



# Automotive & Architectural Window Films



Engineered to Perform Better™



## ORAFOL Turkey

## ORAFOL's Worldwide Locations





# Index

## Special Window Films

Page	List of contents
4	ORACAL® Basic Series Automotive Window Film
5	ORACAL® CA Series Automotive Window Film
6	ORACAL® NT Series Automotive Window Film
7	ORACAL® NT Plus Series Automotive Window Film
8	ORACAL® Safety Series Safety Window Film
9	ORACAL® Commercial S Series Architectural Window Film
10	ORACAL® Commercial S Exterior Series Architectural Window Film
11	ORACAL® Commercial S Plus Series Architectural Window Film

## ORACAL® Basic Series

These double layered auto glass films have an ideal thickness and are available in different tone options. The color of these films provides a natural look from inside. Additionally, the ORACAL Basic Series offers a higher heat blocking performance than standard window films. ORACAL® Basic window films are easy to apply when the right methods and equipment are used.

- 38 micron
- Expected Service Life: 5 Years

	ORACAL® Basic'05	ORACAL® Basic'15	ORACAL® Basic'20	ORACAL® Basic'35	ORACAL® Basic'50
<b>TSER**</b>	54%	52%	50.6%	46.5%	42%
<b>UV Rejection</b>	99%	99%	99%	99%	99%
<b>IR Rejection</b>	37%	37%	37%	37%	37%
<b>Solar Energy Absorbed</b>	62.4%	59.7%	57.2%	50.9%	44.3%
<b>Solar Energy Reflected</b>	7.9%	7.9%	8.4%	8.9%	9.3%
<b>Solar Energy Transmitted</b>	29.7%	32.4%	34.4%	40.2%	46.4%
<b>Visible Light Reflected (ext)</b>	6.8%	7.2%	7.6%	7.5%	8.1%
<b>Visible Light Reflected (int)</b>	4.8%	4.9%	5.3%	5.9%	7.3%
<b>Visible Light Transmitted</b>	5.3%	10.8%	16.8%	26.9%	40.5%

\*\* Total Solar Energy Rejected



## ORACAL® CA Series

These single layered automotive window films have an ideal thickness and are available in different tone options. The color does not fade and the films are non-reflective. Additionally, this product offers a higher heat blocking performance than standard window films.

- 38 micron
- Expected Service Life: 7 Years

	ORACAL® CA'05	ORACAL® CA'15	ORACAL® CA'20	ORACAL® CA'35	ORACAL® CA'50	ORACAL® CA'70
<b>TSER**</b>	50%	48.6%	45.5%	41.2%	35.5%	27.2%
<b>UV Rejection</b>	99%	99%	99%	99%	99%	99%
<b>IR Rejection</b>	31%	31%	31%	31%	30%	31%
<b>Solar Energy Absorbed</b>	60%	57.9%	54%	47.8%	39.6%	27.5%
<b>Solar Energy Reflected</b>	5.7%	5.8%	5.8%	6.1%	6.4%	6.9%
<b>Solar Energy Transmitted</b>	34.3%	36.3%	40.2%	46.1%	54%	65.6%
<b>Visible Light Reflected (ext)</b>	5.1%	5.1%	5%	5.3%	6.1%	7.6%
<b>Visible Light Reflected (int)</b>	4.8%	5%	5.2%	5.5%	6.2%	7.8%
<b>Visible Light Transmitted</b>	5.5%	11%	20.5%	31.3%	48%	77.5%

\*\* Total Solar Energy Rejected



## ORACAL® NT Series

These double layered window films have an ideal thickness and are available in different tone options. The ORACAL NT window films have a structure that prevents heat at high levels. A version that allows the transmission of high-level light is also available. These films are easy to apply when the right methods and equipment are used.

