

# Automotive Wrapping Film CC+ 4000er SERIES

#### **Product Description**

Premium multi-layered cast vinyl film designed specifically for vehicle wrapping applications. The film features an air channel adhesive system which allows for quick and efficient installation without the formation of bubbles. The special adhesive is designed for dry application on painted vehicle surfaces.

#### **Technical Specifications**

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Film construction	Multi-layered cast PVC			
Thickness (without protective liner and adhesive)	110 μm, +/- 20 %			
Adhesive type	Solvent polyacrylate, repositionable with permanent final adhesion (dry application)			
Dimensional stability	Applied on steel, max. 0.1 mm shrinkage			
Temperature resistance	-50°C to +120°C, no change (short-term load)			
Solvent / chemical resistance	At room temperature, 72 hours after applied to aluminum, resistant against most oils, greases, fuels, aliphatic solvents, weak acids, salts and alkalis			
Fire behavior	Applied to steel, self-extinguishing			
Adhesive power (after 24h, stainless steel)	16 N/25 mm			
Elongation at break	Elongation longitudinal and diagonal 140 % Elongation longitudinal and diagonal metallic 120 %			
Shelf life	2 years (upright storage, in original packaging at 20° C and 50% relative humidity)			
Application temperature	> +15°C / optimally 20 – 23° C			
Expected durability*		vertical**	horizontal**	
(Installation on painted vehicle surfaces)	CC+ 4000 Black, White, Colored	8 years	4 years	
	CC+ 4000 Metallic, Matt, Matt Metallic	5 years	2,5 years	
	CC+ 4000 Special Pigment (SP)	3 years	2 years	

#### Additional Information:

The above information is based solely on our current knowledge and practical experience. The information is provided without any guarantee or agreement with regards to the quality or properties of the material. This information does not constitute a warranty of any certain quality, properties and/or durability concerning our color films.

#### IMPORTANT NOTE

Due to the variety of applications and the ongoing development of new applications, it is up to the buyer to determine the suitability and efficiency of the product for the respective purpose of use. The buyer bears all risks arising from the use of the product.

All information is subject to change.

<sup>\*</sup> Expected durability when applied by a specialist, and with proper maintenance and care. Applies to vertical outdoor weathering and Central European climate. The actual and expected durability is determined by the environmental conditions, as well as pre-treatment of the surface and regular care of the installed film.



# Automotive Wrapping Film TECHNICAL GUIDE

#### **GENERAL REQUIREMENTS**

BRUXSAFOL vehicle wrapping films for application on car components and full vehicle wrapping are premium self-adhesive film products for temporary decorations on vehicles.

Please note that vinyl films are by nature more sensitive than vehicle paints. Accordingly, the films require special care when being applied and cleaned. Please read our current Installation and Care Instructions.

The application and removal of BRUXSAFOL vinyl films should only be carried out by trained specialist personnel.

If BRUXSAFOL vinyl films are not installed by a specialist, or if installed incorrectly, the paint of the vehicle may be damaged and/or the durability of the film can be significantly reduced.

### **Durability**

The expected durabilities indicated in the technical data sheets are maximum durabilities that can only be achieved with vertical external weathering under normal Central European environmental conditions.

	Climate Zone 1*		Climate Zone 2*		Climate Zone 3*	
	vertical**	horizontal**	vertical**	horizontal**	vertical**	horizontal**
CC+ 4000 Black, White, Colors	8	4	6	3	4	2
CC+ 4000 Metallic, Matt, Matt Metallic	5	2,5	3	1,5	1	0,5
CC+ 4000 Special Pigment (SP)	3	2	1	0,5	0,5	0,25

<sup>\*</sup> Indication of the expected maximum durability in years. Further details about specific climate zones can be inquired in writing.

#### Notes

The information regarding expected durability does not constitute a legally binding guarantee, warranty or other claim. The information provided is based on practical experience and artificial and natural weathering tests under normal conditions. This information cannot be transferred to the expected maximum durability for every vehicle given the wide variety of possible influences, for example additional mechanical and chemical impacts.

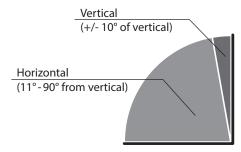
The overall assessment of the expected durability is generally based on the data for horizontal application.

### Reduction of expected durability

A reduction in the durability of BRUXSAFOL vinyl films can occur under the following circumstances:

- When used on unsuitable surfaces
- In case of insufficient or improper cleaning of the application surface
- · When exposed to high temperature and/or high humidity for extended periods of time
- · If not cleaned regularly, for example if insect remains and/or bird droppings are not removed promptly
- Exposure to high level of air pollution, such as in industrial areas, in metropolitan areas or in big cities
- When exposed to high UV exposure, for example at high altitudes or desert areas
- When using non-approved aggressive cleaners/sealers/primers

## \*\*Vertical Exposure Diagram





# Automotive Wrapping Film CC+ 5000 SERIES

#### **Product Description**

Calendared wrapping film, especially suitable for quick and easy automotive wrapping. Gloss and matt finishes are available. The air channel adhesive system allows easy and efficient application without the formation of bubbles. The special adhesive allows for an application on painted surfaces. For strongly curved surfaces as well as in deep recesses, the film should be applied tension-free (This is achieved by using the feeding technique or using inlays/overlaps).

