52 H	4	XX
AN8GBE	41.5	-0.49	0.96	42.0	-0.09	1.66	4	TD
AZRET6	44.0	0.76	0.84	42.1	-0.05	2.88	4	EM
BMB3NL	42.2	-0.17	0.52 L	41.8	-0.19	0.81	4	BU
C29PCU	42.2	-0.18	1.60	41.0	-0.57	1.17	4	LD
C69Z8U	41.2	-0.67	2.22	42.9	0.38	1.53	4	XX
E4EM62	43.4	0.44	1.00	42.7	0.28	1.05	3	LD
EVCKUA	43.2	0.36	1.30	43.0	0.42	1.09	4	LD
G7K9EH	38.1	-2.20 *	2.68 H	37.9	-2.08 *	0.39	4	BU
GEFD8J	46.5	2.02 *	2.01	44.9	1.37	1.68	4	TU
HK62NB	39.2	-1.65	2.02	40.4	-0.87	0.95	4	LC
HN2W34	44.8	1.14	1.50	44.8	1.30	0.00	1	EM
HXA7TH	44.3	0.87	1.52	44.1	0.95	0.76	3	TS
J4A7M4	43.2	0.36	1.50	42.5	0.18	0.59	4	LD
JTTGQJ	41.0	-0.73	0.78	40.9	-0.64	0.19 L	4	LC
LE7Q6M	42.3	-0.10	0.77	41.7	-0.22	0.64	4	TL
N2ALNL	40.9	-0.80	2.16	41.5	-0.33	1.02	4	CT
NGK3X9	43.9	0.67	1.65	40.9	-0.62	2.83	4	TG
NK3ADV	41.7	-0.39	0.90	40.8	-0.66	0.81	4	BU
PWPXLZ	41.5	-0.49	1.15	42.5	0.17	1.07	4	LD
TN6U9H	41.7	-0.41	1.48	41.2	-0.46	0.45	4	LD
TQFPYG	43.0	0.25	1.63	42.5	0.15	0.55	4	LY
TY32LT	42.7	0.08	1.38	42.2	0.04	0.69	4	EM
VEQWBP	43.3	0.40	2.06	45.0	1.41	2.55	4	EM
W4RBNQ	42.4	-0.07	0.83	41.1	-0.52	1.15	3	EN
WDDLWV	41.5	-0.48	1.96	42.0	-0.07	1.49	4	TH
Y2VJPP	45.0	1.27	1.50	43.5	0.66	1.07	4	EM



Containerboard Interlaboratory Testing Program
 Analysis 203
Edgewise Compressive Strength by T839, Corrugated Board - EC14
 TAPPI Official Test Method T839

Report #636 (K)
September 2022

WebCode	Monthly Results				Cumulative Results				
	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
YR9MNN	44.6	1.03	0.42	L	43.6	0.70	0.73	4	LD

Consensus (All Labs) Results				
Month Mean		42.51	Grand Mean	42.15
Avg SD		1.51	Avg SD Months	1.65
SD btwn Labs		2.00	SD btwn Labs	2.02
Labs Incd		39	Labs Incd	40

Key to Instrument Codes Reported by Participants

BU Buchel Digital Crush Tester	CT Con-Ten
EM Emerson 1200 Series	EN Emerson 2200
LC L&W Crush Tester 48	LD L&W Crush Tester 248
LY L&W 830	MK Mark-10 ESM303
TD TMI Digital Crush Tester, Model 17-09	TG TMI Digital Crush Tester, 17-76
TH TMI Monitor/Compression Tester, Model 17-76	TK TLS Compression Tester, Model 5184
TL Tech-Lab Systems Compression	TS TMI Digital Crush Tester, Model 17-56
TU TMI Universal Crush Tester (TMI K440)	XX Instrument make/model not specified by lab



Containerboard Interlaboratory Testing Program
 Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42H1
 TAPPI Official Test Method T807

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB_AL	121.0	123.5	119.0	119.7	120.8	0.89	9.1	2.0	117.5	0.25	8.6	3.0	16	AL
3GXEET_AL	119.7	113.8	117.6	116.0	116.8	-0.04	6.2	2.5	117.6	0.27	5.8	2.2	16	XX
3TP9KU	111.1	110.1	118.4	113.4	113.3	-0.85	8.5	3.7	111.4	-1.22	8.7	4.2	16	LA
4BMQAP	119.1	119.1	118.3	120.5	119.3	0.53	7.8	0.9	119.9	0.84	7.3	3.5	16	AC
6JELT7	114.2	115.2	112.4	111.5	113.3	-0.83	10.2	1.7	112.3	-1.00	9.3	3.2	16	AH
6UUHPW	124.6	127.0	123.2	124.2	124.8	1.80	7.7	1.6	125.9	2.27 *	8.0	3.7	16	XX
6Y6LJ6	114.5	110.6	104.9 *	119.6	112.4	-1.04	5.9	6.2 H	112.3	-0.99	7.2	3.1	16	XX
72C4H2	115.2	118.0	121.6	120.8	118.9	0.45	8.4	2.9	117.7	0.30	9.4	2.0	16	AH
8FN4JJ	118.4	111.8	117.2	121.7	117.3	0.08	8.9	4.1	116.3	-0.04	9.2	4.6	16	LC
8LCNPK	127.6 *L	127.7 *L	127.4 *L	127.5 *L	127.6	2.45 *	3.2	0.1 L	129.6	3.16 X	3.3	1.5	16	AH
94QFBM_AL	116.4	121.4	118.5	118.9	118.8	0.43	8.8	2.1	119.0	0.61	8.5	5.1	16	AL
9BTMQQ	119.0	120.3	110.5 H	116.0	116.4	-0.11	13.9	4.3	118.0	0.37	16.6	4.1	16	LJ
9CKMQM	119.0	117.8	119.9	115.8	118.1	0.27	8.1	1.7	116.8	0.09	10.3	2.0	15	TB
9GKMDX	107.8	117.5	107.2 *	109.4	110.5	-1.49	8.0	4.7	112.5	-0.96	8.3	6.1	15	ME
A3P6NJ_AL	117.1	114.0	120.1	114.6	116.5	-0.11	10.3	2.8	117.9	0.35	10.2	2.6	16	AL
BHJUKF_AL	119.3	124.6	122.0	117.6	120.9	0.91	8.2	3.1	119.8	0.81	7.3	2.9	16	AL
C29PCU	108.3	104.7 *	115.1	110.0	109.5	-1.71	9.9	4.3	109.0	-1.81	10.0	4.2	16	LZ
C69Z8U	120.2	116.7	117.0	113.7	116.9	-0.01	6.3	2.6	115.6	-0.21	6.4	2.2	16	LC
CVLW3F	108.4	110.2	107.0 *	106.2 *	107.9	-2.07 *	8.5	1.7	105.5	-2.65 *	7.8	3.7	16	LA
CWDX2C	116.8	115.8	112.8	117.9	115.8	-0.25	7.7	2.2	117.6	0.27	8.7	2.5	16	LA
CWDX2C_AL	114.3	117.5	120.0	114.6	116.6	-0.08	6.9	2.7	116.2	-0.06	7.6	2.6	16	AL
DXN299	116.9	118.9	115.8	115.0	116.7	-0.06	6.9	1.7	116.1	-0.09	7.0	1.6	16	TP
E4EM62	114.6 L	111.1	115.9	112.1	113.4	-0.81	7.5	2.2	110.5	-1.43	7.5	2.7	16	LA
EVCKUA	113.8 H	108.1 H	120.2	114.0	114.0	-0.67	12.5	4.9	113.3	-0.76	10.2	3.5	16	LA
FHMADG_AI	103.9 *	107.1	110.9	116.0	109.5	-1.72	10.7	5.2	117.0	0.13	11.0	7.2 H	16	AL
HEVU3C	113.7	113.3	110.3	113.3	112.7	-0.98	7.4	1.6	108.6	-1.89	9.3	4.0	12	LC
HF9EVM	124.1	114.4	124.3	117.9	120.2	0.75	6.5	4.9	117.3	0.21	6.3	3.9	16	LA
HGHPMJ_AL	121.3	118.9	119.6	116.0	119.0	0.47	10.0	2.2	120.6	1.00	9.4	2.8	16	AL
J4A7M4	116.5	108.0	118.9	116.1	114.9	-0.47	6.3	4.7	116.7	0.05	7.9	4.0	16	AH
JJP26L	116.5	116.2	116.2	116.8	116.4	-0.12	5.1	0.3 L	116.5	0.01	5.2	0.3 L	16	LJ
JYHUR8	115.0	116.0	111.9	117.2	115.0	-0.44	9.2	2.3	115.7	-0.18	8.7	2.2	16	TP
JYHUR8_AL	110.0	107.6	112.9	109.4	110.0	-1.60	7.3	2.2	110.8	-1.37	7.3	2.5	16	XX
K48XUB_AL	117.0	114.7	117.6	120.4	117.4	0.11	8.6	2.3	115.7	-0.17	10.2	3.9	16	AL
LWNUM9_AI	147.3 XH	137.5 XH	147.2 XH	139.1 XH	142.8	5.95 X	27.7	5.2	136.8	4.90 X	21.4	6.3	16	AL
N2ALNL	124.5	122.0	118.5	115.5	120.1	0.74	10.1	3.9	119.7	0.79	10.5	3.6	16	XX



Containerboard Interlaboratory Testing Program
 Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42H1
 TAPPI Official Test Method T807

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
PCQPBB_AL	115.7	115.6	111.1	116.7	114.8	-0.50	9.4	2.5	117.1	0.15	9.1	3.0	16	AL
PUNR7U	117.7	116.2	115.9	118.8	117.2	0.05	6.5	1.4	116.1	-0.08	7.0	1.3	16	AH
PWPXLZ	114.5	119.6	117.5	115.4	116.7	-0.05	9.6	2.3	115.6	-0.21	9.5	3.3	16	LA
QC2RXA	119.0	117.6	119.5	128.2 *	121.1	0.95	11.0	4.8	121.8	1.28	10.8	3.2	12	RE
QE7JM3	118.2	115.1	113.3	116.6	115.8	-0.26	10.6	2.1	113.7	-0.67	9.7	2.5	16	LA
RB6TX3	115.5 H	118.6	115.5 H	116.8	116.6	-0.08	12.9	1.5	117.0	0.13	11.2	4.5	11	AH
RB6TX3_AL	126.4	126.6	126.9 *	126.6 *	126.6	2.23 *	10.0	0.2 L	126.0	2.29 *	10.5	2.2	10	AL
RH3MUF_AL	117.7	120.9	121.3	118.0	119.5	0.59	8.7	1.9	117.9	0.35	9.2	3.3	16	AL
RXWXVZ	116.4	117.2	116.1	115.9	116.4	-0.12	6.2	0.6	117.0	0.13	4.5	0.6 L	16	LA
TKA337_AL	108.9	112.3	117.7	120.2	114.8	-0.50	10.4	5.1	116.2	-0.06	9.5	2.9	14	AL
TN6U9H_AL	121.6	124.9	121.7	116.4	121.2	0.97	7.9	3.5	119.9	0.83	7.6	2.8	16	AK
TQFPYG	118.4	116.7	125.6	120.3	120.3	0.76	8.6	3.9	121.3	1.16	8.5	4.1	16	AH
TY4P8D	123.2	126.4	122.5	119.9	123.0	1.40	10.1	2.7	122.3	1.41	11.0	3.1	16	LC
W228X6_AL	115.6	113.6	112.3	115.9	114.4	-0.59	9.1	1.7	115.7	-0.18	8.7	2.5	16	AL
WJNLKA	115.6	117.1	116.8	118.2 H	116.9	0.00	11.4	1.1	115.6	-0.21	10.6	4.2	12	LB
XFDARX	119.2	111.5	114.3	114.7	114.9	-0.47	10.1	3.2	111.5	-1.20	8.4	3.6	16	LC
XQWL7W	113.1	108.4	109.7	111.5	110.7	-1.44	9.5	2.1	111.1	-1.30	9.5	2.8	16	LC
Z8UQJH	127.1 *	122.1	117.1	127.1 *	123.4	1.48	8.3	4.8	123.6	1.71	9.0	3.8	16	AX
ZKJP9Z	110.8	110.8	111.0	112.2	111.2	-1.32	5.7	0.7	111.5	-1.20	5.7	1.6	16	XX
ZWVX36	120.4	117.8	118.3	120.2	119.2	0.52	7.8	1.3	119.8	0.81	7.1	2.5	16	LA
ZZD84P	127.0	125.4	125.9	123.5	125.4	1.96 *	8.3	1.4	121.0	1.09	9.4	4.2	16	LA

Consensus (All Labs) Results													
Wk Mean	117.12	116.51	116.96	117.14	Month Mean	116.93		Grand Mean	116.46				
Avg SDr	8.89	8.61	8.81	8.96	Avg SD	8.82		Avg SD	8.95				
SD btwn Labs	5.10	5.55	5.02	4.55	SD btwn Labs	4.34		SD btwn Labs	4.15				
Labs Incl	55	55	55	55	SD btwn Wks	3.01		SD btwn Wks	3.38				
Labs Excl	1	1	1	1	Labs Incl	55		Labs Incl	54				
Labs not Rcvd	0	0	0	0									



