

EXPRESS WINDOW FILMS - SOLAR PERFORMANCE DATA

Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	UVAL	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Auto Standard Series 50%	73	10	17	49	9	9	1.14	0.88	>99	0.86	0.75	25	0.56	50	Automotive	PS
Auto Standard Series 35%	66	9	25	34	8	8	1.12	0.83	>99	0.88	0.71	29	0.41	65	Automotive	PS
Auto Standard Series 20%	60	9	31	19	7	7	1.12	0.77	>99	0.88	0.65	35	0.25	80	Automotive	PS
Auto Standard Series 05%	53	9	38	5	7	7	1.15	0.71	>99	0.88	0.60	40	0.07	95	Automotive	PS
Auto NR True Smoke 70%	70	9	21	72	6	7	1.13	0.87	>99	0.86	0.74	26	0.83	28	Automotive	PS
Auto NR True Smoke 50%	59	6	35	50	6	6	1.14	0.82	>99	0.86	0.70	30	0.61	50	Automotive	PS
Auto NR True Smoke 35%	57	6	37	35	6	6	1.12	0.79	>99	0.88	0.67	33	0.45	65	Automotive	PS
Auto NR True Smoke 20%	49	6	45	20	5	5	1.12	0.73	>99	0.88	0.62	38	0.28	80	Automotive	PS
Auto NR True Smoke 05%	49	6	45	5	4	4	1.15	0.67	>99	0.88	0.57	43	0.07	95	Automotive	PS
Auto HP True Smoke Ultra 35%	48	12	40	34	11	12	1.15	0.67	>99	0.86	0.57	43	0.51	65	Automotive	PS
Auto HP True Smoke Ultra 20%	45	11	44	21	10	11	1.07	0.64	>99	0.87	0.54	46	0.33	80	Automotive	PS
Auto HP True Smoke Ultra 05%	37	11	52	5	10	10	1.12	0.57	>99	0.85	0.48	52	0.09	95	Automotive	PS
Auto NR True Black 57%	59	6	35	60	6	7	1.14	0.85	>99	0.86	0.72	28	0.71	50	Automotive	PS
Auto NR True Black 50%	59	6	35	50	6	7	1.14	0.81	>99	0.86	0.69	31	0.62	50	Automotive	PS
Auto NR True Black 42%	58	6	36	43	6	7	1.13	0.76	>99	0.87	0.65	35	0.56	55	Automotive	PS
Auto NR True Black 35%	57	6	37	35	6	7	1.12	0.73	>99	0.88	0.62	38	0.48	65	Automotive	PS
Auto NR True Black 20%	49	6	45	20	5	6	1.12	0.71	>99	0.88	0.60	40	0.28	80	Automotive	PS
Auto NR True Black 15%	49	6	45	16	6	6	1.13	0.67	>99	0.88	0.57	43	0.24	85	Automotive	PS
Auto NR True Black 05%	49	6	45	5	4	5	1.15	0.66	>99	0.88	0.56	44	0.08	95	Automotive	PS
Auto NR True Bronze 35%	57	6	37	35	6	6	1.12	0.82	>99	0.88	0.70	30	0.43	65	Automotive	PS
Auto NR True Bronze 20%	49	6	45	20	5	5	1.12	0.78	>99	0.88	0.66	34	0.26	80	Automotive	PS
Auto HP True Bronze 35	45	12	43	35	11	12	1.15	0.67	>99	0.87	0.57	43	0.52	65	Automotive	PS
Auto HP True Bronze 20%	42	11	47	18	9	10	1.08	0.58	>99	0.86	0.49	51	0.31	85	Automotive	PS
Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Auto NR Classic Charcoal 1.0 70%	70	9	21	72	6	7	1.13	0.87	>99	0.86	0.74	26	0.83	21	Automotive	PS
Auto NR Classic Charcoal 1.0 50%	63	6	31	52	6	7	1.14	0.82	>99	0.86	0.70	30	0.63	43	Automotive	PS
Auto NR Classic Charcoal 1.0 40%	55	6	39	38	6	6	1.14	0.76	>99	0.86	0.65	35	0.50	58	Automotive	PS
