

# Sustainability Tables



Related USGBC LEED Credits	MR 4		EQ 4					MR 5
Product Family:	Post-Consumer	Pre-Consumer	CHPS	Formaldehyde & VOC Emission	Embodied Energy ~	Approx. Density lbs./cu.ft.	Manu. Efficiency	Raw Materials (percentage by weight)
Steel framing	0	25%			4.4 kWh/LB			Secondary steel: (material location varies both US and international)
Paper tape	0	0			0.03 kWh/LF		95+%	Paper: manufactured at Gypsum, OH; (paper from Georgetown, SC)
Glass fiber tape	0	0						Fibrous glass - continuous filament
Paper-faced bead	0	25%			0.1 kWh/LB			Steel, paper, non-solvent organic adhesive: manufactured in Auburn, WA (steel from Korea, paper from Georgetown, SC) & Weirton, WV (steel from Pittsburg, PA & paper from Georgetown, SC).
Metal bead	0	25%			4.4 kWh/LB			Secondary steel: (material location varies)
SHEETROCK BRAND FIRST COAT	0	0						40% Water, 20% acrylic polymer, 20% kaolin, 10% limestone: manufactured at <b>TVOC content &lt; 95 g/L</b> (LEED EQ 4.2 Low-Emitting Coatings, Flat < 50 g/L)
COVER COAT™ compound	0	0				105		50% Limestone, 30% Water, 5% Mica, 5% Latex, & 5% Attapulgit: Manufactured at East Chicago, In (limestone from Quincy, IL); Port Reading, NJ (Limestone from Canaan, CT & York, PA); & Jacksonville, FL (limestone from Sylacauga, AL). <b>TVOC content &lt; 2 g/L.</b>
Joint compound – ready mix (drying type)	0	0			0.04 kWh/LB	67-105	98%	50% Limestone, 30% Water, 5% Mica, 5% Latex, & 5% Attapulgit: <b>North East Plants:</b> Baltimore, MD (limestone from Cockeysville, MD); Gypsum, OH (limestone from Canaan, CT & Perth, ON); & Port Reading, NJ (limestone from Canaan, CT & York, PA). <b>South Central Plants:</b> Bridgeport, AL (limestone from Marble Hill, GA); Chamblee, GA (limestone from Marble Hill & Dalton, GA); East Chicago, IN (limestone from Quincy, IL); Fort Dodge, IA (limestone from Quincy, IL); & Jacksonville, FL (limestone from Sylacauga, AL & Dalton, GA). <b>Western Plants:</b> Auburn, WA (limestone from Seattle, WA); Dallas, TX (limestone from Marble Falls, TX); Galena Park, TX (limestone from Marble Falls, TX); Phoenix, AZ (limestone from Superior, AZ); Sigurd, UT (limestone from Lucerne Valley, CA); & Torrance, CA (limestone from Lucerne Valley, CA). <b>TVOC content &lt; 2 g/L.</b>
Joint Compound – Setting Type	0	0			0.42 kWh/LB	40-80	98%	60% Plaster of Paris, 20% Limestone & 10% Mica: <b>North East Plants:</b> Baltimore, MD (plaster from Fort Dodge, IA); Gypsum, OH (plaster from Fort Dodge, IA); & Port Reading NJ (plaster from Fort Dodge, IA). <b>South Central Plants:</b> Chamblee, GA (plaster from Southard, OK); East Chicago, IN (plaster from Southard, OK); Fort Dodge, IA (plaster onsite); & Southard, OK (plaster onsite). <b>Western Plants:</b> Auburn, WA (plaster from Mexico); Dallas, TX (plaster from Southard, OK); Phoenix, AZ (plaster from Southard, OK); & Torrance CA (plaster from Southard, OK).
SHEETROCK TUFF-HIDE™ primer-surfacer	0	0				100		90% acrylic polymer, <5% silica, <5% talc: manufactured at Gypsum, OH. <b>TVOC content , &lt; 50g/L</b> (LEED EQ 4.2 Low-Emitting Coatings, Flat < 50 g/L)