- 38 micron
- Expected Service Life: 7 Years

	ORACAL® NT'05	ORACAL® NT'20	ORACAL® NT'35	ORACAL® NT'50	ORACAL® NT'80
<b>TSER**</b>	62.5%	57.1%	53.8%	47.4%	36.2%
<b>UV Rejection</b>	99%	99%	99%	99%	99%
<b>IR Rejection</b>	75%	71%	71%	71%	72%
<b>Solar Energy Absorbed</b>	77%	69.2%	64.2%	55.5%	40.2%
<b>Solar Energy Reflected</b>	5.6%	6.1%	6.5%	6.5%	6.5%
<b>Solar Energy Transmitted</b>	17.4%	24.7%	29.3%	38%	53.3%
<b>Visible Light Reflected (ext)</b>	7.4%	7.7%	8%	7.2%	8.4%
<b>Visible Light Reflected (int)</b>	5.1%	5.9%	7%	7.5%	8.3%
<b>Visible Light Transmitted</b>	7.5%	23%	33.8%	49.1%	79%

\*\* Total Solar Energy Rejected



## ORACAL® NT Plus Series

These double layered, nanoceramic auto window films have an ideal thickness and are available in different tones. They are structured to prevent heat at the highest levels. They are easy to apply when the right methods and equipment are used.

- 38 micron
- Expected Service Life: 20 Years

	ORACAL® NT PLUS'05	ORACAL® NT PLUS'20	ORACAL® NT PLUS'35	ORACAL® NT PLUS'50
<b>TSER**</b>	69.5%	64.8%	61.8%	53.7%
<b>UV Rejection</b>	99%	99%	99%	99%
<b>IR Rejection</b>	99%	99%	99%	99%
<b>Solar Energy Absorbed</b>	78.1%	79%	73.6%	62%
<b>Solar Energy Reflected</b>	11.6%	8.4%	7.6%	7.5%
<b>Solar Energy Transmitted</b>	10.3%	12.6%	18.8%	30.5%
<b>Visible Light Reflected (ext)</b>	5.1%	5%	5.7%	7.4%
<b>Visible Light Reflected (int)</b>	5.6%	6.3%	6.3%	7.3%
<b>Visible Light Transmitted</b>	5.2%	17%	30%	52.3%

\*\* Total Solar Energy Rejected



## ORACAL® Safety Series

These are double layered safety window films that are available in transparent and colored options. Please note that only the 100-micron version is single layered. These safety films prevent impacted glass from being scattered, which reduces the risk of damage. They are suitable for use in buildings, glass facades, and motor vehicles. Various thickness options are available.

- 100, 200 & 375 micron films are clear films whereas 125 micron film is coloured.
- Expected Service Life: 10 Years / 5 Years (Coloured)

	ORACAL® SAFETY 100 Micron	ORACAL® SAFETY 200 Micron	ORACAL® SAFETY 375 Micron	ORACAL® SAFETY Colored'20	ORACAL® SAFETY Colored'35	ORACAL® SAFETY Colored'50
<b>TSER**</b>	16.8%	16.4%	17.6%	39.2%	34.2%	28.9%
<b>UV Rejection</b>	99%	99%	99%	99%	99%	99%
<b>IR Rejection</b>	10%	10%	11%	11%	11%	11%
<b>Visible Light Reflected</b>	8%	9.5%	9.5%	6.4%	5.4%	7.6%
<b>Visible Light Transmitted</b>	88.9%	88%	86.9%	22.3%	35.2%	52.3%
<b>Solar Energy Absorbed</b>	9%	10.8%	12.3%	43.2%	37.7%	28.4%
<b>Solar Energy Reflected</b>	7%	8.5%	8.5%	7.4%	6.4%	8%
<b>Solar Energy Transmitted</b>	84%	80.7%	80.0%	49.4%	55.9%	63.6%
<b>Enongation at Break</b>	160%	191%	183%	109%	109%	109%
<b>Tensile Strength (N/10mm)</b>	151	297	459	171	171	171
<b>180° Peeling Strength (N/10mm)</b>	4.5	2.8	1.1	3.6	3.6	3.6

\*\* Total Solar Energy Rejected





## ORACAL® Commercial S

These are silver/metallized building glass films that are double layered, in ideal thickness, and available in different tone options. Using ORACAL® Commercial S Series in vehicles is not recommended because they are highly reflective. These films can be easily applied when the right methods and equipment are used.