Auto NR Classic Charcoal 1.0 30%	52	6	42	30	6	7	1.14	0.73	>99	0.86	0.62	38	0.41	67	Automotive	PS
Auto NR Classic Charcoal 1.0 20%	48	6	46	21	6	6	1.15	0.71	>99	0.86	0.60	40	0.30	77	Automotive	PS
Auto NR Classic Charcoal 1.0 05%	45	7	48	6	6	6	1.12	0.69	>99	0.85	0.59	41	0.09	93	Automotive	PS
Auto NR Classic Charcoal 1.2 50%	60	5	35	48	4	4	1.12	0.81	>99	0.89	0.69	31	0.59	47	Automotive	PS
Auto NR Classic Charcoal 1.2 40%	56	5	39	39	4	4	1.12	0.76	>99	0.89	0.65	35	0.51	57	Automotive	PS
Auto NR Classic Charcoal 1.2 30%	54	6	40	30	4	4	1.14	0.76	>99	0.89	0.65	35	0.39	67	Automotive	PS
Auto NR Classic Charcoal 1.2 20%	48	5	47	19	4	3	1.12	0.71	>99	0.89	0.60	40	0.27	79	Automotive	PS
Auto NR Classic Charcoal 1.2 05%	41	5	54	4	4	3	1.12	0.66	>99	0.89	0.56	44	0.06	96	Automotive	PS
Auto NR Classic Black 1.2 42%	57	6	37	42	6	6	1.12	0.77	>99	0.89	0.65	35	0.55	54	Automotive	PS

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Auto NR Classic Black 1.2 35%	52	7	41	35	6	6	1.12	0.73	>99	0.88	0.62	38	0.48	62	Automotive	PS
Auto NR Classic Black 1.2 20%	47	7	46	20	5	4	1.13	0.69	>99	0.89	0.59	41	0.29	78	Automotive	PS
Auto NR Classic Black 1.2 15%	44	6	50	15	5	5	1.12	0.67	>99	0.89	0.57	43	0.22	84	Automotive	PS
Auto NR Classic Black 1.2 05%	44	7	49	5	5	5	1.12	0.66	>99	0.89	0.56	44	0.08	95	Automotive	PS
Auto HP Classic Charcoal 1.5 50%	54	7	39	54	7	7	1.13	0.75	>99	0.87	0.64	36	0.72	41	Automotive	PS
Auto HP Classic Charcoal 1.5 45%	48	8	44	44	7	7	1.12	0.70	>99	0.85	0.60	40	0.63	52	Automotive	PS
Auto HP Classic Charcoal 1.5 40%	45	7	48	39	7	6	1.12	0.68	>99	0.85	0.58	42	0.57	57	Automotive	PS
Auto HP Classic Charcoal 1.5 30%	43	6	51	28	5	4	1.13	0.67	>99	0.88	0.57	43	0.42	69	Automotive	PS
Auto HP Classic Charcoal 1.5 20%	32	9	59	20	9	5	1.09	0.56	>99	0.79	0.48	52	0.36	78	Automotive	PS
Auto HP Classic Charcoal 1.5 10%	29	8	63	10	8	4	1.10	0.54	>99	0.81	0.46	54	0.19	89	Automotive	PS
Auto HP Classic Charcoal 1.5 05%	21	12	67	5	5	5	1.06	0.46	>99	0.73	0.39	61	0.11	95	Automotive	PS
Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Auto All Metal 70%	76	10	14	78	11	11	1.12	0.90	>99	0.86	0.77	24	0.87	64	Automotive	PS
Auto All Metal 60%	61	13	26	65	13	15	1.13	0.77	>99	0.86	0.65	35	0.84	64	Automotive	PS
Auto All Metal 40%	46	26	28	52	20	25	1.12	0.60	>99	0.86	0.51	49	0.87	64	Automotive	PS
Auto All Metal 20%	11	64	25	17	63	60	1.10	0.24	>99	0.61	0.20	80	0.71	79	Automotive	PS
Auto Ceramic 70%	53	8	39	69	6	7	1.05	0.81	>99	0.83	0.69	31	0.85	31	Automotive	PS
Auto Ceramic 50%	49	7	44	48	6	7	1.06	0.76	>99	0.83	0.65	35	0.63	52	Automotive	PS