Containerboard Interlaboratory Testing Program
Analysis 205
Bursting Strength (Mullen), 42 lb Linerboard - 42H1
TAPPI Official Test Method T807

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

AC	Perkins Model C	AH	Perkins Model AH
AK	L & W Autoline 300	AL	L & W Autoline 400
AX	Perkins Mullen Tester (model not specified)	LA	L&W Bursting Strength Tester
LB	L&W Burst-O-Matic	LC	L&W Autoline (205 Enrollment)
LJ	L&W Bursting Strength Tester J-Type	LZ	L&W (model not specified)
ME	Messmer Automatic Burst Tester ME-06	RE	Regmed/Mullen Tester
TB	TMI Monitor/Burst 1000	TP	Technidyne PROFILE/Plus
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program
 Analysis 206
Bursting Strength (Mullen), 56 lb Linerboard - 56G3
 TAPPI Official Test Method T807

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB_AL	118.4	124.6	117.6	117.8	119.6	1.10	10.6	3.3	118.4	0.74	12.2	3.1	8	AL
3GXEET_AL	118.3	111.7	116.1 L	118.9	116.2	0.01	7.1	3.3	114.7	-0.52	7.9	2.8	8	XX
3TP9KU	106.0 *	116.4	114.5	112.3	112.3	-1.27	10.7	4.5	112.0	-1.44	12.1	3.7	8	LA
4BMQAP	139.2 X	141.3 X	144.5 X	139.2 X	141.1	8.09 X	14.3	2.5	137.4	7.07 X	13.8	4.9	8	AC
6JELT7	115.0	114.3	114.9	112.0	114.1	-0.70	9.6	1.4	114.4	-0.63	9.7	4.8	8	AH
6UUHPW	115.4	136.8 X	118.0	119.8	122.5	2.05 *	9.1	9.7 H	123.3	2.34 *	9.7	6.4	8	XX
6Y6LJ6	113.9	109.8	110.6	109.3	110.9	-1.73	7.9	2.1	112.2	-1.34	7.8	2.0	8	XX
72C4H2	121.2	114.8	120.4	121.2	119.4	1.04	9.4	3.1	117.2	0.32	9.4	3.3	8	AH
8FN4JJ	128.2 *	127.0 *	117.1	120.3	123.2	2.26 *	11.1	5.3	121.0	1.58	10.1	4.8	8	XX
8LCNPK	140.6 XL	140.1 XL	139.9 XL	140.0 XL	140.2	7.80 X	3.2	0.3 L	140.0	7.97 X	3.1	0.5 L	8	AH
94QFBM_AL	117.4	113.4	114.5	112.9	114.6	-0.54	8.0	2.0	116.0	-0.08	9.2	3.3	8	AL
9BTMQQ	114.4 H	116.7	120.3 H	120.5	118.0	0.58	15.9	3.0	115.5	-0.26	17.2	3.8	8	LZ
9CKMQM	121.5	125.5 *	114.8	112.9	118.7	0.80	11.8	5.8	118.7	0.81	11.8	5.8	4	TB
9GKMDX	107.2 *	109.7	113.7	113.9	111.1	-1.66	9.2	3.2	113.0	-1.08	9.0	5.7	8	LA
A3P6NJ_AL	118.7	119.0	114.6	112.9	116.3	0.03	12.0	3.0	115.8	-0.16	12.3	4.0	8	XX
BHJUKF_AL	116.9	122.8	117.7	121.8	119.8	1.17	9.2	2.9	119.0	0.92	8.5	2.6	8	AL
C29PCU	111.0	107.2	113.2	119.5	112.7	-1.14	9.2	5.2	110.3	-2.00 *	11.1	4.5	8	LZ
CVLW3F	112.3	113.6	105.4 X	109.3	110.1	-1.97 *	9.3	3.7	111.8	-1.50	9.1	3.5	8	LA
CWDX2C	120.3	115.5	114.7	114.1	116.1	-0.02	11.5	2.8	118.0	0.59	10.3	3.0	8	LA
CWDX2C_AL	114.6	119.5	116.1	116.9	116.8	0.18	6.8	2.1	117.5	0.41	7.0	2.2	8	XX
DXN299	116.4	113.5	114.5	115.7	115.0	-0.38	8.5	1.3	115.5	-0.25	7.8	1.5	8	TP
E4EM62	113.1	113.1	113.1	115.1	113.6	-0.86	8.0	1.0	113.3	-1.00	7.5	2.4	8	LA
EVCKUA	112.8	116.3	116.8	110.8	114.2	-0.66	9.2	2.9	113.1	-1.06	9.9	2.4	8	LA
FHMADG_AI	109.4	109.4	120.3	120.0	114.8	-0.46	8.0	6.2	119.5	1.10	8.8	6.7	8	AL
HEVU3C	115.2	113.9	117.1	115.9	115.5	-0.22	8.3	1.4	115.7	-0.20	9.5	2.1	8	LC
HF9EVM	112.8	115.2	116.7	121.0	116.4	0.07	6.8	3.4	118.1	0.62	6.6	5.6	8	LA
HGHPMJ_AL	118.2	121.5	120.4	122.7	120.7	1.46	8.8	1.9	120.8	1.51	9.3	1.9	8	AL
J4A7M4	119.9	117.0	123.5 *	110.2	117.7	0.47	10.5	5.6	118.6	0.80	10.0	4.5	8	AH
JJP26L	116.7	115.9	115.6	116.6	116.2	0.00	5.8	0.5 L	115.8	-0.17	5.9	0.6 L	8	LJ
JYHUR8	119.2	114.7	115.2	112.1	115.3	-0.29	10.0	3.0	115.6	-0.22	9.6	2.6	8	TP
JYHUR8_AL	111.6	107.2	109.7 *	111.3	110.0	-2.03 *	8.7	2.0	110.2	-2.04 *	8.8	2.1	8	XX
K48XUB_AL	113.9	111.4	116.2	115.0	114.1	-0.68	12.1	2.1	115.7	-0.17	11.4	3.7	8	AL
LWNUM9_AI	137.8 XH	139.7 XH	140.8 X	133.9 XH	138.0	7.11 X	24.4	3.0	130.9	4.90 X	20.5	9.6 H	8	XX
N2ALNL	113.5	115.0	119.0	115.0	115.6	-0.19	10.5	2.4	117.6	0.46	10.1	3.0	8	XX
PCQPBB_AL	121.0	109.7	113.5 L	114.4	114.7	-0.50	10.3	4.7	114.2	-0.68	10.1	5.2	7	AL



Containerboard Interlaboratory Testing Program
 Analysis 206
Bursting Strength (Mullen), 56 lb Linerboard - 56G3
 TAPPI Official Test Method T807

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
PUNR7U	118.9	113.4	114.5	114.8	115.4	-0.26	8.5	2.4	115.5	-0.27	8.4	1.7	8	AH
PWPXLZ	114.9	119.7	116.6	117.3	117.1	0.30	10.5	2.0	118.3	0.68	9.4	2.4	8	LA
QC2RXA	114.0	119.4	113.5	114.2	115.3	-0.30	11.4	2.8	117.6	0.47	11.2	4.0	8	RE
QE7JM3	122.0	117.8	116.0	114.3	117.5	0.43	11.0	3.3	116.2	-0.03	10.0	4.0	8	LA
RB6TX3	117.0 H	120.0	113.2	116.2	116.6	0.13	11.9	2.8	117.6	0.46	11.1	3.2	6	AH
RB6TX3_AL	112.4	117.5	118.0	117.5	116.4	0.05	10.7	2.6	115.7	-0.18	9.7	2.6	6	AL
RH3MUF_AL	121.1	123.9	114.9	120.2	120.0	1.25	10.8	3.8	117.8	0.52	10.6	3.7	8	AL
RXWXVZ	117.7	117.6	117.6 L	116.8	117.4	0.40	5.9	0.4 L	116.4	0.05	4.7	1.2	8	LA
TKA337_AL	124.0	114.9	114.0	122.3	118.8	0.85	10.3	5.1	118.2	0.64	10.9	4.8	8	AL
TN6U9H_AL	116.9	119.3	120.7	122.3	119.8	1.17	6.9	2.3	116.7	0.16	8.0	4.0	8	AL
TQFPYG	123.7	118.1	121.7	116.7	120.1	1.25	8.6	3.2	121.1	1.63	8.1	2.8	8	AH
TY4P8D	122.0	118.3	115.1	118.5	118.5	0.74	9.3	2.8	118.3	0.68	10.5	2.3	8	LC
W228X6_AL	117.6	115.4 L	110.9	114.1	114.5	-0.56	6.6	2.8	116.0	-0.09	6.8	2.9	8	AL
WJNLKA	109.0	109.8	116.6	120.2	113.9	-0.75	10.4	5.4	113.4	-0.95	11.5	4.4	8	LB
XFDARX	115.2	117.6	111.1	109.5 H	113.3	-0.94	11.3	3.7	111.8	-1.51	9.6	3.1	8	LC
XQWL7W	118.1	112.4	111.7	117.3	114.9	-0.43	9.5	3.3	113.1	-1.07	9.0	3.5	8	LA
Z8UQJH	123.2	113.5	120.7	120.4	119.5	1.06	8.9	4.2	119.9	1.21	9.2	3.0	8	XX
ZKJP9Z	113.5	107.6	108.9 *	110.6	110.2	-1.97 *	7.8	2.6	110.5	-1.94 *	8.1	2.2	8	XX
ZWVX36	112.0	124.8	116.0	120.5	118.3	0.69	8.5	5.5	119.5	1.08	7.4	4.6	8	LA
ZZD84P	129.9 X	116.1	114.3	116.9	119.3	1.00	9.4	7.2	119.3	1.04	9.5	4.9	8	LA

Consensus (All Labs) Results														
Wk Mean	116.42	115.93	115.81	116.21	Month Mean	116.21			Grand Mean	116.25				
Avg SDr	9.47	9.15	9.74	10.11	Avg SD	9.64			Avg SD	9.69				
SD btwn Labs	4.48	4.75	3.13	3.80	SD btwn Labs	3.07			SD btwn Labs	2.99				
Labs Incl	51	51	51	52	SD btwn Wks	3.74			SD btwn Wks	3.69				
Labs Excl	4	4	4	3	Labs Incl	52			Labs Incl	52				
Labs not Rcvd	0	0	0	0										



Containerboard Interlaboratory Testing Program
Analysis 206
Bursting Strength (Mullen), 56 lb Linerboard - 56G3
TAPPI Official Test Method T807

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

AC	Perkins Model C	AH	Perkins Model AH
AL	L & W Autoline 400	LA	L&W Bursting Strength Tester
LB	L&W Burst-O-Matic	LC	L&W Autoline (206 Enrollment)
LJ	L&W Bursting Strength Tester J-Type	LZ	L&W (model not specified)
RE	Regmed/Mullen Tester	TB	TMI Monitor/Burst 1000
TP	Technidyne PROFILE/Plus	XX	Instrument make/model not specified by lab



Containerboard Interlaboratory Testing Program
 Analysis 215
Ring Crush, 42 lb Linerboard - 42H1
 TAPPI Official Test Method T822

