



The Chemical Company

PRODUCT DATA

9 09 96 53 **Elastomeric Coatings**

# COLORFLEX™

Water-based 100% acrylic waterproof elastomeric coating

### Description

Colorflex™ is a water-based VOC-compliant, 100% acrylic elastomeric decorative coating for exterior masonry. Its waterproof formulation has a high degree of elasticity that will not become brittle after long-term exposure. It complies with Federal Specification TT-C-555B, Type II.

### Yield

APPROXIMATE COVERAGE RATES\*

SUBSTRATE	FT <sup>2</sup> /GAL (M <sup>2</sup> /L)
	PER COAT
Troweled stucco	70 – 90 (1.7 – 2.2)
Blown on stucco	60 – 70 (1.5 – 1.7)
Block	60 – 80 (1.5 – 2.0)
Brick	70 – 90 (1.7 – 2.2)
Concrete	75 – 100 (1.9 – 2.5)

\*NOTE: Coverage rates are theoretical on smooth-surfaced, properly primed substrates.

See page 3 for Wet and Dry Film Thickness Chart.

### Packaging

COLORFLEX™:

5 gallon (18.93 L) pails

PRIMERS, PATCHING COMPOUNDS, AND BLOCK FILLERS

5 gallon (18.93 L) pails

### Features

- Internally plasticized
- Elastomeric
- Excellent UV resistance
- Superior weathering properties
- Resistant to wind-driven rain
- Breathable
- One finish coat application on most installations
- Available in 470 colors
- Carbon dioxide diffusion barrier properties
- VOC-compliant, water-based system

### Benefits

- Retains elasticity long-term
- Provides excellent elongation and low temperature flexibility
- Retains color without fading long-term
- Resists fungus and mildew
- Protects building interiors from moisture
- Allows interior moisture to escape without damaging coating
- Reduces labor costs
- Provides color coordination with Sonneborn® sealants
- Protect embedded Steel from corrosion
- Environmentally friendly, easy cleanup

### Color

Available in white, and four tint bases: pastel, medium, ultra-deep, and neutral.

A total of 463 colors in the Sonneborn® Color Portfolio can be created from the 4 tint bases. See the Popular Palette for Wall Coatings for color formulas.

Refer to Sonneborn® Color Portfolio for the most popular 40 colors. For custom color formulations, consult BASF.

### Texture

Smooth

### Shelf Life

18 months when properly stored

### Storage

Store in unopened containers in a cool, dry area out of direct sunlight. Do not allow Colorflex™ to freeze in the container; do not store below 35° F (2° C).

### Where to Use

#### APPLICATION

- New construction, maintenance, or restoration
- Commercial buildings
- Warehouses
- Condominiums

#### LOCATION

- Vertical
- Exterior
- Above grade

#### SUBSTRATE

- Stucco
- Brick
- Concrete
- CMU
- EIFS



## Technical Data

### Composition

Colorflex™ is an elastomeric 100% acrylic emulsion.

### Typical Properties

PASTEL BASE

PROPERTY	VALUE
<b>Weight</b> , lbs/gal (kg/L)	10.7 (1.3)
<b>Solids by weight</b> , %	55.3
<b>Solids by volume</b> , %	44.5
<b>Viscosity</b> , KU	125 – 132

### Test Data

PROPERTY	RESULTS	TEST METHODS
<b>Elongation at break</b> , %	601	ASTM D 412*
<b>Tensile strength</b> , psi (MPa)	141 (0.97)	ASTM D 412
<b>Cold temperature flexibility</b>		ASTM C 711*
1/8" (3.2 mm) mandrel at 0° F (-18° C)	Passes	
1/2" (12.7 mm) mandrel at -15° F (-26° C)	Passes	
<b>Wind-driven rain</b> (98 mph)	Passes	TT-C-555B
<b>Water vapor transmission</b> , perms		ASTM D 1653 / E 96
Wet	11	
Dry	2.12	
<b>Artificial weathering</b> , Xenon Arc, 4,000 hrs	No chalking, checking, or cracking Color change: $\Delta E < 4.0$	ASTM G 155 (Xenon Arc)
<b>CO<sub>2</sub> diffusion resistance</b> , at 14 mils DFT	264,000 ( $\mu$ CO <sub>2</sub> ) 9" (240 mm) Equivalent concrete layer	PR EN 1062-6
<b>Salt spray (fog) testing</b> , 500 hrs	No fading, checking, or chalking	ASTM B 117
<b>Fungus and mildew resistance</b>	Total absence of growth	ASTM D 3273 / D 3274
<b>Dirt pick-up</b> , at 2 months	97.4	ASTM D 3719
<b>Flame spread</b>	5	ASTM E 84**
<b>Smoke density</b> NFPA class A, UBC class I	5	ASTM E 84**

\* Modified test method

\*\*Scale of 0 - 200; 0 is best

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

## How to Apply

### Surface Preparation

1. Surface should be clean and sound. Concrete substrates should have a minimum 28 day cure and be free of all bond-inhibiting contaminants.
2. High-pressure water blast (or abrasive blast on hard, dense surfaces) surface to medium grit sandpaper texture (reference ICRI guide 03732 CSP 3).
3. Repair any holes, spalled and damaged concrete with appropriate BASF Construction Chemicals repair materials and remove any protruding concrete accessories, and smooth out any irregularities.