#### **Technical Specifications**

Film construction	Multi-layered cast PVC			
Thickness (without protective liner and adhesive)	Approximately 100 μm			
Adhesive type	Acrylic adhesive system, repositionable with permanent final adhesion (dry application)			
Dimensional stability	Applied on steel, max. 0.5 mm shrinkage			
Temperature resistance	-20°C to + 90°C, no change (short-term load)			
Solvent / chemical resistance	At room temperature, 72 hours after applied to aluminum, resistant against most oils, greases, fuels, aliphatic solvents, weak acids, salts and alkalis			
Fire behavior	Applied to steel, self-extinguishing			
Adhesive power (after 24h, stainless steel)	>750 N/m			
Shelf life	2 years (upright storage, in original packaging at 20 ° C and 50% relative humidity)			
Application temperature	+15°C / optimally 20 – 23°C			
Expected durability*		vertical**	horizontal**	
(Installation on painted vehicle surfaces)	CC+ 5000 Black, White, Transparent CC+ 5000 Color, matt	7 years 5 years	5 years 3 years	

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### IMPORTANT NOTE

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<sup>\*</sup>Expected durability when applied by a specialist, and with proper maintenance and care. Applies to vertical outdoor weathering and Central European climate. The actual and expected durability is determined by the environmental conditions, as well as pre-treatment of the surface and regular care of the installed film.



# **Automotive Wrapping Film**

# TECHNICAL GUIDE

CC+ 5000 Series

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#### **Durability**

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	Climate Zone 1*		
	Vertical**	Horizontal**	
CC+ 5000 Black, White, Transparent	7	5	
CC+ 5000 Color, Matt	5	3	

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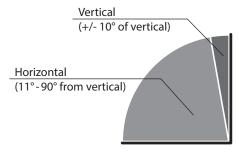
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# **Reduction of expected durability**

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# \*\*Vertical Exposure Diagram





# Automotive Wrapping Film OVERVIEW CLIMATE ZONES

#### Climate Zone 1 temperate

Albania, Andorra, Belgium, Bosnia-Herzegovina, Bulgaria, Denmark, Germany, Estonia, Finland, France, Georgia, Greenland, Ireland, Iceland, Northern Italy, Kosovo, Canada, Croatia, Latvia, Liechtenstein, Lithuania, Luxemburg, Macedonia, Moldavia, Monaco, Montenegro, the Netherlands, Norway, Austria, Poland, Romania, Russia, San Marino, Sweden, Switzerland, Serbia, Slovakia, Slovenia, the Czech Republic, Ukraine, Hungary, Vatican City, the United Kingdom, Belarus, Southern Chile, Southern Argentina, USA: Alaska, Washington, Oregon, Northern California, Idaho, Montana, Wyoming, Northern Utah, Colorado, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, Northern Missouri, Wisconsin, Illinois, Michigan, Indiana, Ohio, Northern Kentucky, Pennsylvania, Northern West Virginia, Maryland, Delaware, New Jersey, New York, Vermont, Massachusetts, Connecticut, New Hampshire, Rhode Island, Maine

#### Climate Zone 2 humid/warm

Armenia, Azerbaijan, Australia (no desert areas), Botswana, North and Central China, French Corsica, Greece, Japan, Kazakhstan, Kyrgyzstan, Lesotho, Mongolia, Namibia, Nepal, New Zealand, North Korea, Portugal, Spain, South Africa, South Korea, Southern Italy, Swaziland, Tajikistan, Türkiye, Turkmenistan, Uzbekistan, Cyprus, Central & Northern Chile, Southern Peru, Southern Bolivia, Uruguay, Argentina, USA: Central & Southern California, Nevada, Central & Southern Utah, Arizona, New Mexico, Oklahoma, Texas, Central & Southern Missouri, Arkansas, Louisiana, Central & Southern Kentucky, Tennessee, Mississippi, Alabama, Georgia, Southern West Virginia, Virginia, North Carolina, South Carolina, Northern & Central Florida

### Climate Zone 3 dry/hot

All desert areas, exposed hights of 1000 m above sea level or more and regions with extremely high UV exposure, African continent (except South Afria, Lesotho, Swaziland, Botswana and Namibia), the Caribbean Island, Polynesian Island, Melanesia Island, Micronesia Islands, Australian desert areas, Central America, Afghanistan, Bangladesh, Bhutan, Indonesia, Cambodia, Laos, Malaysia, the Maldives, Micronesia, Myanmar, East Timor, Pakistan, Papua New Guinea, the Philippines, Singapore, Taiwan, Thailand, Vietnam, Bahrain, India, Iraq, Iran, Israel, Yemen, Jordan, Qatar, Kuwait, Lebanon, Oman, Saudi Arabia, South China, United Arab Emirates, Samoa, Sri Lanka, Colombia, Suriname, Ecuador, Northern Peru, Northern Bolivia, Paraguay, Venezuela, Guyana, Suriname, French Guiana, Brazil, Mexico, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Trinidad and Tobago (on the continental shelf of South America). USA: Hawaii, Southern Florida