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB	96.4	90.0	90.1	91.3	91.9	-0.97	3.5	3.0	92.5	-1.13	3.1	1.5	16	LD
2JBHZ6	91.0	108.8 *	108.8 *	109.4 *	104.5	1.98 *	3.3	9.0 H	103.3	2.34 *	4.3	5.0	16	TU
6JELT7	95.2	98.4	97.7	95.4	96.7	0.15	2.9	1.6	97.0	0.30	2.9	1.3	16	LC
6UTHRH	89.4	91.6	92.2	95.1 L	92.1	-0.94	3.7	2.4	81.5	-4.70 X	3.0	20.6 H	16	LC
6Y6LJ6	89.6	92.2	93.7	86.4	90.5	-1.32	4.5	3.2	90.1	-1.92	5.8	4.4	16	LD
7QVEJV	99.3	98.7	98.2	99.5	98.9	0.66	3.0	0.6	97.4	0.44	3.4	1.3	16	TH
84EJ4X	96.7 L	96.4 L	96.5	96.6	96.6	0.11	1.5	0.1 L	95.4	-0.19	1.6	1.6	16	MB
8FN4JJ	101.5	103.0	104.9	105.2	103.6	1.78	3.5	1.7	98.6	0.82	3.3	4.8	16	MB
8LCNPK	90.8	90.9	90.2	90.3	90.6	-1.30	1.8	0.3 L	91.9	-1.34	2.8	1.6	16	LD
94QFBM	94.2 H	97.4 H	96.3 H	98.3	96.6	0.11	5.6	1.7	96.1	0.03	4.6	1.8	16	LZ
9CKMQM	93.2	92.2	93.1	92.9	92.8	-0.77	2.5	0.5	94.0	-0.65	2.6	3.1	16	LD
9GKMDX	104.1 *	101.0	101.1	NO DATA	102.1	1.41	3.7	1.8	98.9	0.94	5.9	4.7	15	LX
A3P6NJ	95.7	95.9	94.9	93.8	95.1	-0.24	2.5	0.9	96.6	0.20	2.5	1.8	16	LD
C29PCU	98.1	100.0	97.4	96.5	98.0	0.45	2.3	1.5	96.6	0.19	2.9	2.2	16	LD
CVLW3F	143.7 X	147.0 X	146.6 X	146.1 X	145.9	11.71 X	4.4	1.5	120.6	7.97 X	11.4	25.4 H	16	LB
CWDX2C	92.6 H	94.2	92.8	93.2	93.2	-0.67	4.3	0.7	94.4	-0.52	3.4	1.8	16	LD
DXN299	92.3	97.0	95.9	97.3	95.6	-0.11	2.7	2.3	96.3	0.08	3.8	3.4	16	TH
E4EM62	91.6	93.4	92.9	90.6 L	92.1	-0.93	1.9	1.2	92.9	-1.00	2.3	1.2	16	LD
HEVU3C	88.8 L	88.8	88.6	85.0 *	87.8	-1.95 *	2.5	1.8	92.5	-1.15	3.0	3.7	16	LZ
HF9EVM	105.8 *	103.2	103.9	101.4	103.6	1.76	4.0	1.8	99.7	1.18	2.8	3.8	16	TU
J4A7M4	95.5	93.7	94.6	96.2	95.0	-0.25	2.9	1.1	96.2	0.06	3.0	1.3	16	LD
JJP26L	95.8	95.5	95.6	95.7	95.6	-0.10	2.2	0.2 L	95.5	-0.18	2.4	0.3 L	16	LD
JYHUR8	99.6	99.0	98.2	99.2	99.0	0.68	2.6	0.6	97.9	0.59	2.8	1.4	16	LD
K48XUB	92.1	90.7	96.4	95.8	93.7	-0.55	4.1	2.8	93.3	-0.89	3.5	2.1	15	LD
LWNUM9	73.6 XH	100.9	71.2 XH	86.2	83.0	-3.08 X	6.1	13.6 H	84.8	-3.65 X	5.9	12.9 H	16	LC
M4HCFB	99.2	104.4	96.2	102.5	100.6	1.06	3.1	3.6	100.8	1.54	2.8	2.6	16	LD
PCQPBB	98.8 H	103.0	105.1 H	103.3	102.6	1.52	5.0	2.7	100.9	1.58	5.1	5.2	16	LC
PWPXLZ	93.4	92.8	93.6	92.5	93.1	-0.71	2.8	0.5	95.6	-0.13	2.7	1.9	16	LD
QC2RXA	104.2 *	104.6	105.9	107.4 *	105.5	2.22 *	3.2	1.4	102.9	2.22 *	3.2	2.5	16	EX
QFZ97X	98.9	95.4	98.2	95.4	97.0	0.21	4.1	1.9	95.2	-0.27	3.3	2.5	16	LD
RH3MUF	91.1	92.3	91.0	92.0	91.6	-1.06	2.9	0.6	84.0	-3.90 X	6.4	7.3 H	16	LD
TN6U9H	93.3	93.0	96.1	91.9	93.6	-0.59	2.6	1.8	94.3	-0.56	2.8	1.5	16	LD
TQFPYG	94.0	97.1	96.3	95.3 L	95.6	-0.10	2.5	1.3	95.3	-0.25	2.7	1.4	16	LG
TY4P8D	95.4	94.4	91.9	94.0	93.9	-0.51	2.1	1.4	92.7	-1.07	2.5	2.1	16	LD
VJQXGD	92.5	90.1	90.6	91.2	91.1	-1.17	3.6	1.0	90.3	-1.87	4.2	3.2	16	EM



Containerboard Interlaboratory Testing Program
 Analysis 215
Ring Crush, 42 lb Linerboard - 42H1
 TAPPI Official Test Method T822

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
W4667C	97.1	100.4	93.7	90.7 H	95.5	-0.14	4.5	4.2	98.2	0.71	3.5	3.0	16	MB
W4RBNQ	92.1	94.4	94.4	94.6	93.9	-0.52	2.7	1.2	93.4	-0.84	2.9	1.7	12	EN
WJNLKA	96.8	101.7	109.2 *	102.4 L	102.5	1.52	3.1	5.1 H	99.1	0.99	3.0	4.0	12	LC
XFDARX	96.4	99.9	100.6	99.6	99.1	0.72	3.0	1.9	98.1	0.66	3.5	2.2	16	LD
XQWL7W	92.5	95.6	96.3	94.8	94.8	-0.30	2.5	1.6	94.7	-0.44	2.5	1.1	16	LD
Y2VJPP	96.0	97.9	95.4	96.9	96.5	0.11	3.4	1.1	96.6	0.18	3.1	1.6	16	EM
Z8UQJH	90.7	93.1	92.8	94.5	92.8	-0.78	4.6	1.5	92.9	-1.02	4.2	1.5	16	LD
ZKJP9Z	102.6	99.9	93.1	91.2 H	96.7	0.15	6.2	5.4 H	97.8	0.58	4.0	3.0	16	TU
ZWVX36	93.1	91.2	92.9	96.3	93.4	-0.64	3.4	2.1	95.5	-0.19	3.0	2.5	16	LC

Consensus (All Labs) Results														
Wk Mean	95.42	96.59	96.37	95.65	Month Mean	96.08			Grand Mean	96.04				
Avg SDr	3.46	3.27	3.27	3.64	Avg SD	3.41			Avg SD	3.42				
SD btwn Labs	4.20	4.71	4.97	5.28	SD btwn Labs	4.25			SD btwn Labs	3.08				
Labs Incd	42	43	42	42	SD btwn Wks	2.53			SD btwn Wks	2.72				
Labs Exclcd	2	1	2	1	Labs Incd	42			Labs Incd	40				
Labs not Rcvd	0	0	0	1										

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EN	Emerson 2200
EX	Emerson (model not specified)	LB	L&W Crush Tester 240
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LG	L&W 753	LX	L&W 506
LZ	L&W Crush Tester (model not specified)	MB	Messmer Buchel K440
TH	TMI Compression Tester, Model 17-76	TU	TMI Universal Crush Tester (TMI K440)



Containerboard Interlaboratory Testing Program
 Analysis 216
Ring Crush, 56 lb Linerboard - 56G3
 TAPPI Official Test Method T822

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB	130.5	126.7	124.4	125.1	126.7	-1.31	5.1	2.7	127.5	-1.37	4.5	2.6	8	LD
2JBHZ6	138.5	149.8 *	147.6 *	148.1 *	146.0	1.92	4.4	5.1 H	143.8	1.85	4.3	4.1	8	TU
6JELT7	137.9	139.1	137.7	136.8	137.9	0.56	3.6	1.0	138.6	0.83	3.6	1.9	8	LC
6Y6LJ6	120.6 *	113.4 X	117.3 *H	122.6 *	118.5	-2.68 *	5.6	4.0	117.3	-3.40 X	5.4	3.9	8	LD
7QVEJV	138.3	134.3	137.0	138.1	136.9	0.40	3.7	1.8	133.6	-0.16	3.3	4.2	8	TH
84EJ4X	138.3 L	138.4 L	138.2 L	138.6	138.4	0.64	1.7	0.2 L	138.5	0.80	1.7	0.2 L	8	MB
8FN4JJ	143.9	No DATA	No DATA	No DATA	143.9	1.56	4.8	0.0	135.9	0.29	4.8	4.6	5	MB
8LCNPK	129.5	129.7	129.5	130.4	129.8	-0.79	2.7	0.4	130.0	-0.88	2.5	0.6 L	8	LD
94QFBM	130.7 H	133.9	135.0	134.3 H	133.5	-0.18	10.3	1.9	134.9	0.10	8.1	2.3	8	LZ
9CKMQM	138.3	136.0	134.2	136.6	136.3	0.29	3.0	1.7	136.3	0.36	3.0	1.7	4	LD
A3P6NJ	135.8	136.4	135.5 L	135.9	135.9	0.23	3.0	0.4 L	138.0	0.71	2.8	2.3	8	LD
C29PCU	135.5	138.3	137.5	137.9	137.3	0.46	3.9	1.3	136.7	0.44	3.8	1.3	8	LD
CVLW3F	140.1	167.6 XH	166.7 X	159.4 XH	158.5	4.00 X	10.1	12.8 H	152.7	3.62 X	8.3	10.5 H	8	LB
CWDX2C	129.3	131.0	132.8	130.6	130.9	-0.60	4.6	1.4	131.4	-0.60	4.4	1.6	8	LD
DXN299	130.6	137.8	133.5	134.1	134.0	-0.09	4.7	3.0	135.7	0.25	4.8	2.9	8	TH
E4EM62	135.9	132.5	132.3 L	131.4	133.0	-0.25	3.0	2.0	133.7	-0.16	2.8	1.7	8	LD
HEVU3C	125.0	127.7	127.2	124.4	126.1	-1.41	4.5	1.6	128.5	-1.18	3.9	2.9	8	LZ
HF9EVM	134.3	137.8	138.3	132.9	135.8	0.22	3.6	2.6	138.0	0.70	3.5	3.5	8	TU
J4A7M4	129.2	131.8	131.4	129.7	130.5	-0.67	3.6	1.3	131.2	-0.65	3.4	1.7	8	LD
JJP26L	136.7 L	135.6	135.7	136.1	136.0	0.25	2.5	0.5	136.5	0.41	2.6	0.6 L	8	LD
JYHUR8	139.4	138.8	133.4	138.8	137.6	0.51	3.8	2.8	136.2	0.35	3.7	2.7	8	LD
K48XUB	133.9	129.6	136.0	130.7	132.5	-0.33	4.3	2.9	133.2	-0.24	3.8	2.4	7	LD
LWNUM9	88.0 XH	141.3	99.2 XH	96.1 X	106.2	-4.73 X	8.8	23.9 H	103.2	-6.18 X	12.7	19.6 H	8	LC
M4HCFB	141.7	141.1	139.3	140.5	140.6	1.02	3.9	1.0	140.3	1.16	4.6	3.9	8	LD
PCQPBB	143.5	138.7 H	140.9	143.2	141.6	1.18	5.1	2.2	133.6	-0.16	9.9	9.3 H	8	LC
PWPXLZ	129.4	126.3	126.4	127.4	127.4	-1.19	2.9	1.5	130.6	-0.77	3.3	3.7	8	LD
QC2RXA	149.0 *	146.7 *	145.9	148.6 *	147.5	2.17 *	4.1	1.5	146.7	2.43 *	4.2	1.4	8	EX
QFZ97X	132.5	136.7	132.9	136.1	134.5	0.00	4.8	2.2	133.7	-0.15	4.4	2.5	8	LD
RH3MUF	128.2	128.4	130.4	129.8	129.2	-0.88	3.4	1.1	121.2	-2.63 *	6.5	9.0 H	8	LD
TN6U9H	129.8	127.0	133.4 H	127.6	129.4	-0.85	9.0	2.9	129.0	-1.08	6.8	2.1	8	LD
TQFPYG	133.7	133.5	134.1	135.7	134.3	-0.04	3.4	1.0	132.9	-0.31	3.7	1.8	8	LY
TY4P8D	135.8	132.4	131.4	133.5	133.3	-0.21	3.5	1.9	132.1	-0.46	3.8	3.0	8	LD
VJQXGD	125.6	122.6 *	123.6	127.0	124.7	-1.64	5.3	2.0	123.8	-2.12 *	5.1	2.6	8	EM
W4667C	138.8	136.0	144.9	139.1	139.7	0.87	3.9	3.8	137.5	0.62	4.1	4.2	8	MB
W4RBNQ	125.5	126.3	125.6	125.8	125.8	-1.46	4.1	0.4 L	128.0	-1.27	3.9	3.0	8	EN



Containerboard Interlaboratory Testing Program
 Analysis 216
Ring Crush, 56 lb Linerboard - 56G3
 TAPPI Official Test Method T822

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
WJNLKA	143.7	144.0	147.7 *	141.1	144.1	1.60	3.9	2.7	142.1	1.51	3.7	3.0	8	LC
XFDARX	144.0	137.0 H	133.0	135.8	137.4	0.49	5.6	4.7	139.5	1.01	5.7	4.0	8	LD
XQWL7W	132.0	136.0 L	134.1	136.4	134.6	0.02	3.2	2.0	134.0	-0.08	3.1	1.8	8	LD
Y2VJPP	133.9	135.6	133.4	134.8	134.4	-0.01	4.4	1.0	132.6	-0.35	4.0	2.4	8	EM
Z8UQJH	130.9	133.0	133.4	133.4	132.7	-0.30	5.5	1.2	133.9	-0.10	5.5	1.8	8	LD
ZKJP9Z	139.8	142.7	129.9 H	136.4	137.2	0.45	5.2	5.5 H	137.1	0.52	4.1	3.6	8	TU
ZWVX36	137.9	129.8	130.2	140.4	134.6	0.01	4.3	5.4 H	136.3	0.38	4.2	4.1	8	LC