- 50 micron
- Expected Service Life: 7 Years

	ORACAL® Commercial S'00	ORACAL® Commercial S'05	ORACAL® Commercial S'20	ORACAL® Commercial S'30	ORACAL® Commercial S'50	ORACAL® Commercial S'60
<b>TSER**</b>	93.6%	88.5%	74.7%	61.2%	39.9%	33.5%
<b>UV Rejection</b>	99%	99%	99%	99%	99%	99%
<b>IR Rejection</b>	99.4%	94%	82%	71%	48%	39%
<b>Solar Energy Absorbed</b>	14.6%	29.9%	26.9%	29%	31.3%	29.7%
<b>Solar Energy Reflected</b>	85%	65.3%	55.9%	43.3%	23.5%	15.8%
<b>Solar Energy Transmitted</b>	0.4%	4.8%	17.2%	27.7%	45.2%	54.5%
<b>Visible Light Reflected (ext)</b>	83.6%	73.6%	52.3%	34.2%	16.8%	12.4%
<b>Visible Light Reflected (int)</b>	87.7%	77.7%	56.7%	38.2%	20.3%	14.9%
<b>Visible Light Transmitted</b>	2.3%	5.8%	21.8%	38%	52.8%	64.2%

\*\* Total Solar Energy Rejected



## ORACAL® Commercial S Exterior Series

ORACAL Commercial S Exterior Window Films are developed for exterior installations on architectural glass. These silver/metallized films are weather and UV-resistant. In different tone options, ORACAL Commercial S Exterior Window Film Series offers a high level of solar heat rejection as well as a new appearance on buildings.

- 50 micron
- Expected Service Life: 5 Years

### ORACAL® Commercial S Exterior'20

Visible Light Transmitted	Visible Light Reflected (int)	Visible Light Reflected (ext)	Solar Energy Transmitted	Solar Energy Reflected	Solar Energy Absorbed	IR Rejection	UV Rejection	TSER**
21.1%	57.4%	52.8%	16.4%	48.3%	35.3%	83%	99%	74.7%

### ORACAL® Commercial S Exterior'30

Visible Light Transmitted	Visible Light Reflected (int)	Visible Light Reflected (ext)	Solar Energy Transmitted	Solar Energy Reflected	Solar Energy Absorbed	IR Rejection	UV Rejection	TSER**
37.8%	38%	34.5%	29.6%	33.4%	37%	71%	99%	61%

### ORACAL® Commercial S Exterior'50

Visible Light Transmitted	Visible Light Reflected (int)	Visible Light Reflected (ext)	Solar Energy Transmitted	Solar Energy Reflected	Solar Energy Absorbed	IR Rejection	UV Rejection	TSER**
61.8%	17.4%	14.9%	50.4%	14.7%	34.9%	50%	99%	40.6%

\*\* Total Solar Energy Rejected



## ORACAL® Commercial S Plus Series

ORACAL Commercial S Plus Window Films are developed for interior installations on architectural glass. These sputter films are provided in different tone options. ORACAL Commercial S Plus Series provides an outstanding performance for solar heat rejection as well as a new appearance on buildings.

- 50 micron
- Expected Service Life: 20 Years

### ORACAL® Commercial S Plus'35

Visible Light Transmitted	Visible Light Reflected (int)	Visible Light Reflected (ext)	Solar Energy Transmitted	Solar Energy Reflected	Solar Energy Absorbed	IR Rejection	UV Rejection	TSER**
37.6%	52.1%	50%	24.5%	52.3%	23.2%	85%	99%	70.3%

### ORACAL® Commercial S Plus'50

Visible Light Transmitted	Visible Light Reflected (int)	Visible Light Reflected (ext)	Solar Energy Transmitted	Solar Energy Reflected	Solar Energy Absorbed	IR Rejection	UV Rejection	TSER**
52%	35.2%	33.6%	34.5%	41.9%	23.6%	75%	99%	60.1%

\*\* Total Solar Energy Rejected



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