



## The **ArmourTone** **Finish System** with **DensArmor Plus® Abuse-Resistant** **or Impact-Resistant Panels**

In today's ever increasing demand for sustainability in construction materials and systems, abuse resistance of wall surfaces and systems is imperative. Abrasion and impact resistance for both wallboard and applied finishes is the key to reducing maintenance costs and increasing life cycles for wall systems. Variance® Specialty Finishes has developed ArmourTone finish systems to meet the most stringent abuse-resistant criteria and at the same time offering an attractive range of textures and unlimited color options, all meeting the same high performance standards.

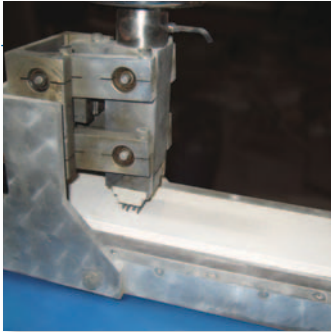
Variance has joined Georgia-Pacific Gypsum to test the ArmourTone Finish systems applied over the two DensArmor Plus® Abuse- and Impact-Resistant Interior Panels for durability and abuse resistance. The results demonstrate exceptional abrasion and impact resistance for all of the attractive ArmourTone Finishes. The ArmourTone Systems are designed not only to provide high performance and aesthetic standards, but also for ease of application, providing exceptional finishing results required in high-end institutional and hospitality construction.

Abuse-resistant gypsum wall panels are rapidly gaining acceptance and market position. DensArmor Plus® Interior Panels by Georgia-Pacific Gypsum provide the ideal substrate for ArmourTone.

For technical information and application guidelines for ArmourTone Finish Systems applied on DensArmor Plus wall panels call **1-888-323-6404** or visit **[www.variancefinishes.com](http://www.variancefinishes.com)**.



ASTM C 1629 test methodology was used to determine how the ArmourTone finish system contributes to the performance of DensArmor Plus® Abuse-Resistant and Impact-Resistant wall panels when tested with ArmourTone as the finish option.

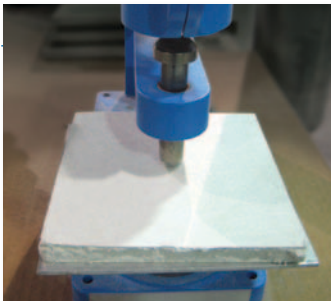


### Surface Abrasion Resistance (Modified ASTM D 4977)

This test measures the ability of a gypsum panel surface to resist scratches and scuffs by subjecting the panel to 50 back and forth cycles with a wire brush. The depth of the abrasion is measured. The test was originally developed to test granule adhesion to mineral surfaced roofing, and was modified by adding a total of 25 pounds of additional weight bearing down on the wire brush.

*Performance Requirements: ASTM D 4977*

CLASSIFICATION LEVEL	ABRADED DEPTH MAXIMUM
1	0.126" (3.2 mm)
2	0.059" (1.5 mm)
3	0.010" (0.3 mm)



### Surface Indentation Resistance (ASTM D 5420 – Gardner Impact Test)

This test measures the ability of a gypsum panel to resist dents by a small hard object, by raising and dropping a hemi-spherical rod onto the gypsum panel. The depth of the indentation is measured. The original test was developed to test flat, rigid sheets of plastic.

*Performance Requirements: ASTM D 5420*

CLASSIFICATION LEVEL	INDENTATION MAXIMUM
1	0.150" (3.8 mm)
2	0.100" (2.5 mm)
3	0.050" (1.3 mm)



### Single Drop Soft Body Impact (Modified ASTM E 695)

This test measures the ability of a gypsum panel to withstand a single impact of a heavy soft object. This test is conducted by swinging a leather bag loaded with 60 lbs. of steel pellets into the panel. When the panel breaks, the height of the drop and weight of the bag are used to calculate the foot-pound measurement required to break the panel. The test was originally developed to measure relative resistance of wall, floor, and roof construction to impact loading.

*Performance Requirements: ASTM E 695*

CLASSIFICATION LEVEL	SOFT BODY MINIMUM
1	90 ft.-lbs. (112 J)
2	195 ft.-lbs. (265 J)
3	300 ft.-lbs. (408 J)

Photos courtesy of Georgia-Pacific Gypsum

## Beauty is more than skin deep.

ArmourTone finishes applied to DensArmor Plus Abuse- and Impact-Resistant Interior Panels were successfully tested using ASTM C 1629 methodology including abrasion resistance, surface indentation, and soft and hard body impact resistance to the wall assembly, particularly when used with DensArmor Plus Abuse-Resistant or Impact-Resistant Interior Panels.

## ArmourTone Finish System Test Scores

Here is how the Variance® ArmourTone Finish System scored when these tests were conducted with and without ArmourTone finishes on the tested abuse- and impact-resistant boards:

		CLASSIFICATION LEVEL	
		<i>Uncoated</i>	<b><i>With ArmourTone</i></b>
<b>Traditional 5/8" drywall</b> (5/8" drywall scores below a Class 1 on Indentation and Soft Body Impact tests)	<b>Surface Abrasion Resistance</b> ASTM D 4977	>1/4"	<b>Class 3</b>
	<b>Surface Abrasion Resistance</b> ASTM D 4977	Class 3	<b>Class 3</b>
<b>5/8" DensArmor Plus® Abuse-Resistant Panels</b>	<b>Indentation Resistance</b> ASTM D 5420	Class 1	<b>Class 2</b>
	<b>Soft Body Impact</b> ASTM E 695	Class 1	<b>Class 2</b>
	<b>Surface Abrasion Resistance</b> ASTM D 4977	Class 3	<b>Class 3</b>
<b>5/8" DensArmor Plus® Impact-Resistant Panels</b>	<b>Indentation Resistance</b> ASTM D 5420	Class 1	<b>Class 2</b>
	<b>Soft Body Impact</b> ASTM E 695	Class 3	<b>Class 3</b>
	<b>Surface Abrasion Resistance</b> ASTM D 4977	Class 3	<b>Class 3</b>