Consensus (All Labs) Results										
Wk Mean	134.82	134.88	133.97	134.50	Month Mean	134.51		Grand Mean	134.43	
Avg SDr	4.85	4.23	5.11	4.04	Avg SD	4.57		Avg SD	4.52	
SD btwn Labs	6.08	5.92	6.35	5.96	SD btwn Labs	5.99		SD btwn Labs	5.05	
Labs Incl	41	39	39	39	SD btwn Wks	2.52		SD btwn Wks	3.41	
Labs Excl	1	2	2	2	Labs Incl	40		Labs Incl	39	
Labs not Rcvd	0	1	1	1						

Key to Instrument Codes Reported by Participants

EM	Emerson 1200	EN	Emerson 2200
EX	Emerson (model not specified)	LB	L&W Crush Tester 240
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LY	L&W Crush Tester 958	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	TH	TMI Compression Tester, Model 17-76
TU	TMI Universal Crush Tester (TMI K440)		



Containerboard Interlaboratory Testing Program
 Analysis 223
STFI, 42 lb Linerboard - 42H1
 TAPPI Official Test Method T826

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB_AL	25.3	23.6 H	26.8 *H	27.3 *H	25.8	1.64	3.8	1.7	25.4	1.69	2.7	1.0	16	AL
2JBHZ6	19.7 *	22.0	25.0	21.3	22.0	-1.35	1.8	2.2 H	23.6	-0.04	2.0	1.5	16	BK
2QPFQD	24.7	25.6	24.7	25.1	25.0	1.06	1.9	0.4	25.0	1.31	1.7	0.4	8	LA
3GXEET	23.2	22.6	23.1	22.5	22.9	-0.66	1.8	0.3	22.6	-0.96	1.7	0.8	16	LY
3GXEET_AL	24.7	24.6 L	24.7 L	24.9 L	24.7	0.83	1.3	0.1 L	23.6	-0.02	1.5	1.0	16	XX
3TP9KU	26.2	25.8	25.1	24.2	25.3	1.30	2.4	0.9	25.1	1.43	2.3	1.1	16	LH
4BMQAP	22.0	22.4	23.4 L	22.9	22.7	-0.81	1.4	0.6	22.5	-0.99	1.4	0.5	16	LH
4P84RQ	22.9 L	23.3	22.7	22.9	22.9	-0.59	1.8	0.3	23.3	-0.31	1.7	0.6	16	LW
4QKQDC	25.5	25.0	23.6	23.6	24.4	0.59	2.0	1.0	24.6	0.89	2.0	0.8	16	LH
6JELT7	22.5	23.9	24.1	23.8	23.5	-0.12	2.0	0.7	23.6	0.03	2.0	0.6	16	LU
8FN4JJ	27.5 *	26.6 *	25.4	27.6 *	26.8	2.44 *	1.7	1.0	25.8	2.07 *	1.8	0.9	16	LA
94QFBM_AL	22.0	22.4	22.1	23.0	22.4	-1.06	1.5	0.5	22.2	-1.34	1.5	0.7	16	AL
9BTMQQ	40.7 XL	28.6 XL	25.9 L	26.3 L	30.4	5.32 X	0.8	7.0 H	28.2	4.31 X	1.4	4.0 H	12	LH
9CKMQM	25.3	24.3 H	24.3	24.6	24.6	0.76	2.2	0.5	24.0	0.42	2.1	0.7	16	LW
9GKMDX	22.9	No DATA	23.0	17.9 X	21.2	-1.96 *	2.0	2.9 H	23.1	-0.46	2.7	2.1 H	15	LZ
A3P6NJ_AL	23.3	23.6 L	24.0 L	24.5	23.8	0.12	1.2	0.5	23.8	0.23	1.3	0.5	16	AL
A9EHRR	23.8	22.9	22.6 L	24.5	23.4	-0.20	1.7	0.9	22.4	-1.08	1.8	1.5	16	XX
AXGQZT	23.9 L	22.3	22.8 L	22.5	22.9	-0.65	1.2	0.7	23.0	-0.58	1.5	0.9	16	LA
BHJUKF_AL	23.5	23.3	24.8	25.1	24.2	0.39	2.0	0.9	24.2	0.57	2.0	0.7	16	AL
C29PCU	22.5	23.1	23.0	22.4	22.7	-0.75	1.6	0.4	22.8	-0.77	1.7	0.4	15	LY
C69Z8U	24.2 H	25.5	25.6	24.5 L	24.9	0.98	2.0	0.7	25.3	1.55	2.1	1.5	16	LA
CVLW3F	23.8 L	23.8 L	25.4 L	25.9 L	24.7	0.81	0.0	1.1	32.5	8.31 X	2.7	11.7 H	12	LH
CWDX2C_AL	24.1	24.5	23.5	24.2	24.1	0.29	2.1	0.4	23.6	-0.03	1.8	0.7	16	AL
DXN299	23.7	23.4	24.5	24.2	23.9	0.19	1.5	0.5	23.6	0.01	1.6	0.5	16	TT
E4EM62	23.6	23.1 L	23.1	23.6	23.3	-0.29	1.3	0.3	23.3	-0.28	1.3	0.6	16	BK
FDCYN9	23.2	22.9	22.3	22.8	22.8	-0.70	1.5	0.4	23.6	-0.01	1.5	0.6	16	LH
FHMADG_AI	23.2	24.2	26.1	24.1 L	24.4	0.57	1.8	1.2	24.4	0.80	2.1	1.1	16	AL
HEVU3C	22.3 L	20.6 *	21.0 *L	20.3 *	21.0	-2.11 *	1.1	0.9	22.5	-1.04	1.6	1.6	12	LA
HGHPMJ_AL	27.0 *	26.1 *	24.4	24.7	25.5	1.47	1.8	1.2	24.7	1.01	1.8	1.2	16	AL
HXA7TH	22.3 L	23.5 L	24.9	24.4	23.8	0.08	1.1	1.1	22.6	-0.89	1.3	1.1	16	LH
J4A7M4	22.6	23.0	22.6	22.7	22.7	-0.77	1.9	0.2	22.8	-0.77	1.9	0.4	16	LU
JYHUR8_AL	23.8	23.1	23.9 L	22.8	23.4	-0.23	1.7	0.5	23.3	-0.30	1.7	0.7	10	XX
K48XUB_AL	24.9	24.3	24.0	24.0	24.3	0.48	2.0	0.4	24.0	0.36	1.9	0.6	16	AL
LWNUM9_AL	24.4 H	24.5 H	24.8 H	26.7 H	25.1	1.11	5.9	1.1	24.0	0.38	3.2	1.2	16	AL
M4HCFB	25.1	25.6	25.2	25.6	25.4	1.35	1.8	0.2	25.7	1.93 *	2.0	0.6	16	LH



Containerboard Interlaboratory Testing Program

Analysis 223

STFI, 42 lb Linerboard - 42H1

TAPPI Official Test Method T826

Report #636 (K)

September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
PCQPBB	23.9	23.3	23.6 H	22.7	23.4	-0.25	2.3	0.5	23.8	0.23	2.1	0.8	13	LU
PWPXLZ	22.6	23.1	24.1	23.7	23.3	-0.28	2.0	0.7	23.1	-0.46	1.9	0.4	16	LZ
QE7JM3	21.4	22.3	21.5	21.6	21.7	-1.57	1.7	0.4	21.8	-1.64	1.5	1.2	16	LY
RB6TX3	20.9	22.0 L	21.0 *	21.6	21.4	-1.85	1.5	0.5	21.5	-1.96 *	1.5	0.6	11	LH
RB6TX3_AL	20.8	22.4	21.9	22.4	21.9	-1.45	1.3	0.8	21.8	-1.72	1.6	0.6	10	AL
RH3MUF	22.3	22.5	23.0	22.6	22.6	-0.86	2.1	0.3	22.4	-1.08	2.0	0.5	16	LY
RH3MUF_AL	23.0	24.2	23.1	23.8	23.5	-0.12	1.6	0.6	23.4	-0.21	1.7	0.5	16	AL
RXWXVZ	24.6	24.2	24.3	24.4	24.4	0.55	2.2	0.2	23.7	0.07	2.0	0.4	16	LA
TN6U9H_AL	23.7 L	24.4	24.6	23.8 L	24.1	0.35	1.3	0.4	24.1	0.46	1.6	0.5	16	AK
TQFPYG	22.8	23.6	21.9	23.0	22.8	-0.70	1.7	0.7	22.5	-1.03	1.8	0.6	16	LU
TY4P8D	23.8	24.8	23.8	24.3	24.2	0.38	1.7	0.5	23.7	0.06	1.7	0.7	16	LA
W228X6	23.5	23.8 L	23.0	23.2	23.4	-0.26	1.5	0.3	23.5	-0.08	1.6	0.7	14	LU
W4667C	25.1	24.6	25.0	27.3 *L	25.5	1.44	2.1	1.2	24.8	1.16	2.1	0.8	16	LA
W4RBNQ	21.3	22.2	20.8 *	22.1	21.6	-1.66	1.6	0.7	22.0	-1.50	1.6	0.7	12	LY
WJNLKA	23.6	23.5	24.4	25.4	24.2	0.43	2.0	0.8	22.3	-1.19	1.7	1.9 H	12	LW
WRX2YW	26.3	26.0 *	25.9	25.8	26.0	1.84	1.5	0.2	25.9	2.12 *	1.4	0.3	16	LH
XFDARX	24.6 H	24.1	24.1	23.8	24.2	0.37	2.0	0.3	24.8	1.09	2.2	1.1	16	LA
XQWL7W	24.5	23.6 L	23.4	23.8	23.8	0.11	1.4	0.5	23.8	0.15	1.7	0.8	16	LA
Z8UQJH	24.1 L	24.2 L	23.3 L	23.5 L	23.8	0.08	0.9	0.5	24.5	0.82	0.9	0.9	16	LH
ZKJP9Z	22.9	23.9	24.6	24.3	23.9	0.18	1.9	0.7	24.2	0.54	1.8	0.7	16	TT
ZWVX36	23.9	23.8	23.4 L	23.5	23.7	-0.03	1.3	0.2	24.0	0.34	1.4	0.7	16	LA
ZZD84P	22.8	22.4	22.5	22.8	22.6	-0.85	2.2	0.2	22.5	-0.98	1.8	0.4	16	LU

Consensus (All Labs) Results													
Wk Mean	23.60	23.72	23.78	23.90	Month Mean	23.69		Grand Mean	23.59				
Avg SDr	2.02	1.93	1.93	1.94	Avg SD	1.96		Avg SD	1.83				
SD btwn Labs	1.49	1.19	1.34	1.50	SD btwn Labs	1.25		SD btwn Labs	1.07				
Labs Incl	56	55	57	56	SD btwn Wks	0.84		SD btwn Wks	0.90				
Labs Excl	1	1	0	1	Labs Incl	56		Labs Incl	55				
Labs not Rcvd	0	1	0	0									



Containerboard Interlaboratory Testing Program
Analysis 223
STFI, 42 lb Linerboard - 42H1
TAPPI Official Test Method T826

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
BK	Buchel Strip Compression Tester BK-155	LA	L&W Autoline (223 Enrollment)
LH	L&W 282	LU	L&W 52 without moisture correction(was 53)
LW	L&W 53 with moisture correction (was 53M)	LY	L&W 152 without moisture correction
LZ	L&W (model not specified)	TT	TMI Short Span Compression, 17-34 (MB K455)
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program

Analysis 224

STFI, 56 lb Linerboard - 56G3

TAPPI Official Test Method T826

Report #636 (K)