Auto Ceramic 35%	45	7	48	34	6	7	1.04	0.66	>99	0.85	0.56	44	0.52	66	Automotive	PS
Auto Ceramic 20%	42	7	51	19	5	6	1.04	0.51	>99	0.85	0.43	57	0.38	81	Automotive	PS
Auto Ceramic 05%	39	7	54	5	4	5	1.07	0.48	>99	0.85	0.41	59	0.10	95	Automotive	PS
Auto Security 4Mil 50%	72	10	18	50	8	8	1.14	0.83	>99	0.86	0.71	29	0.60	50	Automotive	PS
Auto Security 4Mil 35%	66	9	25	35	8	8	1.12	0.83	>99	0.88	0.71	29	0.42	65	Automotive	PS
Auto Security 4Mil 20%	59	9	32	32	8	8	1.12	0.77	>99	0.88	0.65	35	0.42	80	Automotive	PS
Auto Security 4Mil 05%	54	9	37	8	7	8	1.15	0.72	>99	0.88	0.61	39	0.11	95	Automotive	PS
Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Glass / Film Compatibility	Adhesive
Glare Cut NR 70%	70	9	21	72	6	7	1.13	0.87	>99	0.86	0.74	26	0.83	28	Single Pane <100SF Double Pane <40SF	PS
Glare Cut NR 50%	59	6	35	50	6	5	1.14	0.84	>99	0.86	0.71	29	0.60	50	Single Pane <100SF Double Pane <40SF	PS
Glare Cut NR 35%	57	6	37	35	6	5	1.12	0.80	>99	0.88	0.68	32	0.44	65	Single Pane <100SF Double Pane <40SF	PS
Glare Cut NR 20%	49	6	45	20	5	6	1.12	0.76	>99	0.88	0.65	35	0.26	80	Single Pane <100SF Double Pane - No	PS
Glare Cut NR 05%	49	6	45	5	4	5	1.15	0.71	>99	0.88	0.60	40	0.07	95	Single Pane <100SF Double Pane - No	PS
Residential Neutral 50 Percent	44	13	43	49	12	14	1.03	0.67	99.0	0.84	0.58	42	0.73	46	Single Pane <100SF Double Pane <40SF	PS
Residential Neutral 35 Percent	36	16	48	40	15	18	1.00	0.59	>99	0.81	0.50	50	0.68	56	Single Pane <100SF Double Pane <40SF	PS
Residential Neutral 20 Percent	35	22	43	23	19	21	1.04	0.52	>99	0.70	0.44	56	0.44	80	Single Pane <100SF Double Pane - No	PS
Reflective Silver 68	62	15	23	65	14	15	1.05	0.77	>99	0.83	0.65	47	0.84	31	Single Pane <100SF Double Pane <40SF	PS
Reflective Silver 53	36	29	35	48	28	26	0.97	0.54	>99	0.75	0.46	54	0.89	47	Single Pane <100SF Double Pane <40SF	PS
Reflective Silver 35	21	43	36	28	46	49	0.96	0.36	>99	0.73	0.31	69	0.77	69	Single Pane <100SF Double Pane <40SF	PS or DRY

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Reflective Silver 15	12	54	34	16	62	62	0.94	0.25	>99	0.71	0.21	79	0.64	82	Single Pane <100SF Double Pane <40SF	PS or DRY
Reflective Silver/Grey 15	13	55	32	11	53	43	0.91	0.23	>99	0.60	0.20	80	0.48	89	Single Pane <100SF Double Pane - No	PS
Reflective Silver/Green 15	15	45	40	18	48	38	0.91	0.28	>99	0.60	0.24	76	0.64	78	Single Pane <100SF Double Pane - No	PS
Reflective Silver/Gold 15	14	51	35	16	49	39	0.91	0.25	>99	0.60	0.21	79	0.64	85	Single Pane <100SF Double Pane - No	PS
Reflective Silver/Bronze 15	14	54	32	17	51	41	0.91	0.25	>99	0.60	0.22	78	0.67	87	Single Pane <100SF Double Pane - No	PS