## Standards of Reference

ASTM C 1629	REFERENCE ASTM	UNITS	ABUSE RESISTANCE LEVEL		
			1	2	3
<b>Surface Abrasion Resistance</b>	D 4977	Inches Max	0.126	0.059	0.010
<b>Indentation Resistance</b>	D 5420	Inches Max	0.150	0.100	0.050
<b>Soft Body Impact</b>	E 694	ft-lbf	90	195	300



Four ArmourTone finishes ranging from standard spray texture to decorative smooth plaster were tested. The ArmourTone line offers 24 standard colors with endless color matching capability. The combination of color and texture possibilities offer the design professional a sustainable abuse-resistant system with decorative alternatives for the storeroom to the boardroom.



The ArmourTone Finish System may contribute to sustainable design and LEED® credit contribution. For more information call **1-888-323-6404** or visit **www.variancefinishes.com**.

For Georgia-Pacific Gypsum's LEED calculator, visit **www.gp.com/toolbox**.

The following definitions can help to decide which product is best for high traffic projects:

**Abuse Resistance** Prevents abrasion or scuffing due to high traffic of daily building operations and occasional indentation of the wall surface. Occasional direct contact by people, cleaning equipment and the gentle shoving or movement of furniture is considered with this classification. Abuse-resistant wall board reduces life cycle costs by increasing the time period between periodic maintenance and restoration of the wall surface and overall appearance. Abuse-resistant wall board is appropriate for interior spaces where a higher resistance to abrasion, occasional indentation and minor impact penetration is required.

**Impact Resistance** Prevents damage due to high energy or continual impact that breaks into the stud cavity. Impact-Resistant wall board resists this type of damage, increasing useful wall life and reducing wall maintenance costs. Impact Resistance wall board clearly provides a higher level of performance than either Abuse Resistance or conventional drywall.

U.S.A. – Georgia-Pacific Gypsum LLC  
Canada – Georgia-Pacific Canada LP

**Sales Information & Order Placement**

U.S.A. Midwest: **1-800-876-4746**  
West: **1-800-824-7503**  
South: **1-800-327-2344**  
Northeast: **1-800-947-4497**

CANADA Canada Toll Free: **1-800-387-6823**  
Quebec Toll Free: **1-800-361-0486**

**Technical Information**

Georgia-Pacific Gypsum Technical Hotline  
U.S.A. and Canada: **1-800-225-6119**  
www.gpgypsum.com



Variance, a licensed brand of Parex USA, Inc., is a leader in the building materials industry with over 80 years of combined experience in the U.S. construction industry.

**Sales information or to order ArmourTone call 1-877-547-8822.**

**For technical information on the ArmourTone system, call 1-888-323-6404.**



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**WARRANTIES, REMEDIES AND TERMS OF SALE** For current warranty information for DensArmor Plus interior panels, please go to [www.gpgypsum.com](http://www.gpgypsum.com) and select the product for warranty information. All sales of DensArmor Plus interior panels by Georgia-Pacific are subject to our Terms of Sale available at [www.gpgypsum.com](http://www.gpgypsum.com).

Georgia-Pacific makes no representations or warranties regarding the ArmourTone system. For additional information concerning the ArmourTone system, please contact Variance Finishes at 888-323-6404 or go to [www.variancefinishes.com](http://www.variancefinishes.com)

**UPDATES AND CURRENT INFORMATION** The information in this document may change without notice. Visit our website at [www.gpgypsum.com](http://www.gpgypsum.com) for updates and current information.

**CAUTION For fire, safety and use information concerning DensArmor Plus interior panels, go to [www.gp.com/safetyinfo](http://www.gp.com/safetyinfo). For fire, safety and use information concerning the ArmourTone system, please contact Variance Finishes at 888-323-6404 or go to [www.variancefinishes.com](http://www.variancefinishes.com).**

**HANDLING AND USE—CAUTION** DensArmor Plus panels contain fiberglass facings which may cause skin irritation. Dust and fibers produced during the handling and installation of the product may cause skin, eye and respiratory tract irritation. Avoid breathing dust and mini-

mize contact with skin and eyes. Wear long sleeve shirts, long pants and eye protection. Always maintain adequate ventilation. Use a dust mask or NIOSH/MSHA approved respirator as appropriate in dusty or poorly ventilated areas. For handling and use information concerning the ArmourTone system, please contact Variance Finishes at 888-323-6404 or go to [www.variancefinishes.com](http://www.variancefinishes.com).

**FIRE SAFETY CAUTION** Passing a fire test in a controlled laboratory setting and/or certifying or labeling a product as having a one-hour, two-hour, or any other fire resistance or protection rating and, therefore, as acceptable for use in certain fire rated assemblies/systems, does not mean that either a particular assembly/system incorporating the product, or any given piece of the product itself, will necessarily provide one-hour fire resistance, two-hour fire resistance, or any other specified fire resistance or protection in an actual fire. In the event of an actual fire, you should immediately take any and all actions necessary for your safety and the safety of others without regard for any fire rating of any product or assembly/system.

