

REPORT <<< A >>> (SUMMARY)

ROUND: 2023-1
ISSUED BY: SMITHERS

No.	PROPERTY	METHOD	LEVEL	UNIT	CEPI-A MEAN	SD WITHIN	SD BETWEEN	NUMBER OF QL's	WARNING LIMITS		ACTION LIMITS	
1.3	Grammage	ISO 536	1	g/m2	59.7	0.29	0.29	13	59.1	60.3	59.0	60.5
1.3	Grammage	ISO 536	2	g/m2	99.2	0.58	0.30	13	98.5	99.8	98.4	99.9
1.3	Grammage	ISO 536	3	g/m2	245	1.2	0.9	12	243	247	243	247
1.3	Grammage	ISO 536	4	g/m2	592	4.5	11.4	11	570	615	563	622
2.3	Tearing res. (Elmendorf)	ISO 1974	1	mN	332	13.3	10.7	9	311	354	304	360
2.3	Tearing res. (Elmendorf)	ISO 1974	2	mN	553	21.3	18.2	10	516	589	505	600
2.3	Tearing res. (Elmendorf)	ISO 1974	3	mN	1751	79	111	10	1530	1973	1464	2039
2.3	Tearing res. (Elmendorf)	ISO 1974	4	mN	2081	82	166	9	1749	2412	1649	2512
2.8	Flat crush res. after lab fluting	ISO 7263-1	1	N	297	12.0	13.9	5	269	325	261	333
2.8	Flat crush res. after lab fluting	ISO 7263-1	2	N	385	12.6	17.4	5	350	420	340	431
2.10	Puncture res.	ISO 3036	1	J	4.60	0.260	0.616	5	3.36	5.83	2.99	6.20
2.10	Puncture res.	ISO 3036	2	J	11.8	0.35	0.66	5	10.5	13.2	10.1	13.5
2.12	Folding endurance (Schopper)	ISO 5626	1	log10(n)	2.15	0.129	0.165	7	1.82	2.47	1.72	2.57
2.12	Folding endurance (Schopper)	ISO 5626	2	log10(n)	3.27	0.085	0.240	6	2.79	3.75	2.64	3.89
2.13	Folding endurance (Köhler-Molin)	ISO 5626	1	log10(n)	1.45	-	-	1	-	-	-	-
2.13	Folding endurance (Köhler-Molin)	ISO 5626	2	log10(n)	3.22	-	-	1	-	-	-	-
2.14	Bursting strength paper	ISO 2758	1	kPa	175	9.2	12.0	12	151	199	143	206
2.14	Bursting strength paper	ISO 2758	2	kPa	446	20.3	15.9	12	414	478	405	488
2.14	Bursting strength paper	ISO 2758	3	kPa	567	27.9	14.6	12	538	596	529	605
2.14	Bursting strength paper	ISO 2758	4	kPa	903	48.3	54.0	10	795	1011	762	1043
2.15	Bursting strength board	ISO 2759	2	kPa	460	25.8	38.3	9	383	537	360	560
2.15	Bursting strength board	ISO 2759	3	kPa	583	25.4	26.4	9	530	636	515	652
2.15	Bursting strength board	ISO 2759	4	kPa	923	68.2	54.2	10	814	1031	782	1064
2.15	Bursting strength board	ISO 2759	5	kPa	1145	62	43	10	1059	1231	1033	1257
2.18(a)	Tensile strength	ISO 1924-3	1	kN/m	1.81	0.049	0.048	8	1.71	1.90	1.68	1.93
2.18(a)	Tensile strength	ISO 1924-3	2	kN/m	5.85	0.151	0.196	7	5.46	6.24	5.34	6.36
2.18(a)	Tensile strength	ISO 1924-3	3	kN/m	14.8	0.41	0.62	7	13.6	16.0	13.2	16.4
2.18(b)	Tensile Strain	ISO 1924-3	1	%	3.93	0.338	0.292	8	3.35	4.52	3.17	4.69
