



Ophthalmic Testing Report

Report Number: R-20160606-034
Scratch Resistance

Prepared for:

Chiaro
a Gradus Group Company
375 West 35th Street
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June 15, 2016

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Project Definition and Scope

Twelve lens filters were submitted for Scratch Resistance testing. The test outlined was performed on all samples. The samples were received on June 6, 2016.

Sample Identification

The samples are labeled as indicated in the table below.

Sample Number	Client Label	Pass/Fail
S-160606-054	Class A (99-UVBTS72)	Pass
S-160606-055	Class AB (99-UVBT72)	Pass
S-160606-056	Class B (98-UVATS72)	Pass
S-160606-057	New Class C (98-UVAT72)	Pass
S-160606-058	Class D (95-UVAT72)	Pass
S-160606-059	Class E (90-UVAT72)	Pass

Opinions, Interpretations, and Conclusions

If you have any questions regarding these results, please contact us.

Report Prepared By: Terry Graham
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Approved by:

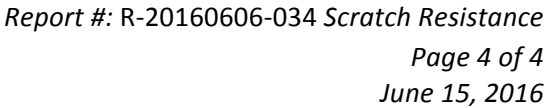


Table 1: Scratch Resistance, S-160606-054_059

Additional Comments:

Ophthalmic Materials Test Report for Resistance Coatings

Brand\	Product Name	Scratch Initial Haze	Scratch Side 1 Haze	Scratch Side 1&2 Haze	Final Scratch H. Gain
Chiario	99-UVBTS58-1	0.03	0.13	0.28	0.25
Chiario	99-UVBTS58-2	0.03	0.36	0.58	0.55
Chiario	99-UVBTS67-1	0.07	0.21	0.51	0.44
Chiario	99-UVBTS67-2	0.23	0.31	0.49	0.26
Chiario	99-UVBT58-1	0.07	0.29	0.54	0.47
Chiario	99-UVBT58-2	0.20	0.34	0.48	0.28
Chiario	99-UVBT67-1	0.03	0.20	0.46	0.43
Chiario	99-UVBT67-2	0.23	0.37	0.51	0.28
Chiario	98-UVATS58-1	0.03	0.13	0.52	0.49
Chiario	98-UVATS58-2	0.04	0.28	0.38	0.34
Chiario	98-UVATS67-1	0.00	0.20	0.49	0.49
Chiario	98-UVATS67-2	0.04	0.27	0.53	0.49
Chiario	98-UVAT58-1	0.03	0.24	0.45	0.42
Chiario	98-UVAT58-2	0.01	0.35	0.58	0.57
Chiario	98-UVAT67-1	0.03	0.13	0.24	0.21
Chiario	98-UVAT67-2	0.03	0.29	0.39	0.36
Chiario	95-UVAT58-1	0.26	0.29	0.36	0.10
Chiario	95-UVAT58-2	0.26	0.40	0.48	0.22
Chiario	95-UVAT67-1	0.16	0.31	0.43	0.27
Chiario	95-UVAT67-2	0.57	0.61	0.64	0.07
Chiario	88-UVAT58-1	0.09	0.14	0.18	0.09
Chiario	88-UVAT58-2	0.07	0.46	0.53	0.46
Chiario	88-UVAT67-1	0.08	0.13	0.15	0.07
Chiario	88-UVAT67-2	0.11	0.21	0.28	0.17
Bower	FUC67	0.13	0.18	0.26	0.13
Bower	FUC67	0.12	0.14	0.24	0.12
Tiffen	67UVP	0.08	0.16	0.18	0.10
Tiffen	67UVP	0.11	0.22	0.34	0.23
Hoya	C-ALP67UV	0.15	0.45	0.63	0.48
Hoya	C-ALP67UV	0.21	0.63	0.97	0.76
Tiffen	67HZE	0.14	0.19	0.25	0.11
Tiffen	67HZE	0.18	0.28	0.38	0.20
Polaroid	PLFILUV67	0.03	0.11	0.36	0.33
Polaroid	PLFILUV67	0.05	0.15	0.38	0.33
B+W	65-070138	0.19	0.46	0.72	0.53
B+W	65-070138	0.04	0.62	0.84	0.80
Hoya	A67UVC	0.09	0.24	0.46	0.37
Hoya	A67UVC	0.05	0.31	0.52	0.47
Hoya	A-NXT67UV	0.14	0.22	0.50	0.36
Hoya	A-NXT67UV	0.11	0.39	0.74	0.63
MeFoto	MUV67K	0.10	0.72	0.89	0.79
MeFoto	MUV67K				
B+W	66-1066123	0.00	0.10	0.13	0.13
B+W	66-1066123	0.01	0.12	0.15	0.14
B+W	66-070236	0.05	0.19	0.23	0.18
B+W	66-070236	0.06	0.17	0.31	0.25
Hoya	XEVA-67UV	0.03	0.65	0.93	0.90
Hoya	XEVA-67UV	0.00	0.98	2.25	2.25
Hoya	XHD3-67UV	0.03	0.13	0.15	0.12
Hoya	XHD3-67UV	0.00	0.04	0.10	0.10
Hoya	X67UV	0.11	0.23	0.34	0.23
Hoya	X67UV	0.18	1.08	1.56	1.38