4. Some stains may require chemical removal. Be sure to neutralize the compounds and rinse with clean water.

5. Remove any blisters or delaminated areas and sand edges to smooth out rough areas and provide transition to old paint areas.
6. Test adhesion of existing coatings using ASTM D 3359, measure adhesion by tape method A.

### DETAIL WORK

1. Apply NP 1™ or Sonolastic® 150 where appropriate on support columns and other details. Inspect all expansion joints. Ensure there is no deteriorated sealant, adhesion loss, or non-elastomeric caulking in joints. Repair all defective sealant or caulk with NP 1™ or Sonolastic® 150.

2. Apply and tool a liberal amount of Patching Compound or form a cant bead of NP 1™ or Sonolastic® 150 wherever there is change in direction where 2 walls abut and at column and wall intersections.

3. If movement is anticipated where dissimilar substrates join (e.g., stucco and concrete or brick and block), properly clean the joint and seal with NP 1™ or Sonolastic® 150.

4. Inspect all through-wall penetrations, including electrical, lighting, signage, plumbing, HVAC, and fire-sprinkler piping, for a watertight seal. Repair with NP 1™ or Sonolastic® 150.

5. Inspect all flashings, including cap flashing and roof flashing for watertight seal. Repair with NP 1™ or Sonolastic® 150.

**Wet and Dry Film Thickness**

FT <sup>2</sup> /GAL (M <sup>2</sup> /L) PER COAT	AVERAGE DRY FILM MILS (MM)	AVERAGE WET FILM MILS (MM)
60 (1.47)	11 – 12 (0.28 – 0.30)	26 – 27 (0.66 – 0.68)
75 (1.84)	8 – 10 (0.2 – 0.25)	20 – 22 (0.51 – 0.56)
100 (2.45)	6 – 7 (0.15 – 0.18)	16 – 17 (0.41 – 0.43)

IMPORTANT: Warranty applications require a minimum 10 dry mil (0.25 mm) film thickness.

6. Recaulking of old windows is essential in the waterproofing and renovation of existing structures. Inspect perimeter joints and mullions and recaulk with NP 1™ or Sonolastic® 150 as required. Allow sealant to cure before proceeding.

7. All stucco and masonry window sills (primed, if required) should receive a coat of brush-grade Patching Compound. Create a smooth surface that drains away from the window.

8. Bridge cracks smaller than hairline with knife-grade or brush-grade Patching Compounds.

9. Chip or grind out nonmoving cracks larger than hairline. Remove dust and pack with knife-grade Patching Compound 748. Bridge crack with brush-grade Patching Compound 750. Brush a narrow band directly into the crack using brush, sponge, or other means to match substrate texture and reduce telegraphing of patches through the finish coat. On textured substrates, use texturized patching compound to minimize the telegraphing.

10. Rout out dynamic or moving cracks to a minimum of 1/4 by 1/4" (6 by 6 mm), then fill with NP 1™ or Sonolastic® 150. Once sealant is tooled and cured, proceed with crack repair as described previously.

11. Repair cracks and treat back side of parapets in the same manner as exterior walls, terminating at roof counter flashings. If top of parapet wall is exposed masonry, apply a coat of Patching Compound to create a smooth, well-draining surface. Recaulking of reglet may be required.

12. Block and other porous surfaces should be clean, dry, and free of contaminants. Fill concrete block faces with 1 nylon brush coat of Block Filler 749. Apply by working material into pores, crevices, and voids. Allow Block Filler to dry, typically 24 – 48

hours, before proceeding. Coverage rate depends on the porosity and texture of the block surface. Apply to dry, cured block and mortar only.

**Priming****CHALKY SURFACES ONLY**

1. Primer is used only to stabilize existing substrates or coatings that are chalking or friable (powdery) after power washing. The user must ensure that surface or old paint can be bound by the primer for proper adhesion of Colorflex™. A test application is required. Existing surfaces and coatings totally free of chalk do not require priming.

2. Apply Chalky Surface Primer VOC at 200 – 400 ft<sup>2</sup>/gallon (5 – 10 m<sup>2</sup>/L). See product data sheet for further application instructions.

3. Extremely porous substrates may require Block Filler following application of primer.

4. Apply the Colorflex™ finish coat after Primer and Block Filler have sufficiently dried.

5. Special substrates, such as insulated wall systems, may require a different primer system. Contact Technical Service for specific recommendations.