September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB_AL	36.1	36.6	35.6 H	35.6 H	36.0	1.46	4.1	0.5	36.2	1.51	3.3	0.8	8	XX
2JBHZ6	30.6 L	33.3 L	37.0	31.2	33.1	-0.50	2.2	2.9 H	34.4	0.33	2.5	2.5	8	BK
2QPFQDQ	31.9	29.5 *	31.9	32.1	31.4	-1.64	2.2	1.2	31.4	-1.58	2.2	1.2	4	LA
3GXEET	32.3	34.1	32.8	31.5	32.7	-0.76	2.2	1.1	32.4	-0.93	2.2	0.9	8	LY
3GXEET_AL	32.5	34.7 L	35.4	37.0	34.9	0.73	2.1	1.9	34.4	0.35	2.2	1.7	8	XX
3TP9KU	37.3 *	35.7	35.7	37.5 *	36.6	1.85	2.8	1.0	36.9	1.93	2.8	1.4	8	LH
4BMQAP	31.7 L	31.3	31.7	32.3 L	31.8	-1.38	1.7	0.4	32.2	-1.06	1.8	0.6	8	LH
4P84RQ	33.2 L	33.0	33.7	33.5	33.3	-0.31	1.8	0.3	33.1	-0.46	2.1	0.6	8	LW
4QKQDC	34.7	36.6	35.8	32.8	35.0	0.79	2.4	1.6	35.8	1.28	2.4	1.5	8	LH
6JELT7	33.1	33.5	34.2	33.5	33.6	-0.15	2.2	0.5	33.9	0.03	2.2	0.7	8	LU
8FN4JJ	36.5	33.2	34.9 L	36.7	35.3	1.04	2.4	1.6	35.9	1.32	2.3	1.5	8	LA
94QFBM_AL	32.6	32.1	32.4	33.0	32.5	-0.85	2.3	0.4	31.8	-1.31	2.1	1.0	8	AL
9BTMQQ	40.9 XL	39.9 XL	39.3 XL	38.1 *L	39.6	3.86 X	1.3	1.2	39.6	3.64 X	1.3	1.2	4	LZ
9CKMQM	35.3	34.7	34.8	33.1	34.5	0.44	3.1	1.0	33.8	-0.04	3.0	1.3	8	LW
9GKMDX	33.5 L	No DATA	32.0	35.9 L	33.8	-0.02	1.8	2.0	33.6	-0.17	2.9	2.6	7	LZ
A3P6NJ_AL	34.0 L	33.3	33.6	35.0 L	34.0	0.11	1.8	0.7	33.8	-0.01	1.6	0.8	8	XX
A9EHRR	32.0	32.5	32.5	32.4	32.3	-0.99	2.3	0.2	32.3	-0.97	2.3	0.7	8	XX
AXGQZT	33.2	32.2	32.3	32.5	32.5	-0.84	2.2	0.4	33.1	-0.44	2.1	1.3	8	LA
BHJUKF_AL	34.3	32.8	34.2 L	33.5 L	33.7	-0.06	1.8	0.7	34.1	0.15	1.9	0.6	8	AL
C29PCU	32.2	31.6 L	33.3	32.9	32.5	-0.88	2.1	0.8	33.0	-0.55	2.2	0.8	7	LZ
C69Z8U	36.5 L	36.2 L	34.9	34.6	35.6	1.18	1.8	0.9	35.7	1.19	2.1	1.4	8	LA
CVLW3F	34.4 L	35.8 L	35.3 L	36.3 L	35.4	1.09	0.0	0.8	40.6	4.29 X	3.5	5.6 H	8	LH
CWDX2C_AL	34.1	35.5	34.2	34.1	34.5	0.44	2.2	0.7	33.8	0.00	2.0	0.9	8	AL
DXN299	34.6 L	34.8 L	34.1	34.1	34.4	0.39	1.6	0.4	34.3	0.29	1.8	0.4	8	TT
E4EM62	34.0 L	34.3 L	33.7 L	34.0 L	34.0	0.14	1.3	0.2	34.0	0.09	1.5	0.5	8	BK
FDCYN9	32.5	33.1	32.2	32.0	32.5	-0.90	2.0	0.5	34.0	0.12	2.1	1.8	8	LH
FHMADG_AI	35.8	33.5	35.5	34.9	34.9	0.76	2.9	1.0	35.4	0.99	2.7	1.0	8	AL
HEVU3C	33.3	3.8 X	31.4 L	28.6 XL	24.3	-6.40 X	1.5	13.8 H	28.7	-3.27 X	1.6	10.2 H	8	LA
HGHPMJ_AL	32.3	36.1	38.1 *	36.1	35.7	1.25	2.6	2.4 H	35.0	0.76	2.5	1.8	8	AL
HXA7TH	31.8	31.4	35.8	34.1	33.3	-0.35	2.1	2.1	31.4	-1.53	1.9	2.4	8	LH
J4A7M4	32.1	32.5	32.0	32.0	32.1	-1.11	2.5	0.3	32.0	-1.16	2.4	0.6	8	LU
JYHUR8_AL	34.6	33.6	34.8	35.4	34.6	0.54	2.1	0.7	34.6	0.49	2.1	0.7	4	XX
K48XUB_AL	35.1 L	34.8 L	35.0 L	35.2 L	35.0	0.81	0.7	0.2 L	34.7	0.57	1.6	0.4	8	AL
LWNUM9_AL	31.9 H	34.4 H	32.9 H	33.5 H	33.2	-0.42	11.0	1.1	34.5	0.42	7.9	2.4	8	XX
M4HCFB	35.3	35.1	35.1	34.6	35.0	0.83	2.5	0.3	35.5	1.03	2.4	0.7	8	LH



Containerboard Interlaboratory Testing Program

Analysis 224

STFI, 56 lb Linerboard - 56G3

TAPPI Official Test Method T826

Report #636 (K)

September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
PCQPBB	34.2	35.0	33.4	32.0	33.6	-0.11	2.3	1.3	34.2	0.20	2.3	1.1	7	LU
PWPXLZ	33.8	33.2	34.3	33.7	33.8	-0.02	2.3	0.5	33.7	-0.07	2.3	0.4	8	LZ
QE7JM3	30.2 L	31.2	30.0 *	31.2	30.6	-2.12 *	1.9	0.6	30.7	-1.98 *	2.4	0.9	8	LU
RB6TX3	29.1 *	33.0	29.7 *	32.1	31.0	-1.90	2.4	1.9	31.0	-1.83	2.3	1.4	6	LH
RB6TX3_AL	28.8 *	31.1	30.5	31.1	30.4	-2.30 *	2.3	1.1	30.7	-2.01 *	2.1	1.1	6	AL
RH3MUF	32.6	33.1	32.9	33.0	32.9	-0.61	2.0	0.2	32.8	-0.69	2.1	0.3 L	8	LY
RH3MUF_AL	32.9	33.0	33.2	33.2	33.1	-0.50	2.3	0.2 L	33.4	-0.31	2.2	0.5	8	AL
RXWXVZ	35.2	35.1	35.4	35.1	35.2	0.94	3.2	0.1 L	34.9	0.65	3.1	0.4	8	LA
TN6U9H_AL	35.0 L	34.1	35.4	35.1	34.9	0.74	1.9	0.6	34.2	0.24	2.0	1.0	8	XX
TQFPYG	31.9	33.0	33.2	31.7	32.4	-0.93	2.1	0.8	32.4	-0.93	2.1	0.6	8	LU
TY4P8D	34.2	35.2	34.8	34.8	34.8	0.64	1.9	0.4	34.2	0.26	2.0	0.9	8	LU
W228X6	32.3	34.9	32.9	33.0	33.3	-0.36	2.2	1.1	33.7	-0.07	2.1	1.1	8	LU
W4667C	34.1	33.2 L	33.3 L	35.2	33.9	0.10	1.8	0.9	34.7	0.56	2.1	1.2	8	LA
W4RBNQ	31.5	32.5	32.7	31.1	32.0	-1.24	2.0	0.8	32.1	-1.12	2.1	0.7	8	LY
WJNLKA	35.5	33.8	35.9	36.2	35.4	1.05	2.5	1.1	31.8	-1.28	2.3	3.9 H	8	ID
WRX2YW	37.3 *	38.1 *L	37.7 *L	37.6 *L	37.7	2.61 *	1.5	0.3	37.5	2.34 *	1.5	0.3 L	8	LH
XFDARX	37.3	35.8	33.8	34.1	35.3	0.97	1.9	1.6	36.7	1.80	2.5	2.0	8	LA
XQWL7W	34.1	34.8	32.6 L	33.8	33.8	0.01	2.0	0.9	34.2	0.23	2.2	0.9	8	LW
Z8UQJH	34.9 L	35.7 L	35.0 L	33.6 L	34.8	0.68	0.8	0.9	35.2	0.86	1.1	1.4	8	LH
ZKJP9Z	35.8	34.2	31.3	35.1	34.1	0.20	2.3	2.0	34.7	0.53	2.4	1.5	8	TT
ZWVX36	34.6 L	34.5	33.3	33.6	34.0	0.13	2.0	0.6	34.7	0.55	1.9	1.1	8	LA
ZZD84P	32.5	33.0	32.8	33.0	32.8	-0.67	2.5	0.2	32.9	-0.58	2.7	0.5	8	LU

Consensus (All Labs) Results														
Wk Mean	33.62	33.87	33.80	33.93	Month Mean	33.80			Grand Mean	33.84				
Avg SDr	2.68	2.59	2.65	2.65	Avg SD	2.65			Avg SD	2.47				
SD btwn Labs	1.92	1.65	1.78	1.76	SD btwn Labs	1.49			SD btwn Labs	1.57				
Labs Incd	56	54	56	56	SD btwn Wks	1.08			SD btwn Wks	1.32				
Labs Exclcd	1	2	1	1	Labs Incd	55			Labs Incd	54				
Labs not Rcvd	0	1	0	0										



Containerboard Interlaboratory Testing Program
Analysis 224
STFI, 56 lb Linerboard - 56G3
TAPPI Official Test Method T826

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

AL	L & W Autoline 400	BK	Buchel Strip Compression Tester BK-155
ID	IDM Compression Tester	LA	L&W Autoline (224 Enrollment)
LH	L&W 282	LU	L&W 52 without moisture correction (was 53)
LW	L&W 53 with moisture correction (was 53M)	LY	L&W 152 with moisture correction
LZ	L&W (model not specified)	TT	TMI Short Span Compression, 17-34 (MB K455)
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program
 Analysis 228
Roughness - Stylus Method, 42 lb Linerboard - 42H
 TAPPI Official Test Method T575

Report #636 (K)
September 2022

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
2JBHZ6	143.5	0.01	23.34	139.3	-0.10	5.81	4	LA
3GXEET_AL	152.8	0.60	18.64	154.0	1.06	11.25	4	XX
3TP9KU	136.0	-0.47	14.70	134.7	-0.46	2.02	L 4	EV
8FN4JJ	141.6	-0.11	30.32	149.4	0.70	13.00	4	LA
94QFBM_AL	133.3	-0.64	9.63	139.5	-0.08	5.63	4	XX
9BTMQQ	211.3	4.33	X 38.15	H 195.2	4.30	X 16.75	4	LS
9CKMQM	121.7	-1.38	9.99	119.3	-1.67	6.19	4	XX
BHJUKF_AL	163.6	1.29	19.75	132.2	-0.65	21.24	4	AL
C29PCU	137.3	-0.39	10.90	143.2	0.21	5.18	4	EV
FHMADG_AL	132.3	-0.71	24.31	129.5	-0.87	4.24	4	AL
HGHPMJ_AL	120.2	-1.48	11.77	128.0	-0.99	11.44	4	AL
J4A7M4	153.5	0.64	8.32	L 150.8	0.81	6.35	4	EV
JA29VA	128.9	-0.92	13.37	126.8	-1.08	3.59	4	LS
LP4PU8	116.2	-1.73	8.16	L 116.2	-1.92	* 0.00	1	EV
LWNUM9_AL	176.0	2.08	* 34.72	H 149.4	0.70	19.36	4	AL
PCQPBB	217.2	4.71	X 32.47	171.9	2.46	* 32.39	H 4	EV
PWPXLZ	137.6	-0.37	19.83	136.0	-0.36	1.38	L 4	LS
RB6TX3_AL	166.9	1.50	23.65	134.7	-0.46	27.96	H 3	AL
RH3MUF	147.9	0.29	26.16	142.1	0.12	7.55	4	LS
RH3MUF_AL	162.9	1.24	18.95	145.9	0.42	12.40	4	AL
RXWXVZ	141.0	-0.15	19.68	141.2	0.05	1.49	L 4	LS
TN6U9H	148.3	0.31	26.59	148.3	0.61	3.51	4	EV
W228X6	160.6	1.10	26.29	150.0	0.74	13.44	4	EV
W4667C	150.3	0.44	15.36	144.9	0.34	11.49	4	LA
W4RBNQ	157.9	0.93	26.36	166.6	2.05	* 19.76	3	EV
XFDARX	127.7	-1.00	29.41	145.7	0.40	19.99	4	LA
XQWL7W	151.4	0.51	27.56	136.4	-0.32	10.03	4	LA
ZWVX36	119.5	-1.52	13.10	122.5	-1.42	4.14	4	EV
ZZD84P	142.4	-0.06	8.39	L 137.0	-0.28	4.69	4	EV

Consensus (All Labs) Results			
Month Mean	143.38	Grand Mean	140.55
Avg SD	20.69	Avg SD Months	13.28
SD btwn Labs	15.69	SD btwn Labs	12.72
Labs Incl	27	Labs Incl	28



Containerboard Interlaboratory Testing Program
Analysis 228
Roughness - Stylus Method, 42 lb Linerboard - 42H
TAPPI Official Test Method T575

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

AL	L & W Autoline 400	EV	Emveco Microgauge Model 210-R
LA	L&W Autoline (228 Enrollment)	LS	L&W 263
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program
 Analysis 229
Roughness - Sheffield Method, 42 lb Linerboard - 42H1
 TAPPI Official Test Method T538