2.18(b)	Tensile Strain	ISO 1924-3	2	%	2.09	0.138	0.131	7	1.83	2.35	1.75	2.43
2.18(b)	Tensile Strain	ISO 1924-3	3	%	2.16	0.128	0.556	8	1.05	3.27	0.72	3.61
2.18(c)	Tensile energy absorption (TEA)	ISO 1924-3	1	J/m²	54.0	5.73	2.57	8	48.8	59.1	47.3	60.6
2.18(c)	Tensile energy absorption (TEA)	ISO 1924-3	2	J/m²	80.5	7.90	2.02	6	76.5	84.5	75.2	85.8
2.18(c)	Tensile energy absorption (TEA)	ISO 1924-3	3	J/m²	181	14.8	13.8	6	153	209	145	217
2.18(d)	Tensile stiffness	ISO 1924-3	1	kN/m	211	5.6	20.5	7	170	252	158	264
2.18(d)	Tensile stiffness	ISO 1924-3	2	kN/m	612	10.1	73.9	7	465	760	420	805
2.18(d)	Tensile stiffness	ISO 1924-3	3	kN/m	1393	46	386	6	622	2164	390	2395
3.1	Bending stiffness resonance	ISO 5629	1	mNm	0.222	0.0161	0.0086	4	0.205	0.239	0.200	0.244
3.1	Bending stiffness resonance	ISO 5629	2	mNm	7.45	0.300	0.606	5	6.24	8.67	5.88	9.03
3.1	Bending stiffness resonance	ISO 5629	3	mNm	19.5	0.64	2.72	5	14.0	24.9	12.4	26.6
3.1	Bending stiffness resonance	ISO 5629	4	mNm	71.8	1.88	5.23	5	61.3	82.2	58.2	85.4
4.3	Roughness Parker Print-surf	ISO 8791-4	1	µm	1.05	0.054	0.070	5	0.91	1.19	0.87	1.23
4.3	Roughness Parker Print-surf	ISO 8791-4	2	µm	2.71	0.065	0.256	5	2.20	3.22	2.04	3.38
4.3	Roughness Parker Print-surf	ISO 8791-4	3	µm	6.14	0.197	0.901	5	4.34	7.94	3.80	8.49
8.2	Tissue, Tensile str. after imm. in	ISO 12625-5	1	N/m	30.0	1.99	2.15	8	25.6	34.3	24.4	35.5
8.2	Tissue, Tensile str. after imm. in	ISO 12625-5	2	N/m	65.0	3.01	2.37	9	60.3	69.8	58.9	71.2
8.5(a)	Tissue, Tensile strenath	ISO 12625-4	1	N/m	117	7.9	4.0	7	109	125	106	127

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No.	PROPERTY	METHOD	LEVEL	UNIT	CEPI-A MEAN	SD WITHIN	SD BETWEEN	NUMBER OF QL's	WARNING LIMITS		ACTION LIMITS	
8.5(a)	Tissue, Tensile strength	ISO 12625-4	2	N/m	451	19.0	17.2	8	416	485	406	495
8.5(b)	Tissue, Strain at break	ISO 12625-4	1	%	17.5	1.04	1.14	8	15.2	19.8	14.5	20.4
8.5(b)	Tissue, Strain at break	ISO 12625-4	2	%	15.2	0.68	0.96	8	13.3	17.1	12.7	17.7
8.7	Tissue, Grammage	ISO 112625-6	1	g/m ²	20.5	0.18	0.30	12	19.9	21.1	19.7	21.2
8.7	Tissue, Grammage	ISO 112625-6	2	g/m ²	53.3	0.26	0.36	12	52.6	54.1	52.4	54.3
10.3	Relative humidity	ISO 187	1	%	-1.82	0.00	1.45	8	-4.73	1.09	-5.60	1.96

Issued by Mr G. Collis

Date: 23-5-2023

for SMITHERS as a member of the
CEPI Comparative Testing Service