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Product Family:	Post-Consumer	Pre-Consumer	CHPS	Formaldehyde & VOC Emission	Embodied Energy ~	Approx. Density lbs./cu.ft.	Manu. Efficiency	Raw Materials (percentage by weight)
MICORE™ 160 & 300 panels	18%	32%	Pass	Low	3.4 kWh/SF	3		Perlite, 1% starch, clay; 37% mineral wool; 19% recycled paper: manufactured at Cloquet, MN (All materials local) <b>11% rapid renewable content.</b>
USG DONN® Brand AX™ Aluminum Suspension System	73	22			2.2 kWh/LB**		90%	Recycled Aluminum: manufactured at Oakville, Ontario, Canada. (Aluminum from Newport, OH).
USG DONN® Brand Hot-Dipped Galvanized Steel, and Stainless Steel Suspension Systems	0	25			4.4 kWh/LB		90%	US and foreign steel: manufactured at Cartersville, GA; Oakville, Ontario, Canada; Stockton, CA and Westlake, OH (Steel can specify US material, paint locally supplied). See USG's Design Studio <i>LEED Report</i> tool ( <a href="http://www.usgdesignstudio.com/leedreport.asp">http://www.usgdesignstudio.com/leedreport.asp</a> ) for more specific values.
Acoustical sealant	0	0						Limestone, water, acrylic polymer: manufactured at La Mirada, CA (limestone from Lucerne Valley, CA). <b>TVOC content &lt;65 g/L</b> (LEED EQ requires architectural sealants < 250 g/L per Reg. 8, Rule 51)
DUROCK™ cement board	0	10%			3.8 kWh/SF	72		40% Aggregate, 45% Portland cement, 10% fly ash, & 5% other; <b>DUROCK™ Next Gen:</b> 50% Portland cement, 22% Aggregate, 8% Perlite, 15% Fly Ash, & 5% other: manufactured at Baltimore, MD (Aggr. From Arvonva VA, PC from Martinsburg, WV, Perlite from Hodgkins, IL & Fly Ash from Havana, IL); Detroit, MI (Aggr. From Brooklyn, IN, PC from River Rouge, MI & Fly Ash from West Olive, MI); New Orleans, LA (Aggr. From Baton Rouge, LA, PC from Theodore, AL & Fly Ash from Boyce, LA); Santa Fe Springs, CA (Aggr. From Frazier Park, CA, PC from Lucerne Valley, CA & Fly Ash from Monticello, TX)
DUROCK™ Next Gen panels	0	15%						
FIBEROCK® sheathing, AR panels & underlayment	0	95%	pass/zero	zero	2.14 kWh/SF	55	95%	85% gypsum; 10% cardboard cut-offs& 2% wax: manufactured at Gypsum, OH (FGD railed from Westmoreland, PA & cardboard & wax local) <b>Note: only AR &amp; VHI has been tested for emissions, to date!</b>
SECUROCK® roof panels	0	95%	pass/zero	zero	2.14 kWh/SF	55	95%	85% gypsum; 10% cardboard cut-offs& 2% wax: manufactured at Gypsum, OH (FGD railed from Westmoreland, PA & cardboard & wax local)
SECUROCK® exterior sheathing (94% gypsum, 4% glass fiber & 1% starch)	0	0						Manufactured at Empire, NV; natural gypsum onsite; glass mat made at Waterville, OH.
	0	0						Manufactured at Sperry, IA; natural gypsum onsite; glass mat made at Waterville, OH.
	0	0						Manufactured at Sweetwater, TX; natural gypsum onsite, glass mat made at Waterville, OH.

