



DURACAP™

Vinyl Capstock Compounds

***Stands up to the elements...
All of them.***



DuraCap™ Compounds Offer Excellence in Weatherability

Durability • Color Retention • Stain and Scratch Resistance • Gloss Control • Impact Retention

Let Mother Nature give you her worst. Geon® DuraCap Vinyl Capstock Compounds provide you with the best protection.

Unique materials specially formulated for exceptional weatherability, DuraCap Compounds add value and increase design flexibility for an unlimited variety of exterior building products.

DuraCap Compounds can be applied to a substrate as a protective coating (0.003-0.005 inches thick) by:

- Co-Extrusion
- Film Extrusion Calendering and Lamination
- Extrusion Coating

DuraCap Compounds can be applied to a wide range of substrates including:

- Rigid Vinyl
- Cellular Vinyl
- CPVC
- ABS
- Modified Polyphenylene Oxide
- Glass Fiber-Reinforced PVC
- Glass Fiber-Reinforced Polyester
- Wood and Wood Composites
- Aluminum
- Steel

Lamination and extrusion coating can be done by heat or use of adhesives, depending on the substrate to be coated.

Process/Feature	86101	86103	83974	86105
Co-Extrusion		■	■	
Extrusion Coating		■	■	
Film Extrusion	■			
Film Calendering				■
High Gloss			■	
Low Gloss	■	■		
Colors	■	■	■	■

Acting as a protective coating, DuraCap Compounds provide excellent weatherability and durability, with outstanding color retention, stain and scratch resistance, and gloss control year after year.

Give Your Products the Benefits of DuraCap Compounds

Putting DuraCap Compounds to work for you is simple - choose the appropriate substrate from a variety of possibilities, based on your own requirements for cost, toughness, stiffness, heat-deflection temperature, and texture.

Then add a long list of DuraCap Compounds' benefits to every application:



- Two to ten times the color retention of rigid PVC.
- Excellent impact retention upon weathering.
- Resistance to mildew and dirt.
- Excellent ultraviolet protection for the substrate.
- High film opacity, resulting in a more uniform color of the composite.
- Excellent adhesion with the substrate.
- Easy processing in co-extrusion, extrusion coat, film extrusion, film calendaring, and lamination.

- Wide choice of colors.
- Low heat buildup in exterior applications.
- Easy embossing into a variety of textures.

A Capstock for All Seasons... And All Applications

With their precise color match capability, weatherability, and low heat buildup, DuraCap Compounds are ideally suited for products such as:

- Window Profiles
- Window Components
- Siding
- Manufactured Housing Skirts
- Residential Entry and Garage Doors
- Gutter Systems
- Fencing

DuraCap Compounds have compiled a record of 25 years of commercial use on vinyl and composite windows, extruded over wood core/PVC substrate for sash and frame parts, and over PVC or CPVC substrates for cladding, jamb liner, glazing beads, etc. Use your imagination - then protect your image with DuraCap Compounds.

DuraCap Compounds Shine in Solar Heating Tests

Good dimensional stability is a key requirement for any thermoplastic. This characteristic depends greatly on heat buildup above ambient air temperature under exposure to the sun. Lower heat buildup improves dimensional stability. DuraCap Compounds' colors offer the lowest possible heat buildup under the frequently harsh conditions of exterior use.

Maximum Heat Buildup Temperature (Vertical Position)		
Color	°F	°C
Black 288	74	41
Green 530	50	28
Blue 460	56	31
Gray 240	49	27
Ivory 035	45	25
White 138	45	25
White 145	45	25
Brown 382	52	29
Brown 372	50	28
Red 730	49	27
Tan 360	45	25
Gold 070	50	28
Olive 080	50	28
Yellow 650	36	20

Temperature buildup for a horizontal or inclined position would be approximately 20% higher.

