# **CFC®ColorFlow**



# Series 4000 | cast (Easy Wrap RS Long Term Removable)

#### Materials:

Series 4000 ColorFlow<sup>™</sup> is a premium quality cast film designed for use in vehicle and graphics markets where special film effects are required together with a high quality finish and cost effective full color wrapping. CFC<sup>®</sup> EasyWrap RS feature allows for faster positioning helps to prevent bubbles during application, and long term removability.

#### Features:

- » ColorFlow™ effect properties of the film make this series absolutely exclusive!
- » Satin film finish enhances the colour swap effect.
- » Superior conformability to irregular substrates
  - Deeply concave shaped
  - Extremely convex shaped
  - Best conformance in recesses
- » Unique patented adhesive technology
- » Fast and easy-going application properties
- » Easy Wrap feature helps prevent wrinkles and bubbles during application
- » Outstanding durability and outdoor performance
- » Excellent UV, temperature, humidity, and salt-spray resistance
- » Excellent removability



Face: 81 µm satin cast film



Adhesive: Long Term Removable Acrylic



Liner: 90 µm StaFlat, Poly-Coated with Easy Wrap technology



Durability & Warranty: See durability table starting on page 4.

#### **Application Surfaces:**

Flat, Flat with Rivets, Corrugations and deep recesses.

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ColorFlow / Series 4000

# **Physical Characteristics**

Property		Typical Value		
Caliper, face		81 µm		
Caliper, adhesive		30 µm		
Applied Shrinkage, max.		< 0.51 mm		
Tensile at Yield		0.6-1.1 kg/cm		
Elongation		200% at break		
Gloss	Measured @ 60°	20 – 30 GU		
Adhesion: Stainless Steel	(FTM-1, FINAT)			
	15 min.	350 N/m		
	24 hrs.	490 N/m		
	72 hrs.	500 N/m		
Flammability		Self Extinguishing		
Shelf-Life		2 years from date of manufacture when stored at the following temperatures and humidity conditions 20° - 25°C and 50 $\pm$ 5% R. H.		
Durability		Reference color and warranty charts in this data sheet. See page 5.		
Min. Application Temperature		10°C Flat & Simple Curves 16°C Complex curves		
Service Temperature		-45° to 82°C (Reasonable range of temperatures which would be expected under normal environmental conditions).		
Chemical resistance		Resistant to most mild acids, alkalis, and salt solutions.		
Removable		For the length of the applicable warranty period. Reference color and warranty charts in this data sheet.		

Data represents average values where applicable, and is not intended for specification purposes.

#### DISCLAIMER

All CFC<sup>®</sup> statements, technical information and recommendations are based on tests believed to be reliable but do not constitute a guarantee or warranty. All CFC<sup>®</sup> products are sold with the understanding that purchaser has independently determined the suitability of such products for its purposes. All CFC<sup>®</sup> products are sold subject to CFC<sup>®</sup>'s general terms and conditions of sale.

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# **Unsuitable Uses:**

This product is not designed or recommended for the following uses. Unsuitable applications or exposure conditions include, but is not limited to:

- » Paint that is not thoroughly cured or dried
- » Low surface energy substrates (i.e. Tedlar® coatings)
- » Substrate surfaces that are not clean and smooth (little or no variation in texture)
- » Painted substrates with poor paint-to-substrate, or paint-to-paint bond
- » Stainless steel
- » Film applied to non-CFC® Films
- » Film applied to pre-existing graphics (pre approval required)
- » Watercraft below the static water line
- » Watercraft which are not edge sealed
- » Non-OEM painted vehicles
- » Graphic removal from paint with poor adhesion or existing graphics
- » Graphics exposed to oil, harsh chemical, or gasoline vapors or spills
- » Graphics where application tape must adhere to liner
- » Plotter cut text where the minimum size of the text or dimension of the object is less than 2 in (51 mm)

# **Removability:**

The removability listed in the physical characteristics section "Clean removability" means removable with less than 20% adhesive residue when using appropriate heat and chemical removal methods.

CFC® does not warrant removability from the following substrates:

- » Surfaces with poor paint-to-substrate adhesion
- » Wallboard (painted or unpainted)
- » Pre existing graphics that must remain intact; damage to existing graphic when film is removed
- » Improperly cured paint
- » Oxidized or chalked substrates
- » Stainless Steel

CFC® makes no warranty for:

- » Paint/Clear Coat Staining: CFC<sup>®</sup> does not warrant vehicle paint staining that may be visible after removing material which has cracked or discolored. At the first sign of a change in the surface of the material contact CFC<sup>®</sup>.
- » Ease or speed of removal of any graphic
- » Removal from automotive paint that is greater than 5 years old
- » Removal from paint that is improperly cured
- » Removal from aged paint or metals, surface oxidation or chalking; user must test, approve and accept liability for such applications



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# **Application to Glass:**

There is no coverage for graphics applied to glass, and possible breakage for glass applications of this film series.

Note: CFC® does not recommend the use of Series 4000 as block out film for window applications.

## **Durability:**

Durability is the period of time the product is expected to perform satisfactorily when applied in vertical exposure conditions by defined zones, provided that the film is properly stored, converted and installed in accordance with CFC<sup>®</sup> guidelines. The term of CFC<sup>®</sup>'s warranty is equal to the product's durability.

The warranty is the maximum period of time CFC® will warrant the finished product performance.

Abrasion and Loss of Gloss are not covered by any CFC® Warranty. These changes are considered normal wear and tear.

Other factors which may reduce the durability of this product series include: surface texture, surface preparation, application methods, angle and direction of sun, environmental conditions, cleaning & maintenance.

Products containing petroleum distillates or solvents such as soaps, waxes or protective coatings, void any warranty, and may cause premature failure of the material.

Matte finished materials are subject to extreme color and gloss shift when exposed to cleaners, wax and polish. Test an inconspicuous area prior to using any cleaners, wax and polish. The end user assumes complete responsibility to ensure that matte finishes are not affected during cleaning or protecting.

## **Expected Durability:**

	Zone 1		Zone 2		Zone 3	
	Vertical	Non Vertical / Horizontal	Vertical	Non Vertical / Horizontal	Vertical	Non Vertical /Horizontal
ColorFlow <sup>™</sup> Series	4	1	3	0,5	2	0,33

Non-vertical: The face of the graphic is between 10° to 45° from vertical. Specifically for Series 4000 Non-vertical exposure performance will be calculated using the Horizontal exposure value.

Horizontal: The face of the graphic is between 45° and 90° from vertical, for Series 4000 Horizontal applications will be warranted as stated in this ICS Performance Guarantee Bulletin.

Vertical: The face of the graphic is between 0 and 10 degrees from vertical.

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