Report #636 (K)
September 2022

WebCode	Monthly Results				Cumulative Results				
	Mean	CPV	SD		Mean	CPV	SD Months	Months	Inst
23JRUB	374.7	-0.06	7.12		376.0	0.20	2.46	4	PP
3GXEET_AL	379.9	0.53	6.61		376.7	0.29	3.35	4	XX
6JELT7	379.6	0.50	9.43		381.2	0.87	5.45	4	XX
A3P6NJ_AL	384.2	1.03	14.98	H	383.5	1.16	3.87	4	AL
C69Z8U	391.1	1.81	6.35		384.3	1.26	4.77	4	XX
CVLW3F	342.6	-3.73	2.67	X L	340.0	-4.43	2.47	3	HM
CWDX2C_AL	378.2	0.34	10.35		377.0	0.33	2.49	4	AL
FHMADG_AL	362.7	-1.43	5.54		364.8	-1.24	8.18	4	AL
HGHPMJ_AL	368.3	-0.79	10.61		365.3	-1.17	3.22	4	AL
JYHUR8	369.6	-0.64	6.29		372.1	-0.30	3.47	4	PP
JYHUR8_AL	381.5	0.71	4.80		382.2	1.00	3.14	4	XX
K48XUB_AL	360.5	-1.68	9.34		363.2	-1.45	2.42	3	AL
LWNUM9_AL	136.2	-27.32	23.76	X H	142.3	-29.89	8.66	2	AL
PWPXLZ	376.0	0.09	15.00	H	378.9	0.57	3.72	4	XX
RB6TX3_AL	363.0	-1.40	9.03		359.5	-1.93	3.06	3	AL
RH3MUF_AL	371.1	-0.47	8.63		370.0	-0.57	2.59	4	AL
TN6U9H	385.2	1.14	6.56		380.0	0.71	7.36	4	LA
TN6U9H_AL	378.0	0.32	10.55		376.4	0.25	4.85	4	AK
VJQXGD	414.4	4.48	7.96	X	419.0	5.74	5.38	4	TS

Consensus (All Labs) Results			
Month Mean	375.22	Grand Mean	374.43
Avg SD	9.30	Avg SD Months	4.36
SD btwn Labs	8.75	SD btwn Labs	7.76
Labs Incl	16	Labs Incl	16

Key to Instrument Codes Reported by Participants

AK	L & W Autoline 300	AL	L & W Autoline 400
HM	Technidyne - Hagerty Model	LA	L & W Autoline (229 Enrollment)
PP	Technidyne Profile/Plus	TS	TMI Monitor/Smoothness
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program
Analysis 231

Report #636 (K)
September 2022

Internal Bond, 42 Ib Linerboard - 42H

TAPPI Official Test Method T569

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
23JRUB	142.5	1.33	5.26	144.6	1.37	2.71	4	HY
28RDH8	142.4	1.32	4.67	141.9	1.18	4.19	4	TM
3TP9KU	117.0	-0.64	3.67	117.3	-0.48	4.52	4	TM
6JELT7	141.8	1.28	5.41	146.6	1.50	4.46	4	HY
94QFBM	115.6	-0.75	10.92	115.5	-0.59	5.17	4	TM
A3P6NJ	56.6	-5.32 X	2.89	58.0	-4.46 X	1.67 L	4	LZ
C69Z8U	113.8	-0.89	3.83	104.9	-1.31	7.18	4	SC
CWDX2C	122.6	-0.21	3.56	123.9	-0.03	2.80	4	TM
CYGQXV	137.6	0.95	11.67	128.0	0.24	8.70	4	XX
FHMADG	113.6	-0.91	2.51	115.8	-0.58	3.36	4	TM
J4A7M4	130.0	0.36	10.32	126.4	0.14	3.63	4	TM
JA29VA	135.2	0.77	4.60	139.3	1.01	4.07	4	HY
JXN2ZV	121.2	-0.32	6.87	109.1	-1.02	21.50 H	4	SC
JYHUR8	145.0	1.52	6.20	138.9	0.98	4.84	4	HY
K48XUB	114.4	-0.85	11.42	117.2	-0.48	8.43	4	TM
LWNUM9	140.8	1.20	7.92	104.1	-1.36	24.65 H	4	SC
PCQPBB	97.2	-2.17 *	3.96	94.6	-2.00 *	2.21	4	TM
RH3MUF	132.0	0.52	9.30	122.5	-0.12	9.02	4	TM
TN6U9H	113.6	-0.91	5.41	114.8	-0.64	1.56 L	4	TM
TY4P8D	123.8	-0.12	3.93	134.0	0.65	8.73	4	HZ
W228X6	116.2	-0.70	4.09	117.5	-0.46	4.93	4	TM
XQWL7W	172.8	3.67 X	4.66	152.6	1.90 *	16.85	4	HY
ZKJP9Z	114.5	-0.84	3.56	125.0	0.05	18.14	4	TM
ZWVX36	126.0	0.05	8.57	125.1	0.05	0.89 L	4	TM

Consensus (All Labs) Results

Month Mean	125.30	Grand Mean	124.31
Avg SD	6.87	Avg SD Months	9.86
SD btwn Labs	12.93	SD btwn Labs	14.87
Labs Incl	22	Labs Incl	23

Consensus By Method

Test Method	Group Mean	SD btwn Group	Difference from Grand Mean	Labs Included
Scott Bond Type	123.75	13.00	1.55	19
Modified Scott Bond Mechanics	141.80	0.00	16.50	1

Analysis Notes

A3P6NJ - Method used is not covered in this test. Data excluded from consensus calculation.



Containerboard Interlaboratory Testing Program
Analysis 231
Internal Bond, 42 lb Linerboard - 42H
TAPPI Official Test Method T569

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

HY	Huygen Digitized Scott Internal Bond Tester	HZ	Huygen Internal Bond Tester with AccuPress
LZ	L&W (model not specified)	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 - 42H
 TAPPI Official Test Method T815

Report #636 (K)
September 2022

WebCode	Monthly Results			Cumulative Results			
	Mean	CPV	SD	Mean	CPV	SD Months	Months
23JRUB	29.0	0.53	1.58	28.8	0.41	0.28	2
3TP9KU	25.2	-1.33	2.68	27.6	-0.17	3.39	2
6JELT7	28.3	0.19	1.17	28.9	0.44	0.82	2
8FN4JJ	27.5	-0.20	4.85	26.8	-0.55	0.99	2
94QFBM	31.2	1.60	2.59	30.9	1.41	0.41	2
9BTMQQ	19.8	-3.97 X	1.48	20.5	-3.54 X	0.99	2
9CKMQM	27.2	-0.35	4.82	26.3	-0.78	1.27	2
A3P6NJ	19.5	-4.11 X	5.05	23.3	-2.21 *	5.37	2
BHJUKF	26.0	-0.94	1.58	27.0	-0.45	1.41	2
C29PCU	27.7	-0.11	3.27	26.6	-0.64	1.56	2
C69Z8U	27.8	-0.06	1.10	28.3	0.17	0.71	2
ETCPWR	25.6	-1.13	2.30	26.1	-0.88	0.71	2
FHMADG	28.4	0.24	4.77	29.8	0.89	2.01	2
HGHPMJ	29.3	0.67	2.71	30.2	1.09	1.36	2
J4A7M4	28.2	0.14	2.95	29.5	0.74	1.84	2
JA29VA	28.0	0.04	0.71	27.9	-0.02	0.14	2
JYHUR8	23.8	-2.01 *	3.35	25.2	-1.31	1.98	2
K48XUB	24.4	-1.72	1.95	23.7	-2.02 *	0.99	2
LWNUM9	30.6	1.31	2.07	29.6	0.79	1.41	2
PCQPBB	26.0	-0.94	2.55	24.9	-1.45	1.56	2
PWPXLZ	29.2	0.63	4.59	30.5	1.21	1.84	2
RH3MUF	29.0	0.53	2.45	27.3	-0.31	2.40	2
RXWXVZ	27.8	-0.06	0.45 L	27.6	-0.17	0.28	2
TKA337	27.8	-0.06	3.70	30.9	1.40	4.38	2
TN6U9H	30.1	1.05	4.54	29.0	0.50	1.50	2
U6TH3D	27.0	-0.45	1.41	27.1	-0.40	0.14	2
W228X6	33.2	2.58 *	1.30	31.8	1.83	1.98	2
W4RBNQ	30.3	1.16	0.51 L	30.0	0.95	0.49	2
XQWL7W	28.0	0.04	2.45	27.9	-0.02	0.14	2
Z8UQJH	26.7	-0.60	1.20	27.5	-0.24	1.06	2
ZZD84P	26.4	-0.74	2.07	27.5	-0.21	1.56	2

Consensus (All Labs) Results			
Month Mean	27.92	Grand Mean	27.95
Avg SD	2.80	Avg SD Months	1.88
SD btwn Labs	2.05	SD btwn Labs	2.10
Labs Incl	29	Labs Incl	30



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

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

ZZ Instruments No Longer Tracked



Containerboard Interlaboratory Testing Program
Analysis 237

Report #636 (K)
September 2022

Air Resistance, 42 Ib Linerboard - 42H

TAPPI Official Test Method T460

WebCode	Monthly Results				Cumulative Results				
	Mean	CPV	SD		Mean	CPV	SD	Months	Inst
23JRUB	37.3	3.68 X	8.84	H	33.6	1.03	2.53	4	TP
2JBHZ6	32.5	0.33	1.46		32.3	0.21	1.41	4	LA
2QPFDQ	31.5	-0.38	1.12		31.5	-0.31	0.01	2	LA
3GXEET_AL	33.4	0.95	2.17		32.3	0.16	1.00	4	XX
3TP9KU	31.3	-0.54	1.66		30.6	-0.92	0.71	4	LP
6JELT7	31.9	-0.13	2.56		32.4	0.23	0.79	4	TP
6Y6LJ6	33.7	1.16	4.92	H	33.8	1.12	1.16	4	GG
8FN4JJ	30.6	-1.03	2.68		30.7	-0.84	0.85	4	LA
94QFBM_AL	33.5	0.98	2.01		32.9	0.60	1.08	4	XX
9BTMQQ	31.2	-0.61	3.38		31.2	-0.52	2.47	4	TD
9CKMQM	29.8	-1.60	1.15		31.9	-0.10	2.07	4	LP
A3P6NJ_AL	35.1	2.18 *	0.58	L	34.6	1.69	1.78	4	AL
BHJUKF_AL	30.7	-0.94	1.54		31.0	-0.62	0.55	4	AL
C29PCU	31.8	-0.19	2.30		32.1	0.06	1.23	4	LP
CVLW3F	28.9	-2.27 *	1.57		28.3	-2.35 *	1.77	3	LA
CWDX2C_AL	33.1	0.73	2.10		32.8	0.51	0.30	L 4	AL
ETCPWR	31.7	-0.26	3.80		31.7	-0.20	0.00	1	XX
FHMADG_AL	32.5	0.29	3.28		32.4	0.24	0.83	4	AL
HGHPMJ_AL	31.5	-0.40	1.51		29.3	-1.72	1.77	4	AL
J4A7M4	30.5	-1.13	3.55		32.1	0.05	2.27	4	GA
JA29VA	31.3	-0.53	1.53		31.5	-0.33	0.93	4	LP
JVJHW8	32.1	0.00	4.27	H	30.9	-0.70	1.56	3	GG
JYHUR8	30.7	-1.00	4.23	H	32.0	-0.01	1.07	4	TP
JYHUR8_AL	31.7	-0.29	0.98	L	31.5	-0.35	0.42	4	XX
K48XUB_AL	32.5	0.32	1.33		32.5	0.30	0.64	3	AL
KE7D2Z	32.5	0.31	1.51		32.9	0.59	0.33	4	LP
LWNUM9_AL	34.3	1.58	1.89		32.0	0.01	1.65	4	AL
M4HCFB	26.7	-3.81 X	3.16		28.1	-2.54 *	2.25	4	XX
PCQPBB_AL	33.2	0.83	1.38		32.7	0.46	1.91	4	AL
PWPXLZ	34.3	1.61	2.21		34.6	1.63	0.95	4	GA
QVWGQH	31.1	-0.66	0.86	L	27.9	-2.66 *	7.94	H 4	TD
RB6TX3_AL	34.1	1.43	1.68		33.8	1.13	0.54	3	AL
RH3MUF	30.8	-0.87	2.01		33.9	1.18	4.26	2	LP
RH3MUF_AL	34.7	1.85	2.27		35.1	1.95 *	0.54	4	AL
RXWXVZ	31.8	-0.19	2.15		31.8	-0.17	0.24	L 4	LA
TKA337_AL	33.0	0.63	4.03	H	32.4	0.24	1.06	4	AL
TN6U9H_AL	33.3	0.89	0.85	L	32.3	0.15	0.89	4	AK
W228X6_AL	33.1	0.72	2.41		33.2	0.75	0.55	4	AL
W4667C	30.6	-1.05	2.35		32.4	0.22	1.32	4	LA