Only DuraCap Compounds Have a Proven History of Performance

10 Years' Actual Weathering Data • Capstock Innovation • Established Track Record • Lasting Protection

Color Retention of Geon 86103 DuraCap Vinyl Capstock Compound After Outdoor Exposure																				
Color	Ivory 035				Tan 360				Gray 240				White 138				White 145			
Yrs of Exposure	1	2	5	7	1	2	5	10	1	2	5	10	1	2	5	10	1	2	5	10
Arizona Δ E	.4	4.7	3.9	5.0	.5	.9	3.0	2.8	.3	.6	1.7	3.3	.8	1.0	1.7	6.1	.5	1.5	3.4	6.6
Ohio Δ E	1.3	2.2	.2	.6	.2	.2	4.2	3.9	1.8	1.7	.9	.6	1.1	2.7	.7	.8	1.9	2.5	.6	.5
Florida Δ E	.7	2.4	.3	.2	.3	.5	2.0	1.0	.5	.7	.3	.6	.7	.7	.4	.7	.8	1.1	2.8	1.0

Color	Brown 372				Brown 382				Green 530				Blue 460				Yellow 650			
Yrs of Exposure	1	2	5	10	1	2	5	10	1	2	5	10	1	2	5	10	1	2	5	10
Arizona Δ E	.3	.3	1.6	2.7	.9	1.3	.9	.8	.9	2.2	1.2	.8	.2	.3	1.8	1.7	.5	.2	1.1	.4
Ohio Δ E	.2	.2	4.2	3.9	.3	.5	.4	2.5	1.3	1.1	1.3	1.6	.8	.8	1.5	1.7	1.1	1.4	1.0	2.7
Florida Δ E	.4	.2	3.7	1.5	.9	.6	.7	1.6	.9	2.1	4.1	1.4	.5	.6	.5	1.2	.8	.8	1.7	1.2

Color	Red 730				Gold 070				Olive 080				Black 288			
Yrs of Exposure	1	2	5	10	1	2	5	10	1	2	5	10	1	2	5	10
Arizona Δ E	1.6	.6	.4	1.4	.4	.8	.4	1.0	.6	.5	1.7	1.3	1.7	1.3	.8	.2
Ohio Δ E	.9	1.1	5.2	7.3	.9	.9	.3	1.3	.1	.1	2.1	1.3	1.0	1.2	.2	1.9
Florida Δ E	1.4	.5	2.9	3.4	.7	.5	3.3	.5	.5	.5	1.7	1.3	1.8	.2	.6	1.1

Twenty-five years ago, Geon pioneered vinyl capstock compounds to give greater luster and longer life to exterior building products. And today, we're the only manufacturer with 10 years of actual weathering-test data in Arizona, Florida, and Ohio, as well as more than two decades of results from in-field applications. Only DuraCap Compounds can offer a proven track record of performance under all types of conditions, in the extremes of our testing environment and everyday commercial and residential use.

DuraCap Compounds are formulas for lasting protection, with the physical characteristics you demand for high quality and the performance you need for cost-effective application. Trust DuraCap Compounds for the color retention, and stain and chemical resistance that differentiate your building products from the rest.

Tough Stuff

Geon DuraCap Compounds can actually aid in resisting impact. DuraCap Compounds have outperformed other capstocks when used with rigid PVC and general-purpose ABS.

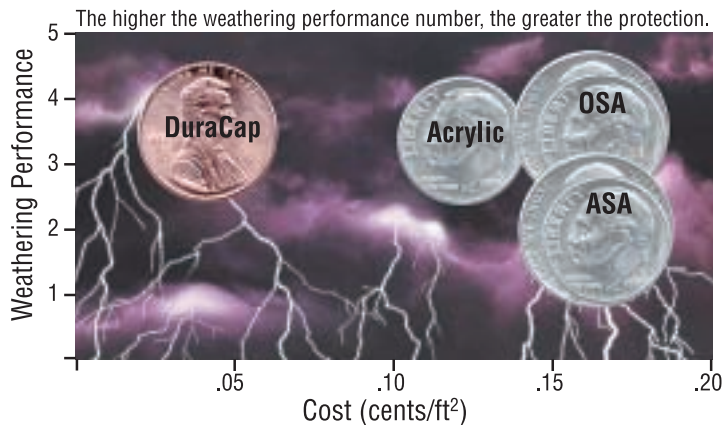
Typical Chemical Resistance Properties of Geon 86103, Geon 83974, Geon 86105, and Geon 86101 DuraCap Vinyl Capstock Compounds