**Application**

1. A 1 coat application on textured, raked, or aggregate finish is normally sufficient.

2. For best appearance, apply 2 thin coats as opposed to 1 heavy coat.

3. Apply finish coat in a pinhole-free continuous membrane for waterproofing integrity.

4. Always work to a natural break and maintain a wet edge during application.

**ROLLER**

1. Use a quality 1-1/4" (32 mm) nap roller cover (lamb's wool preferred).

2. Completely saturate the roller and keep it loaded with the coating to build the required mils. Never dry roll except for touch up.

3. Roll the coating in a consistent fanlike pattern to achieve uniform mil thickness. Stroke variations may result in uneven color and texture. For uniformity of color and texture, application techniques must be consistent throughout the project. Inconsistent application techniques will produce texture or color variations.

4. Colorflex™ is formulated to allow proper working time to help avoid lap marks and has the viscosity to build the required mils in 1 coat when applied properly.

**BRUSH**

1. Application by brush is recommended only for small inaccessible areas, e.g., on touch-ups.

2. Use a nylon brush only.

**SPRAY**

1. For spray equipment recommendations, refer to the equipment manufacturer. As a general guideline, use an airless sprayer providing up to 3,300 psi (22.75 MPa) pressure and utilize 0.031 – 0.035 tip size.

2. A 10% spray loss should be anticipated.

3. On porous substrates, pinholing is an indication of entrapped air. Backrolling is required to eliminate pinholing.

## Clean Up

Clean all tools and equipment with warm soapy water.

## For Best Performance

- Apply a 4 by 4' (1.2 by 1.2 m) test area to verify acceptable color and adhesion before proceeding with any project.
- Keep from freezing.
- Do not apply when surface or ambient temperatures are less than 40° F (4° C) or are expected to go below 40° F (4° C) for 12 hours following application.
- Do not apply coatings in rain, snow, or fog.
- Do not thin Colorflex™.
- Hot or dry conditions limit working time and accelerate drying; cool or damp conditions extend working time and retard drying and may require added measures for protection against wind, dust, dirt, rain, and freezing.
- Minimum dry time between coats is 12 hours at 75° F (24° C) and 50% or less relative humidity.
- Color formulas containing organic colorants are susceptible to fading in exterior applications. Refer to Technical Support for guidance.
- Ultra-deep and neutral-base colors are mainly intended for use as accents in small areas only; they are not guaranteed against fading.
- Slower drying time should be expected when using ultra-deep or neutral base colors.
- On porous substrates, pinholing is an indication of entrapped air; backroll to eliminate pinholing (overaggressive backrolling, however, may create pinholes).
- During hot dry conditions, pre-dampening the wall or the use of a primer can condition the wall for ease of application and to help maintain a wet edge.
- Do not apply to traffic-bearing or flat surfaces.
- Block, mortar, or brick containing iron-rich slag aggregate may cause discoloration through Colorflex™. Consult Technical Service for recommendations.

- Make certain the most current versions of product data sheet and MSDS are being used; call Customer Service (1-800-433-9517) to verify the most current versions.
- Proper application is the responsibility of the user. Field visits by BASF personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.

## Health and Safety

COLORFLEX™

### Caution

Colorflex™ contains zinc oxide, crystalline (quartz) silica, and ethylene glycol.

### Risks

May cause skin, eye or respiratory irritation. Ingestion may cause irritation. Repeated ingestion may cause kidney damage. Contains crystalline silica. NTP and IARC recognize respirable crystalline silica as a human carcinogen. The exposure to crystalline silica during the normal use of this product will be little or none. INTENTIONAL MISUSE BY DELIBERATELY INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

### Precautions

KEEP OUT OF REACH OF CHILDREN. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling. Keep container closed when not in use. DO NOT take internally. Use only with adequate ventilation. Use impervious gloves, eye protection and if the TLV is exceeded or used in a poorly ventilated area, use NIOSH/MSHA approved respiratory protection in accordance with applicable federal, state and local regulations. All label warnings must be observed until container is commercially cleaned or reconditioned.

## First Aid

In case of eye contact, flush thoroughly with water for at least 15 minutes. In case of skin contact, wash affected areas with soap and water. If irritation persists, SEEK MEDICAL ATTENTION. Remove and wash contaminated clothing. If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs or if swallowed, SEEK IMMEDIATE MEDICAL ATTENTION.

Refer to Material Safety Data Sheet (MSDS) for further information.

## Proposition 65

This product contains material listed by the state of California as known to cause cancer, birth defects, or other reproductive harm.

## VOC Content

0.62 – 0.8 lbs/gal or 74 – 96 g/L, less water and exempt solvents.

**For medical emergencies only,  
call ChemTrec (1-800-424-9300).**

## BASF Construction Chemicals, LLC – Building Systems

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