

REPORT <<< A >>> (SUMMARY)

ROUND: 2022-2
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/m ²	59.7	0.24	0.19	13	59.3	60.0	59.2	60.1
1.3	Grammage	ISO 536	2	g/m ²	99.0	0.66	0.24	12	98.6	99.5	98.4	99.7
1.3	Grammage	ISO 536	3	g/m ²	244	1.6	0.7	11	243	245	242	246
2.3	Tearing res. (Elmendorf)	ISO 1974	1	mN	326	13.9	15.1	9	296	357	287	366
2.3	Tearing res. (Elmendorf)	ISO 1974	2	mN	548	26.8	21.2	12	506	590	493	603
2.3	Tearing res. (Elmendorf)	ISO 1974	3	mN	1719	80	131	12	1457	1982	1378	2061
2.3	Tearing res. (Elmendorf)	ISO 1974	4	mN	1948	69	217	10	1514	2382	1384	2512
2.8	Flat crush res. after lab fluting	ISO 7263-1	1	N	136	4.5	46.4	6	43	229	15	256
2.8	Flat crush res. after lab fluting	ISO 7263-1	2	N	430	18.9	28.6	4	373	488	356	505
2.10	Puncture res.	ISO 3036	1	J	4.46	0.101	0.482	5	3.50	5.43	3.21	5.71
2.10	Puncture res.	ISO 3036	2	J	10.7	0.19	1.27	4	8.2	13.2	7.4	14.0
2.12	Folding endurance (Schopper)	ISO 5626	1	log10(n)	2.12	0.139	0.210	6	1.70	2.54	1.58	2.67
2.12	Folding endurance (Schopper)	ISO 5626	2	log10(n)	3.24	0.130	0.275	6	2.69	3.79	2.53	3.96
2.13	Folding endurance (Köhler-Molin)	ISO 5626	1	log10(n)	1.57	-	0.133	2	1.30	1.83	1.22	1.91
2.13	Folding endurance (Köhler-Molin)	ISO 5626	2	log10(n)	3.27	-	0.083	2	3.10	3.44	3.05	3.49
2.14	Bursting strength paper	ISO 2758	1	kPa	170	9.8	7.5	10	155	185	150	189
2.14	Bursting strength paper	ISO 2758	2	kPa	439	22.4	16.1	11	407	471	397	480
2.14	Bursting strength paper	ISO 2758	3	kPa	565	26.8	19.4	11	526	604	514	615
2.14	Bursting strength paper	ISO 2758	4	kPa	925	61.0	49.7	10	826	1025	796	1054
2.15	Bursting strength board	ISO 2759	1	kPa	210	-	36.5	3	137	284	116	305
2.15	Bursting strength board	ISO 2759	2	kPa	464	24.3	30.2	10	404	525	386	543
2.15	Bursting strength board	ISO 2759	3	kPa	589	29.9	32.7	10	524	654	504	674
2.15	Bursting strength board	ISO 2759	4	kPa	931	66.5	39.2	9	853	1010	829	1033
2.15	Bursting strength board	ISO 2759	5	kPa	1174	64	72	8	1030	1318	987	1361
2.18(a)	Tensile strength	ISO 1924-3	1	kN/m	1.81	0.057	0.086	8	1.64	1.98	1.58	2.03
2.18(a)	Tensile strength	ISO 1924-3	2	kN/m	5.85	0.179	0.257	8	5.34	6.36	5.18	6.52
2.18(a)	Tensile strength	ISO 1924-3	3	kN/m	15.1	0.44	0.72	8	13.6	16.5	13.2	17.0
2.18(b)	Tensile stretch	ISO 1924-3	1	%	3.80	0.409	0.400	8	3.00	4.60	2.76	4.84
2.18(b)	Tensile stretch	ISO 1924-3	2	%	2.15	0.094	0.252	7	1.65	2.65	1.49	2.80
2.18(b)	Tensile stretch	ISO 1924-3	3	%	2.18	0.115	0.503	8	1.17	3.19	0.87	3.49
2.18(c)	Tensile energy absorption (TEA)	ISO 1924-3	1	J/m ²	52.1	6.73	4.92	8	42.2	61.9	39.3	64.9
2.18(c)	Tensile energy absorption (TEA)	ISO 1924-3	2	J/m ²	83.4	6.40	6.86	8	69.6	97.1	65.5	101.2
2.18(c)	Tensile energy absorption (TEA)	ISO 1924-3	3	J/m ²	205	17.9	34.6	8	136	274	115	295
2.18(d)	Tensile stiffness	ISO 1924-3	1	kN/m	202	10.3	31.7	6	139	266	120	285
2.18(d)	Tensile stiffness	ISO 1924-3	2	kN/m	608	14.8	63.4	6	481	734	443	772
2.18(d)	Tensile stiffness	ISO 1924-3	3	kN/m	1537	32	91	4	1356	1719	1301	1773
3.1	Bending stiffness resonance	ISO 5629	1	mNm	0.229	0.0224	0.0288	5	0.171	0.286	0.154	0.304
3.1	Bending stiffness resonance	ISO 5629	2	mNm	7.62	0.284	1.248	6	5.12	10.11	4.37	10.86
3.1	Bending stiffness resonance	ISO 5629	3	mNm	35.3	1.09	3.35	5	28.6	42.0	26.6	44.0
3.1	Bending stiffness resonance	ISO 5629	4	mNm	72.6	2.74	7.53	6	57.5	87.6	53.0	92.2
4.3	Roughness Parker Print-surf	ISO 8791-4	1	µm	1.13	0.050	0.087	4	0.95	1.30	0.90	1.35
4.3	Roughness Parker Print-surf	ISO 8791-4	2	µm	3.28	0.112	0.867	7	1.54	5.01	1.02	5.53
4.3	Roughness Parker Print-surf	ISO 8791-4	3	µm	4.63	0.139	0.930	7	2.77	6.49	2.21	7.05
8.2	Tissue, Tensile str. after imm. in	ISO 12625-5	1	N/m	31.0	1.96	0.83	7	29.3	32.6	28.8	33.1
8.2	Tissue, Tensile str. after imm. in	ISO 12625-5	2	N/m	66.6	2.08	1.90	8	62.8	70.4	61.6	71.5
8.5(a)	Tissue, Tensile strength	ISO 12625-4	1	N/m	115	9.7	3.9	9	108	123	105	126

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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	453	18.4	15.0	8	423	483	414	492
8.5(b)	Tissue, Stretch at break	ISO 12625-4	1	%	17.7	1.12	0.58	8	16.5	18.8	16.2	19.2
8.5(b)	Tissue, Stretch at break	ISO 12625-4	2	%	15.5	0.70	0.86	8	13.8	17.2	13.3	17.8
8.7	Tissue, Grammage	ISO 112625-6	1	g/m ²	20.3	0.14	0.19	11	19.9	20.7	19.8	20.8
8.7	Tissue, Grammage	ISO 112625-6	2	g/m ²	53.9	0.18	0.43	9	53.0	54.7	52.8	55.0
10.3	Relative humidity	ISO 187	1	%	0.05	0.00	0.51	6.00	-0.97	1.06	-1.26	1.37

Signed by Mr G. Collis

Date: 27-10-2022

for SMITHERS as a member of the
CEPI Comparative Testing Service