Reflective Silver/Blue 15	15	53	32	17	48	37	0.91	0.25	>99	0.60	0.21	79	0.68	80	Single Pane <100SF Double Pane - No	PS
Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Delta Dual Reflective 45%	42	9	49	42	8	10	1.00	0.66	>99	0.83	0.56	44	0.64	52	Single Pane <100SF Double Pane <40SF	DRY
Delta Dual Reflective 35%	35	12	53	34	9	13	0.98	0.59	>99	0.80	0.50	50	0.58	61	Single Pane <100SF Double Pane <40SF	DRY
Delta Dual Reflective 25%	22	26	52	23	15	30	0.94	0.43	>99	0.74	0.37	63	0.53	74	Single Pane <100SF Double Pane <40SF	DRY
Delta Dual Reflective 10%	35	16	49	13	14	21	0.92	0.54	>99	0.70	0.46	54	0.24	90	Single Pane <100SF Double Pane <40SF	PS
Delta Dual Reflective 05%	8	49	43	7	16	58	0.92	0.23	>99	0.70	0.20	80	0.30	92	Single Pane <100SF Double Pane <40SF	DRY
Neutral Sputtered NiChrome 60%	53	8	39	60	8	10	1.04	0.74	>99	0.87	0.63	37	0.81	21	Single Pane <100SF Double Pane <40SF	PS
Neutral Sputtered NiChrome 45%	39	11	51	44	12	14	1.04	0.62	>99	0.86	0.53	47	0.71	50	Single Pane <100SF Double Pane <40SF	PS
Neutral Sputtered NiChrome 35%	29	15	57	33	16	19	1.03	0.51	>99	0.83	0.43	57	0.65	63	Single Pane <100SF Double Pane <40SF	PS or DRY
Neutral Sputtered NiChrome 20%	16	22	62	18	28	29	1.02	0.39	>99	0.82	0.33	67	0.46	79	Single Pane <100SF Double Pane - No	PS or DRY
Copper Sputtered Solar Bronze 50%	32	23	47	49	17	18	0.92	0.50	>99	0.65	0.43	57	0.98	46	Single Pane <100SF Double Pane <40SF	PS
Copper Sputtered Solar Bronze 35%	22	31	47	37	24	25	0.91	0.39	>99	0.62	0.33	67	0.95	58	Single Pane <100SF Double Pane <40SF	DRY
Copper Sputtered Solar Bronze 20%	9	43	48	18	38	37	0.94	0.25	>99	0.67	0.21	79	0.72	80	Single Pane <100SF Double Pane <40SF	DRY
Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Specialty Blackout	0	41	59	0	3	13	1.00	0.18	>99	0.63	0.15	85	0.00	100	Single Pane <100SF Double Pane - No	PS
Specialty Whiteout	12	47	41	17	71	72	1.12	0.25	>99	0.85	0.21	79	0.68	83	Single Pane <100SF Double Pane <40SF	PS
Specialty Matte White 2.0 Mil	61	9	30	68	9	10	1.09	0.81	>99	0.85	0.69	31	0.84	32	Single Pane <100SF Double Pane <40SF	PS
Specialty Matte Bronze	43	11	46	35	8	9	1.14	0.65	>99	0.86	0.55	45	0.54	62	Single Pane <100SF Double Pane <40SF	PS
Specialty Matte Grey	43	11	46	35	9	10	1.14	0.65	>99	0.86	0.55	45	0.54	62	Single Pane <100SF Double Pane <40SF	PS
Specialty Matte Silver	15	47	38	19	38	54	1.05	0.29	>99	0.70	0.25	75	0.66	79	Single Pane <100SF Double Pane <40SF	PS
Color Graphic Blue	55	7	38	38	5	7	1.14	0.76	>99	0.86	0.65	35	0.50	58	Single Pane <100SF Double Pane <40SF	PS