# Sustainability Tables



USGBC LEED Credits	MR 4				EQ 4		MR 5
	Post-Consumer	Pre-Consumer	Embodied Energy	Approx. Density lbs./cu.ft.	VOC	Manufacturer Efficiency	Plant Location; Raw Materials (%s by weight)
<b>RED TOP GYPSUM PLASTER</b> (100% PLASTER OF PARIS)	0	0	.42 kWh/LB	80	None	98%	Empire, NV; Plaster of Paris onsite
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite
	0	99			None	98%	Gypsum, OH; Plaster of Paris from Westmoreland, PA
<b>RED TOP GAUGING PLASTER</b> (100% PLASTER OF PARIS)	0	0	.42 kWh/LB	80	None	98%	Empire, NV; Plaster of Paris onsite
	0	0					Southard, OK; Plaster of Paris onsite
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite
<b>RED TOP GAUGING PLASTER - AGGREGATED</b> (98% PLASTER OF PARIS, 2% PERLITE)	0	0	.42 kWh/LB	70	None	98%	Baltimore, MD; Plaster of Paris from Nova Scotia, Canada; Perlite from Socorro, NM
<b>RED TOP WOOD-FIBER PLASTER</b> ((99% PLASTER OF PARIS & 1% WOOD)	0	99	.42 kWh/LB	80	None	98%	Gypsum, OH; Plaster of Paris from Westmoreland, PA; wood from Socorro, NM
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite; wood from Socorro, NM
<b>RED TOP FINISH PLASTER</b> (50% PLASTER OF PARIS, 50% LIME)	0	0	.42 kWh/LB	55	None	98%	Empire, NV; Plaster of Paris onsite, Lime from Genoa, OH
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite, Lime from Genoa, OH
<b>STRUCTO-BASE BASECOAT PLASTER</b> (100% PLASTER OF PARIS)	0	0	.42 kWh/LB	80	None	98%	Empire, NV; Plaster of Paris onsite
	0	0			None	98%	Southard, OK; Plaster of Paris onsite
	0	0			None	98%	Fort Dodge, IA; Plaster of Paris onsite
<b>STRUCTO-LITE BASECOAT PLASTER</b> (90% PLASTER OF PARIS 10% PERLITE)	0	0	.42 kWh/LB	55	None	98%	Empire, NV; Plaster of Paris onsite, Perlite from Lakeview, OH
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite, Perlite from Socorro, NM
	0	75			None	98%	Gypsum, OH; Plaster of Paris from Westmoreland, PA, Perlite from Socorro, NM
<b>STRUCTO-GAUGE GAUGING PLASTER</b> (100% PLASTER OF PARIS)	0	0	.42 kWh/LB	80	None	98%	Fort Dodge, IA; Plaster of Paris onsite
	0	0			None	98%	Southard, OK; Plaster of Paris onsite
<b>KEENES CEMENT</b> (100% CALCIUM SULFATE)	0	0			None		Southard, OK; Calcium Sulfate onsite

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USGBC LEED Credits	MR 4.1 & 4.2				EQ 4	MR 5.2	
VENEER PLASTER PRODUCTS:	Post-Consumer	Pre-Consumer	Embodied Energy	Approx. Density lbs./cu.ft.	VOC	Manufacturer Efficiency	Plant Location; Raw Materials (%s by weight)
<b>DIAMOND VENEER BASECOAT PLASTER</b> (50% PLASTER OF PARIS & 50% SAND)	0	0	.42 kWh/LB	120	None	98%	Empire, NV; Plaster of Paris on-site, Sand from Emmett, ID
	0	0			None	98%	Shoals, IN; Plaster of Paris on-site, Sand from Wedron, IL
<b>DIAMOND VENEER FINISH PLASTER</b> (80% PLASTER OF PARIS & 20% LIME)	0	0	.42 kWh/LB	70	None	98%	Empire, NV; Plaster of Paris onsite, Lime from Genoa, OH
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite, Lime from Genoa, OH
<b>Imperial Veneer Basecoat Plaster</b> (50% Plaster of Paris & 50% Sand)	0	0	.42 kWh/LB	120	None	98%	Empire, NV; Plaster of Paris onsite, Sand from Emmett, ID
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite, Sand from Wedron, IL
<b>IMPERIAL VENEER FINISH PLASTER</b> (75% PLASTER OF PARIS & 25% SAND)	0	0	.42 kWh/LB	120	None	98%	Empire, NV; Plaster of Paris onsite, Sand from Emmett, ID
	0	0			None	98%	Shoals, IN; Plaster of Paris onsite, Sand from Wedron, IL
<b>Plaster Bonder</b>	0	0					Water (50%) and vinyl acetate polymer: manufactured in Gypsum, OH
<b>Ivory Finish Lime</b>	0	0					Lime manufactured in Genoa, OH from limestone on-site.