Containerboard Interlaboratory Testing Program
Analysis 237

Report #636 (K)
September 2022

Air Resistance, 42 lb Linerboard - 42H

TAPPI Official Test Method T460

WebCode	Monthly Results			Cumulative Results				
	Mean	CPV	SD	Mean	CPV	SD Months	Months	Inst
XFDARX	30.5	-1.12	1.84	31.5	-0.33	0.91	4	LA
XQWL7W	31.3	-0.55	2.50	32.8	0.49	1.18	4	LP
ZUCTMU	32.0	-0.08	3.22	31.9	-0.05	0.63	4	LP
ZZD84P	30.7	-0.95	1.54	31.6	-0.28	0.97	4	LP

Consensus (All Labs) Results			
Month Mean	32.07	Grand Mean	32.01
Avg SD	2.43	Avg SD Months	1.88
SD btwn Labs	1.41	SD btwn Labs	1.56
Labs Incl	41	Labs Incl	43

Key to Instrument Codes Reported by Participants

- | | |
|-------------------------------------------------------|---------------------------------------------------------|
| AK L & W Autoline 300 | AL L & W Autoline 400 |
| GA Gurley Precision #4340 Automatic Densometer | GG Gurley Precision #4320 Densometer |
| LA L&W Autoline (237 Enrollment) | LP L&W Air Permeance Tester SE 166 |
| TD TMI Gurley Densometer | TP Technidyne Profile/ plus Roughness & Porosity |
| XX Instrument make/model not specified by lab | |



Containerboard Interlaboratory Testing Program
 Analysis 240
Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM12
 TAPPI Official Test Method T809

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB	53.2	55.1	54.2	No DATA	54.1	-1.42	4.4	1.0	54.8	-1.29	3.5	1.5	15	LD
2JBHZ6	60.6	60.7	54.1	57.4	58.2	0.00	3.8	3.2	59.2	0.47	4.5	2.5	16	TU
3GXEET	60.1	58.3	56.9	59.0	58.6	0.13	4.9	1.4	58.4	0.16	4.5	2.6	16	LD
4BK26T	61.6	64.0 H	65.7 X	66.3 X	64.4	2.16 *	5.3	2.1	63.3	2.12 *	4.7	2.1	16	TX
4BMQAP	57.3 L	57.2	57.2	56.9	57.1	-0.37	2.3	0.2 L	56.8	-0.47	2.5	0.7	16	EN
4L9RVR	55.0 L	56.2	54.8	55.1	55.3	-1.03	2.8	0.6	55.6	-0.95	2.7	0.8	16	LD
6JELT7	59.0 L	58.2	58.0	58.4	58.4	0.08	3.0	0.4	59.7	0.66	4.1	1.6	16	LC
84EJ4X	57.8	57.1 L	57.2	57.1	57.3	-0.32	1.8	0.4	56.7	-0.54	1.8	0.5 L	16	MB
8EUF2N	58.2	56.8	58.9	60.4	58.6	0.14	3.5	1.5	58.4	0.15	3.9	1.5	12	LD
8FN4JJ	58.0	59.1	58.5	55.6	57.8	-0.14	4.2	1.5	56.6	-0.55	4.5	1.8	16	MB
8HVJWG	58.6	58.2	57.8	58.9	58.4	0.06	3.3	0.5	58.5	0.20	3.1	0.5 L	16	LC
9CKMQM	61.2	61.1	60.9	61.6	61.2	1.05	3.7	0.3 L	61.0	1.19	3.8	1.6	16	LD
9GKMDX	58.7	57.9	60.2	59.3	59.0	0.30	2.9	1.0	59.0	0.38	3.7	2.3	16	LD
A3P6NJ	56.1	51.5 *	56.0	53.8 *	54.4	-1.34	3.1	2.1	55.1	-1.17	2.8	1.9	16	LD
A9EHRR	59.9 L	59.3 L	60.8 L	59.4 L	59.8	0.58	1.1	0.7	60.5	1.01	1.4	1.3	16	XX
AGAH8K	58.1 L	57.8 L	58.0 L	58.0	58.0	-0.08	1.5	0.1 L	58.1	0.04	1.7	0.2 L	16	LD
BHJUKF	58.9	65.6 *	61.6	62.1	62.0	1.35	4.2	2.8	60.6	1.02	4.3	2.5	16	LZ
C29PCU	59.8	61.5	62.1	59.0	60.6	0.84	3.2	1.4	60.0	0.77	3.7	1.9	16	LZ
CVLW3F	53.6	54.8	53.8	54.1	54.0	-1.45	3.7	0.5	47.8	-4.06 X	3.1	9.3 H	16	LD
DXN299	58.4	58.1 H	57.8 H	60.1	58.6	0.14	5.8	1.1	59.3	0.52	5.6	1.7	16	TG
ETCPWR	61.5	63.2	59.8	57.7	60.5	0.82	4.7	2.3	61.2	1.26	4.3	1.6	16	LZ
FDCYN9	64.6 *	61.0	62.0	62.5	62.5	1.51	3.3	1.5	61.6	1.42	3.5	2.0	16	LD
FHMADG	58.5	58.5 H	56.9	56.4	57.6	-0.22	4.6	1.1	57.9	-0.03	4.1	1.5	16	LD
HF9EVM	56.3	56.3	57.3	58.6	57.1	-0.38	3.5	1.1	55.8	-0.89	2.9	1.8	16	TU
J4A7M4	58.7	58.3	59.2	58.5 H	58.7	0.17	4.7	0.4	57.0	-0.39	3.9	1.9	16	LD
JA29VA	No DATA	No DATA	No DATA	56.9	56.9	-0.47	2.1	0.0	59.1	0.45	2.1	1.6	4	LD
JJP26L	58.4	58.7	58.8	58.2	58.5	0.11	2.3	0.3 L	58.5	0.19	2.4	0.3 L	16	LD
JXN2ZV	57.7	55.9	52.2 *	58.7	56.1	-0.73	4.7	2.9	55.5	-1.00	4.2	2.1	16	LC
JYHUR8	53.9	59.2	56.1	58.0	56.8	-0.50	3.3	2.3	57.9	-0.03	3.2	1.9	16	LD
M4HCFB	57.0	57.9	54.1	56.6	56.4	-0.63	2.9	1.6	53.2	-1.90	3.4	2.8	16	LD
PCQPBB	65.0 *	72.6 X	58.3	57.7	63.4	1.82	4.5	7.0 H	62.0	1.59	3.9	5.4 H	15	LC
PDGT3X	59.1	58.3	58.6	58.0	58.5	0.11	3.2	0.5	58.5	0.21	3.2	0.5 L	16	LD
PUNR7U	58.3	58.0	58.0 H	60.0 H	58.5	0.12	6.8	1.0	58.2	0.06	6.0	1.5	16	TH
PWPXLZ	55.7	55.2	58.7	57.4	56.8	-0.50	3.2	1.6	58.0	0.01	3.2	1.6	16	LZ
PYVLY6	58.3 L	58.4 L	58.2 L	58.5 L	58.4	0.06	0.8	0.1 L	58.7	0.29	0.8	0.4 L	16	LD



Containerboard Interlaboratory Testing Program
Analysis 240

Report #636 (K)
September 2022

Flat Crush Strength (CMT), 26 lb Corrugating Medium - CM12

TAPPI Official Test Method T809

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
QC2RXA	58.1	56.9	57.6	58.1	57.7	-0.18	3.7	0.5	55.9	-0.83	3.4	2.2	16	EM
QE7JM3	60.4 H	61.0	61.9	58.9	60.6	0.83	5.3	1.3	58.9	0.35	5.0	2.7	16	LD
QVWGQH	50.9 *	52.1 *	53.9	48.7 X	51.4	-2.37 *	3.0	2.2	51.4	-2.64 *	3.1	1.7	16	TH
RH3MUF	51.6 *	51.2 *	52.5 *L	51.4 X	51.7	-2.29 *	2.6	0.6	54.2	-1.53	3.3	4.5 H	16	LD
RWLB4D	58.6	63.7	59.0	63.8 *	61.3	1.08	4.6	2.9	56.4	-0.64	4.2	4.7 H	12	LD
RXWXVZ	58.4 L	58.8	58.7 L	58.4 L	58.6	0.13	1.4	0.2 L	58.3	0.11	1.7	0.6	16	LD
TQFPYG	56.0	55.7	59.1	58.7	57.4	-0.29	3.3	1.8	58.0	0.00	3.2	1.4	16	LZ
TY4P8D	59.7	56.8	59.5	58.0	58.5	0.10	2.5	1.4	58.3	0.11	3.0	1.4	16	LD
W4667C	46.9 XL	48.5 X	54.5	53.2 *	50.7	-2.61 *	3.1	3.7 H	51.2	-2.70 *	3.1	2.5	16	MB
W4RBNQ	56.9	59.0	59.1	59.6	58.6	0.16	3.9	1.2	59.6	0.62	3.8	1.7	12	EN
WJNLKA	60.3	63.5	58.8 L	60.5	60.8	0.90	2.4	2.0	58.1	0.02	3.3	3.1	12	LD
WRX2YW	55.1	58.0	55.7	57.6	56.6	-0.56	3.0	1.4	57.2	-0.34	2.9	1.5	16	LD
XEL9T2	59.9	60.9	61.6	62.6	61.3	1.08	3.5	1.2	59.2	0.49	3.0	1.6	16	LC
XQWL7W	55.8	56.7	54.2	54.9	55.4	-0.98	3.7	1.1	56.2	-0.74	3.9	1.6	16	LD
Z8UQJH	63.7	62.5	61.4	64.6 *	63.0	1.70	3.4	1.4	62.8	1.92	4.2	1.5	16	LD
ZUCTMU	58.1	62.0	60.1	58.0	59.5	0.47	3.3	1.9	58.0	0.00	3.1	1.9	16	LD
ZWVX36	59.9	60.9	61.2	60.6	60.7	0.86	3.5	0.6	60.1	0.82	3.5	1.1	16	LC

Consensus (All Labs) Results													
Wk Mean	58.20	58.51	57.91	58.48	Month Mean	58.19		Grand Mean	58.01				
Avg SDr	3.78	3.42	3.82	3.56	Avg SD	3.64		Avg SD	3.59				
SD btwn Labs	2.84	3.07	2.61	2.37	SD btwn Labs	2.86		SD btwn Labs	2.51				
Labs Includ	50	49	50	48	SD btwn Wks	1.82		SD btwn Wks	2.06				
Labs Exclcd	1	2	1	3	Labs Includ	52		Labs Includ	51				
Labs not Rcvd	1	1	1	1									

Key to Instrument Codes Reported by Participants

EM	Emerson 1200 Series	EN	Emerson 2200 Series
LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LZ	L&W Crush Tester (model not specified)	MB	Messmer Buchel K440
TG	TMI Compression Tester, Model 17-10	TH	TMI Compression Tester, Model 17-76
TU	TMI Universal Crush Tester (TMI K440)	TX	TMI Crush Tester (model not specified)
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program
Analysis 250

Report #636 (K)
September 2022

Fluted Edge Crush Strength (FCF), 26 lb Corrugating Medium - CM12

TAPPI Official Test Method T843

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
23JRUB	69.0	68.6	70.4	NO DATA	69.3	0.16	3.7	1.0	68.9	0.16	4.0	1.0	15	LD
6JELT7	69.1	70.7	70.3	72.4	70.6	0.89	3.8	1.4	70.7	0.80	3.2	2.1	16	LC
84EJ4X	68.2	68.5	68.8	L 68.8 L	68.6	-0.27	1.5	0.3	69.0	0.17	1.7	0.6	L 16	MB
8HVJWG	68.4	69.1	68.9	68.0	68.6	-0.26	3.5	0.5	68.5	0.01	3.2	0.5	L 16	LD
9CKMQM	67.1	68.6	H 63.3 *H	70.3	67.3	-0.98	5.4	3.0	67.7	-0.30	4.7	2.2	16	LD
A3P6NJ	67.9	69.4	70.4	66.7	68.6	-0.28	3.5	1.6	70.1	0.57	3.0	2.7	16	LD
A9EHRR	L 71.4 L	L 69.4 L	L 69.5 L	L 68.3 L	69.6	0.32	1.1	1.3	71.0	0.90	1.0	1.6	16	XX
AGAH8K	69.3	69.1	L 69.0 L	69.0	69.1	0.02	1.6	0.1 L	68.9	0.15	1.7	0.3	L 16	LD
BHJUKF	67.9	68.6	65.8	*H 62.2 *H	66.1	-1.67	4.3	2.9	65.6	-1.06	4.1	3.4	16	LZ
CVLW3F	64.9	XH 55.2 XH	XH 55.7 XH	XH 53.1 XH	57.2	-6.71 X	7.5	5.2 H	61.7	-2.45 *	7.0	6.9	H 16	LD
E4EM62	65.0	70.2	67.2	67.0	67.3	-0.98	3.9	2.1	67.9	-0.24	3.5	1.3	16	LD
FHMADG	65.0	67.1	69.3	68.0	67.4	-0.97	3.4	1.8	67.2	-0.46	3.5	2.2	16	LD
JYHUR8	72.4	71.7	71.0	71.8	71.7	1.51	3.4	0.6	71.1	0.94	3.4	1.1	16	LD
PCQPBB	71.0	62.5 X	73.0	69.2	68.9	-0.08	4.5	4.6 H	70.0	0.55	4.8	6.8	H 15	LC
RH3MUF	69.4	70.9	70.8	70.5	70.4	0.76	3.1	0.7	62.7	-2.10 *	4.8	5.7	16	LD
RXWXVZ	L 68.9 L	69.2	L 68.6 L	69.5	69.1	-0.01	1.5	0.4	68.6	0.02	1.7	0.6	L 16	LD
TQFPYG	67.8	* 64.8 *	66.0	64.6	65.8	-1.86	4.6	1.5	66.3	-0.81	3.6	1.2	16	LZ
WJNLKA	69.9	70.0	72.1	71.7	70.9	1.06	2.6	1.1	71.6	1.13	3.0	1.7	12	LD
XQWL7W	71.2	* 73.5 *	71.0	72.5	72.1	1.70	3.4	1.1	71.9	1.22	3.9	1.7	16	LD
ZUCTMU	72.4	72.0	70.1	68.5	70.7	0.94	3.7	1.8	70.7	0.79	3.5	1.7	16	LD

