

AT THE CORE OF YOUR SUCCESS[®]



TYPICAL USES

Atlas EPS understands that in a manufacturing environment your process depends on our products performing the same day after day, year after year. Each Atlas manufacturing facility uses state of the art vacuum molding technology to assure the most consistent materials, proprietary cutting technology to deliver precise thickness, and customized packaging to fit your manufacturing needs.

Integrity GX Series products are manufactured with EPS^x technology. Each polystyrene granule contains graphite, giving it a distinct dark gray color. The graphite additive- and not blowing agents- increase the R-value by approximately 20%. GX products are approved for use in construction and backed by UL Listings and Evaluation Reports.

THERMAL RESISTANCE

Integrity GX Series provides an insulating value of R5 in a nominal 1" thick panel. R means resistance to heat flow. The higher the R-value, the greater the insulation power.

INSTALLATION & HANDLING

Integrity GX Series is not a structural product and must be separated from the interior occupants of a building by a 15 minute thermal barrier. Exceptions can be found in UL ER16529.1.

PRODUCT DESCRIPTION

Integrity[®] GX Series rigid insulation is graphite enhanced EPS with a stable long term R-value. **The thermal performance per inch is higher than other XPS alternatives.**

- Virgin expanded polystyrene resin
- Distinct dark gray color
- Smooth surface
- Flame retardant grade, meets ASTM E84 < 25 flame spread
- UL listed, UL Report ULEX R16529.1
- Contains no CFCs, HFCs or HCFCs — **only air** in the insulating cells
- Lightweight, yet industrial strength
- Closed-cell construction

Table 1 – Physical Properties

Property	ASTM Test Method	GX Series		
Product ID	-	101-00 GX	151-00 GX	201-00 GX
Compressive Strength (minimum psi) @ 10% deformation ¹	D1621	11	15	27
R-value per inch at 75°F mean temperature	C518	4.7	4.7	4.7
ASTM classification	C578	Type I	Type II	Type IX
Coefficient of linear expansion (in/in/°F)	C578	.000035	.000035	.000035
Flexural Strength (typical psi)	C203	25	35	50
Water absorption % by volume, maximum after 24 hr immersion	-	1.1	1.1	1.1
Water vapor permeance at 1" thick (perms)	Typical E96	4.0	3.0	2.5
Surface burning — flame spread and smoke developed	E84	FS < 15, SD < 300		
Maximum use temperature	-	Short term (10-15 minutes) 180°F Long term 165°F		

¹Integrity GX Series is elastic within 1-2% deformation

DENSITY

OEM products are commonly ordered via nominal density (1#, 1.5#, 2#) etc. Construction products are commonly specified via ASTM C578 Types. While C578 includes minimum density requirements, most OEM applications require engineered solutions, where strength and surface dictate performance.

CODE COMPLIANCE

Integrity GX Series complies with the model building codes when properly installed:

- Surface burning — UL BRYX.R16529
- Cal Std Reg #CA472
- International Energy Conservation Code
- ASTM C578 — see product marking for Type
- International Residential Code (IRC) — ICC-ES Report ESR-1962, UL ER16529.1
- International Building Code (IBC) — ICC-ES Report ESR-1962, UL ER16529.1
- CAN/ULC S102.2, S701 — ULC BOZCC.R16529

QUALITY ASSURANCE SYSTEM

Atlas EPS utilizes the best practices of ISO-9001, while remaining agile enough to customize solutions for each client. Fitness for use is assured through initial product sampling, process inspection, and ERP backed specifications for every single product you buy. If an issue arises, root cause and corrective action are completed with a goal of not more than 72 hours.

SAFETY

SDS for this product available at www.atlaseps.com. Dust generated from sanding or cutting Integrity EPS should be avoided using a dust mask as with other building materials. Integrity EPS is combustible and the product should be protected from ignition sources such as open flames or welder's torch. Applications not specifically listed in ICC-ES Report ESR-1962 or UL ER16529.1 require permanent separation of Integrity EPS from the interior of the building by a thermal barrier such as drywall or concrete for fire safety.

MOLD RESISTANCE

Integrity GX Series has been tested against 4 week exposure to various mold and fungi via ASTM G21, D3273, and C1338 with no growth of spores on the product. Integrity GX Series provides no nutritive value for mold. However, construction practices greatly impact mold growth, and fungi have been known to even grow on glass.

The most current version of this document can be found at www.IntegrityComponentSolutions.com



ENVIRONMENTAL

Integrity GX Series products are ROHs and REACH Compliant, and use air in the insulating cells, emitting no gasses.

CHEMICAL & PHYSICAL PROPERTIES

Table 1 lists the physical properties of Integrity GX Series. Chemical resistance is listed in Table 2. Contact Technical Services for compatibility of materials not listed.

Table 2 — Chemical Compatibility of Integrity GX Series

Inorganic Acids (Muriatic, Sulfuric, Boric Acid)	Excellent
Organic Acids (Carbolic, Citric, Acetic Acid)	Good
Bases (Sodium Hydroxide, Potassium Hydroxide, Ammonia)	Excellent
Alcohols (Methanol, Ethanol, Isopropyl Alcohol)	Good
Beer, Tea, Coffee, Carbonated Soda, Water, Fruit Juice	Excellent
Household Liquid Spray Insecticides (non-aqueous)	Poor
Cement	Excellent
MEK, Methylene Chloride, Acetone	Poor
Antifreeze (Ethylene Glycol — Green, Propylene Glycol — Orange)	Excellent
Hydrocarbons (W, Gasoline, Diesel, Kerosene)	Poor
Mineral Oil	Excellent
Other Oils (Corn, Motor, Palm, Coconut Oil)	Good
Agricultural (Manure, Feed, Urine, Soil, Fertilizer)	Excellent
Formaldehyde, Turpentine, Chloroform, Naphtha)	Poor
Salts (Ammonium, Ferrous, Sodium Chloride, Sulfur)	Excellent
MDI-based Adhesive (Gorilla Glue, Fast-Tac, Dow Great Stuff)	Good
Bleach, Detergents, Borax	Excellent
Cured Mastic, Construction Adhesive, Hardened Asphalt	Good
Wherever XPS insulation is used	Excellent

Excellent = No degradation, no effect from exposure
Good = some effect from exposure, but not significant for product performance
Poor = significant degradation affecting performance, up to completely dissolving product
This table is a guide only — consult Atlas Technical Services for specific chemical design questions