Stain Resistance Test NEMA LO-1-2.05	Immersion (7 days, 75°C) % Volume Change ASTM D-543-67
Household Ammonia.....No Effect	Ethyl Alcohol.....-14.86
Orange Juice.....No Effect	100% Iso-octane-7.41
Coffee.....No Effect	Gasoline-2.42
Tea.....No Effect	JP-4 Jet Fuel.....-10.21
Mustard.....No Effect	Motor Oil (ASTM #3)-9.05
Catsup.....No Effect	Toluene.....+26.79
Oleo.....No Effect	30% H ₂ SO ₄0
Gasoline.....Severe Effect	10% NaOH-14.97
Naphtha.....No Effect	H ₂ O+5.97
Vegetable Oil.....No Effect	
Ethanol.....No Effect	
Methanol.....No Effect	
Wax Crayon.....No Effect	
Lipstick.....No Effect	
Permanent Marker....Moderate Effect	
Grape Juice.....No Effect	

The Undisputed Leader in Cost-Effective Protection

Exceptional Cost/Performance • Easily Processed • Wide Color Selection

DuraCap Compounds' outstanding performances are matched only by their value. And to match your product needs precisely, DuraCap Compounds come in an array of standard colors, or you can have DuraCap Compounds color-customized to your application by our dedicated color lab. DuraCap Compounds provide peak performance for a cost that keeps you extremely competitive in your markets.



A Commitment as Strong as Our Compounds

DuraCap Compounds are backed by The Geon Company, the industry's leading innovator in vinyl compounds. Our resources are completely dedicated to providing high-quality, cost-effective products for both commercial and residential applications, along with:

- A product range that allows you to apply Geon capstocks through a variety of production methods.
- Flexible manufacturing processes that permit us to meet your needs for both small, customized orders and high-volume production.
- Outstanding research and development resources that lead to innovative new capstock materials, processes, and applications.

Typical Properties of Geon 86103, Geon 83974, Geon 86105, and Geon 86101 DuraCap Vinyl Capstock Compounds

(Data based upon 3 mil film) All tests run at 23°C (73°F) except where indicated.

	ASTM Test Method	
Thickness, mm (in.)	0.08	(0.003)
Hardness, Durometer (D)	D-785	72
Specific Gravity, .02	D-792	1.40
Dimensional Stability, % Shrinkage, 10" Square in Hot Air Oven 10 minutes, 80°C (176°F),	D-1042	
With grain		1
Across grain		2
10 minutes, 130°C (266°F),		
With grain		2
Across grain		7
10 minutes, 200°C (392°F),		
With grain		50
Across grain		30
Gloss, 15.6°C (60°F), % Reflectance	D-523	35-45
Water Vapor Transmission Rate, gms/100 sq m/24 hrs. (gms/100 sq. in./24 hrs.)	E-96	15.5 (1)
Tear Resistance	D-1004	
kN/M (lb/mil), With grain		87.5 (.50)
kN/M (lb/mil), Across grain		87.5 (.50)
Tensile Strength, MPa (psi)	D-882	
With grain, yield		20.7 (3000)
With grain, rupture		27.6 (4000)
Across grain, yield		20.7 (3000)
Across grain, rupture		27.6 (4000)
Tensile Elongation, %	D-882	
With grain, yield		2-3
With grain, rupture		200
Across grain, yield		2-3
Across grain, rupture		200
Dielectric Strength, volts/mm (volts/mil)	D-149	98500 (2500)
Dielectric Constant, 1000 cP	D-150	3.0
Volume Resistivity, ohm/cm ³ x 10 ¹⁵	D-257	3.0

- Unmatched customer service and on-time delivery.

So call your Geon representative today at 1-800-GET-GEON - and discover how DuraCap Vinyl Capstock Compounds can help you stand up to all the elements.

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The Geon Company • Cleveland, Ohio 44012 • 1-800-GET-GEON • (1-800-438-4366)