Consensus (All Labs) Results									
Wk Mean	68.81	69.51	69.23	68.84	Month Mean	69.06	Grand Mean	68.51	
Avg SDr	3.26	3.30	3.80	3.61	Avg SD	3.48	Avg SD	3.71	
SD btwn Labs	2.24	1.93	2.33	2.67	SD btwn Labs	1.76	SD btwn Labs	2.76	
Labs Incl	20	18	19	18	SD btwn Wks	1.81	SD btwn Wks	2.98	
Labs Excl	0	2	1	1	Labs Incl	19	Labs Incl	20	
Labs not Rcvd	0	0	0	1					

Key to Instrument Codes Reported by Participants

LC	L&W Crush Tester 48	LD	L&W Crush Tester 248
LZ	L&W Crush Tester (model not specified)	MB	Messmer Buchel K440
XX	Instrument make/model not specified by lab		



Containerboard Interlaboratory Testing Program
 Analysis 255
Ring Crush (RCT), 26 lb Corrugating Medium - CM12
 TAPPI Official Test Method T822

Report #636 (K)
September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					Inst
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	
23JRUB	39.3 X	43.7	43.9	41.5	42.1	-1.15	3.1	2.2	42.3	-1.10	3.3	1.3	16	LD
2QPFDQ	42.8	44.8	45.5	41.5	43.6	-0.20	2.4	1.8	44.5	0.50	2.8	1.5	16	LD
4BK26T	42.6	44.0	40.6	44.1	42.8	-0.71	2.8	1.6	41.0	-2.03 *	3.1	2.4	16	LZ
4L9RVR	47.2 *	45.8	46.4	44.9	46.1	1.29	3.2	1.0	44.8	0.73	2.9	1.0	16	LC
4QKQDC	44.1	43.0 L	46.4	46.3	44.9	0.60	3.4	1.7	45.1	0.90	3.4	2.2	12	LD
6JELT7	44.7	46.1	43.6	48.9 *	45.8	1.13	3.2	2.3	45.5	1.20	3.5	1.8	16	LC
7QVEJV	42.6	41.3	41.2	43.5	42.2	-1.11	2.5	1.1	43.3	-0.35	2.7	1.7	16	TH
84EJ4X	43.5	43.7	43.1	43.6	43.5	-0.30	1.7	0.3	43.4	-0.29	1.7	0.3 L	16	MB
8EUF2N	41.8	43.9 H	40.9	40.1	41.7	-1.41	4.4	1.7	42.2	-1.17	3.9	2.0	12	LD
8FN4JJ	46.4	No DATA	No DATA	No DATA	46.4	1.52	2.9	0.0	43.4	-0.27	3.7	2.6	12	MB
9GKMDX	43.7	46.2	44.4	44.8	44.8	0.49	3.5	1.1	45.6	1.26	3.9	1.5	16	LZ
A3P6NJ	44.5	43.5	41.0	44.1	43.3	-0.43	2.4	1.6	44.6	0.54	2.4	1.7	16	LD
HF9EVM	41.7	38.5 X	42.8	40.1	40.8	-1.97 *	3.1	1.9	42.2	-1.16	2.5	1.6	16	TU
JJP26L	43.6	43.5	43.9	43.6	43.6	-0.20	2.4	0.2 L	43.8	-0.01	2.3	0.2 L	16	LD
JYHUR8	44.4	42.7	41.1	41.8	42.5	-0.91	1.7	1.4	42.4	-0.99	2.9	1.7	16	LD
M4HCFB	45.9	47.8 *	46.5	45.6	46.4	1.51	2.8	1.0	46.2	1.76	3.0	1.6	16	LD
PWPXLZ	44.4	41.6	42.7	42.8	42.9	-0.66	3.7	1.2	43.3	-0.38	3.1	1.1	16	LD
PYVLY6	45.4 L	45.3 L	45.2 L	45.3 L	45.3	0.82	0.5	0.1 L	45.4	1.13	0.5	0.1 L	16	LD
QC2RXA	45.4 H	47.7 *	46.3	45.0	46.1	1.30	3.9	1.2	45.3	1.07	3.7	1.0	16	EM
RWLB4D	45.9	42.2	46.2	46.5	45.2	0.76	3.4	2.0	42.9	-0.65	2.9	3.2	12	EM
TY4P8D	44.5	44.5	41.7	44.9	43.9	-0.05	3.2	1.5	42.9	-0.69	3.3	1.8	16	LD
XEL9T2	37.8 X	34.8 X	33.6 X	34.9 XH	35.3	-5.34 X	4.3	1.8	36.2	-5.55 X	4.6	2.4	16	XX
XQWL7W	44.8	44.8	44.5	43.3	44.4	0.24	2.9	0.7	44.9	0.77	3.2	1.5	16	XX
ZUCTMU	43.5 H	44.1	43.8	40.8	43.1	-0.57	3.7	1.5	42.7	-0.77	3.9	1.8	16	LD

Consensus (All Labs) Results														
Wk Mean	44.25	44.30	43.71	43.77	Month Mean	43.97			Grand Mean	43.81				
Avg SDr	2.78	3.30	3.10	2.86	Avg SD	3.02			Avg SD	3.09				
SD btwn Labs	1.45	1.74	2.02	2.22	SD btwn Labs	1.63			SD btwn Labs	1.38				
Labs Incl	22	21	22	22	SD btwn Wks	1.44			SD btwn Wks	1.71				
Labs Excl	2	2	1	1	Labs Incl	23			Labs Incl	23				
Labs not Rcvd	0	1	1	1										



Containerboard Interlaboratory Testing Program
Analysis 255
Ring Crush (RCT), 26 lb Corrugating Medium - CM12
TAPPI Official Test Method T822

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

EM	Emerson 1200 Series	LC	L&W Crush Tester 48
LD	L&W Crush Tester 248	LZ	L&W Crush Tester (model not specified)
MB	Messmer Buchel K440	TH	TMI Compression Tester, Model 17-76
TU	TMI Universal Crush Tester (TMI K440)	XX	Instrument make/model not specified by lab



Containerboard Interlaboratory Testing Program

Analysis 261

STFI, 26 lb Corrugating Medium - CM12

TAPPI Official Test Method T826

Report #636 (K)

September 2022

WebCode	Weekly Means				Monthly Results				Cumulative Results					
	Week 1	Week 2	Week 3	Week 4	Mean	CPV	SD	SD Wks	Mean	CPV	SD	SD Wks	Wks	Inst
23JRUB	13.8	13.2 L	13.4	13.7 H	13.5	-0.61	1.1	0.3	13.5	-0.65	1.1	0.4	16	LB
2JBHZ6	11.6 *	12.9	13.1	11.6 X	12.3	-3.26 X	1.2	0.8	13.1	-1.36	1.2	0.8	16	BK
2QPFQD	14.8	13.9	15.0	15.1 H	14.7	1.93 *	1.3	0.5	14.5	1.43	1.2	0.6	16	LZ
4BMQAP	12.8	13.7	13.3	13.0	13.2	-1.29	0.9	0.4	13.4	-0.86	1.0	0.3	16	LH
4L9RVR	15.1	14.8	14.1	14.4	14.6	1.75	1.0	0.4	14.0	0.49	1.2	0.6	16	LH
4QKQDC	14.2	14.6	14.3	14.2	14.3	1.11	1.1	0.2	14.5	1.43	1.1	0.4	16	XX
6JELT7	13.8	14.0	14.0	14.5	14.1	0.59	1.1	0.3	14.0	0.46	1.1	0.4	16	LU
8FN4JJ	14.3	13.6	15.0 H	14.4	14.3	1.14	1.3	0.6	14.4	1.24	1.1	0.6	15	LA
8HVJWG	13.1	13.8	14.1	14.4	13.9	0.14	0.9	0.6	13.7	-0.17	0.9	0.4	16	LB
A3P6NJ	13.5	14.5	13.7	13.6 L	13.8	0.04	0.9	0.4	13.8	0.00	1.0	0.4	16	LA
A9EHRR	12.8	13.1	12.5	13.4	12.9	-1.88	0.8	0.4	12.8	-2.02 *	0.9	0.8	16	XX
AGAH8K	13.6 L	13.8 L	13.8 L	13.7 L	13.7	-0.13	0.3	0.1 L	13.7	-0.12	0.3	0.1 L	16	LA
AXGQZT	14.1 L	13.7	13.4	12.5 *	13.4	-0.82	0.8	0.7	13.4	-0.78	0.9	0.6	16	LA
CYGQXV	13.9	13.7	13.6	13.9	13.8	-0.09	1.0	0.2	13.6	-0.34	1.0	0.3	16	LA
DXN299	13.4	13.7	14.0	14.3 L	13.9	0.12	1.1	0.4	13.5	-0.52	1.1	0.4	16	TT
FHMADG	15.6 *	15.2 *	15.8 *	15.3 *	15.5	3.59 X	1.1	0.3	15.1	2.49 *	1.1	0.6	16	LA
HEVU3C	13.2 H	12.8	12.4 *	13.5	12.9	-1.83	1.2	0.5	13.7	-0.12	1.0	0.9	16	LA
J4A7M4	13.0	13.6 H	14.6	14.1	13.8	0.05	1.3	0.7	13.6	-0.44	1.2	0.4	16	LU
K48XUB	14.1 L	13.6 L	14.6 L	13.4 L	13.9	0.25	0.1	0.6	14.3	0.93	1.1	0.5	16	LA
PDGT3X	12.8	13.9	13.5	14.0	13.5	-0.58	0.8	0.6	13.7	-0.23	0.9	0.5	16	LB
PWPXLZ	13.3	13.9	14.3	13.5	13.8	-0.10	1.0	0.4	13.6	-0.41	1.0	0.4	16	LZ
QVWGQH	13.9	13.8	14.9	13.0	13.9	0.21	1.1	0.8	13.7	-0.19	1.0	0.6	16	TX
RH3MUF	13.3	13.3	13.2	13.3	13.3	-1.11	1.2	0.1 L	13.1	-1.27	1.1	0.3	16	LA
RXWXVZ	14.3	14.3	14.1	14.2	14.2	0.88	1.3	0.1	13.7	-0.17	1.1	0.4	16	LB
W4667C	13.1	13.4 H	13.9	13.5	13.5	-0.66	1.0	0.3	13.7	-0.10	1.1	0.4	16	LA
Z8UQJH	14.2 L	14.4 L	14.4	13.9	14.2	0.89	0.6	0.2	14.4	1.28	0.6	0.5	16	LH

Consensus (All Labs) Results														
Wk Mean	13.67	13.80	13.96	13.88	Month Mean	13.80			Grand Mean	13.79				
Avg SDr	1.02	1.04	1.01	0.99	Avg SD	1.01			Avg SD	1.04				
SD btwn Labs	0.83	0.57	0.78	0.65	SD btwn Labs	0.47			SD btwn Labs	0.51				
Labs Incl	26	26	26	25	SD btwn Wks	0.44			SD btwn Wks	0.51				
Labs Excl	0	0	0	1	Labs Incl	24			Labs Incl	26				
Labs not Rcvd	0	0	0	0										



Containerboard Interlaboratory Testing Program
Analysis 261
STFI, 26 lb Corrugating Medium - CM12
TAPPI Official Test Method T826

Report #636 (K)
September 2022

Key to Instrument Codes Reported by Participants

BK	Buchel Strip Compression Tester BK-155	LA	L&W Autoline
LB	L&W Model 152	LH	L&W 282
LU	L&W 52 without moisture correction (was 53)	LZ	L&W (model not specified)
TT	TMI Short Span Compression, 17-34 (MB K455)	TX	TMI (model not specified)
XX	Instrument make/model not specified by lab		

End of Report