Color Graphic Green	50	7	43	36	7	7	1.13	0.72	>99	0.86	0.61	39	0.50	60	Single Pane <100SF Double Pane <40SF	PS
Color Graphic Red	59	6	35	23	4	4	1.13	0.80	>99	0.89	0.68	32	0.29	75	Single Pane <100SF Double Pane <40SF	PS
Color Graphic Yellow	72	6	22	83	7	7	1.13	0.90	>99	0.89	0.77	23	0.92	9	Single Pane <100SF Double Pane <40SF	PS
Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Pearl Ceramic 7643	59	10	31	70	9	9	1.09	0.64	>99	0.99	0.55	45	1.09	22	Single Pane <100SF Double Pane <40SF	PS
Pearl Ceramic 6865	43	29	28	61	20	20	1.04	0.58	>99	0.67	0.5	50	1.05	32	Single Pane <100SF Double Pane <40SF	PS
Pearl Ceramic 6777	44	35	21	61	8	8	1.06	0.60	>99	0.99	0.51	49	1.01	32	Single Pane <100SF Double Pane <40SF	PS
Pearl Ceramic 5885	36	31	34	51	28	20	1.07	0.51	>99	0.66	0.44	56	1.00	49	Single Pane <100SF Double Pane <40SF	PS
Security 2 Mil Clear	83	8	9	87	9	9	1.08	0.96	>99	0.87	0.82	18	0.90	13	Single Pane <100SF Double Pane <40SF	PS
Security 4 Mil Clear	87	10	3	88	11	11	1.08	0.97	>99	0.90	0.82	18	0.91	13	Single Pane <100SF Double Pane <40SF	PS

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Film Name	TSEt	TSEr	TSEa	VLT	VLRI	VLRe	Uval	SC	UV	EMIS	SHGC	TSErj	LE	GR	Application Type	Adhesive
Security 8 Mil Clear	85	11	4	87	12	11	1.07	0.97	>99	0.89	0.82	18	0.90	13	Single Pane <100SF Double Pane <40SF	PS
Security 4 Mil Tinted 50%	72	10	18	50	8	8	1.14	0.83	>99	0.86	0.71	29	0.60	50	Single Pane <100SF Double Pane <40SF	PS
Security 4 Mil Tinted 35%	66	9	25	35	8	8	1.12	0.83	>99	0.88	0.71	29	0.42	65	Single Pane <100SF Double Pane <40SF	PS
Security 4 Mil Tinted 20%	59	9	32	32	8	8	1.12	0.77	>99	0.88	0.65	35	0.42	80	Single Pane <100SF Double Pane - No	PS
Security 4 Mil Tinted 05%	54	9	37	8	7	8	1.15	0.72	>99	0.88	0.61	39	0.11	95	Single Pane <100SF Double Pane - No	PS
Security 4 Mil Silver 15%	11	62	27	16	66	60	1.10	0.24	>99	0.61	0.20	80	0.67	80	Single Pane <100SF Double Pane <40SF	PS
Anti-Graffiti 4 Mil Clear	83	8	9	87	9	9	1.08	0.96	>99	0.87	0.82	18	0.90	13	Single Pane <100SF Double Pane <40SF	PS
Anti-Graffiti 7 Mil Clear	87	10	3	88	11	11	1.08	0.97	>99	0.90	0.82	18	0.91	13	Single Pane <100SF Double Pane <40SF	PS

PARAMETERS

TSEt	Total Solar Transmittance
TSEr	Total Solar Reflectance
TSEa	Total Solar Absorbance
VLT	Visible Light Transmission
VLRI	Visible Light Reflectance (Int)
VLRe	Visible Light Reflectance (Ext)
Uval	Winter Median U Value
SC	Shading Coefficient
UV	UV Rejected
EMIS	Emissivity
SHGC	Solar Heat Gain Coefficient
TSErj	Total Solar Energy Rejected
LE	Luminous Efficacy
GR	Glare Reduction

*** Revised 11/01/2011