ROCKLATH® Plaster Base	MR 4.1 & 4.2			MR 5.1 & 5.2 – Manufacturing Location & Raw Material Locations
Plant Locations	Post-Consumer	Pre-Consumer	Recycle Content	94% Gypsum, 5% Recycled Paper, 1% Starch; Special panel with wax and glass fiber
Baltimore, MD	5%	19%	24%	Natural gypsum shipped from Nova Scotia; FGD gypsum from Westmoreland, PA; paper from Clark, NJ

**IMPERIAL® Gypsum Base is manufactured at Jacksonville, FL; Stony Point, NY; Rainier, OR; Plaster City, CA; Sperry, IA Norfolk, VA; Aliquippa, PA; Hagersville, ON, Canada; and East Chicago, IN panel information can be found on page 6.**

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USGBC LEED Credits	MR 4.1 & 4.2				EQ 4		MR 5.2
LEVELROCK® Floor Underlayment Products:	Post-Consumer	Pre-Consumer	Embodied Energy	Approx. Density lbs./cu.ft.	VOC	Manufacturer Efficiency	Plant Location; Raw Materials (%s by weight)
<b>LEVELROCK 2500, 3500, RH (Radiant Heat), and Commercial RH (Radiant Heat) green floor underlayment</b>	0	90	.38 kWh/LB	115 - 120	None	98%	Gypsum, OH; 90% Plaster of Paris from Westmoreland, PA; 10% Portland Cement obtained locally.
<b>LEVELROCK® 2500, 3500, 4500, RH (Radiant Heat) &amp; Commercial RH (Radiant Heat) floor underlayment</b>	0	0	.38 kWh/LB	115 - 120	None	98%	Southard, OK; Plaster of Paris onsite
	0	0	.38 kWh/LB		None	98%	Fort Dodge, IA; Plaster of Paris onsite
	0	15	.38 kWh/LB		None	98%	Baltimore, MD; Plaster of Paris from Nova Scotia, Canada
<b>LEVELROCK® CSD™ floor underlayment (corrugated steel deck)</b>	0	15	.38 kWh/LB	120	None	98%	Baltimore, MD; Plaster of Paris from Nova Scotia, Canada
	0	0	.38 kWh/LB		None	98%	Southard, OK; 70% Plaster of Paris onsite, & 30% Portland Cement obtained Locally.
<b>LEVELROCK® PROFLOW™, 2500, 3500, 4500, RH, Commercial RH floor underlayment (pre-sanded)</b>	0	0	.38 kWh/LB	115-130	None	98%	Southard, OK; 20% Plaster of Paris onsite, 20% Portland Cement obtained Locally, & 55% sand obtained locally.

**Note:** USG uses more recaptured (FGD or flue gas desulfurization) gypsum than any other competitive supplier, over 3 million tons in 2003. However, this content changes from plant to plant and even day to day at any one plant due to availability. The recycled contents provided in these tables are approximate based on plant averages. Most of the power plants, which produce this by-product FGD (Flue Gas Desulfurization) gypsum or recaptured gypsum, are east of the Mississippi River. While this by-product gypsum is not available everywhere in North America, we do have plants strategically located to meet your needs. Evaluation should be made per job on the benefits of the use of this material over natural gypsum in the production of LEVELROCK® underlayment used in your project. Using locally produced products like LEVELROCK® underlayment may be more environmentally friendly than shipping LEVELROCK® green floor underlayment across the country to take advantage of the high recycled content.

USGBC LEED Credits	MR 4.1 & 4.2				EQ 4		MR 5.2
FORTACRETE STRUCTURAL PANELS:	Post-Consumer	Pre-Consumer	Embodied Energy	Approx. Density lbs./cu.ft.	VOC	Manufacturer Efficiency	Plant Location; Raw Materials (%s by weight)
<b>FORTACRETE FLOOR DECKING</b>	0	36		78			36% Fly Ash, 20% Gypsum, 20% Portland Cement, 10% Silica Flume, & 10% Fibrous Glass manufactured in Delavan, WI (Fly Ash from Valley Forge, PA; Gypsum from Fort Dodge, IA; Portland Cement from Mason City, IA; Silica Flume from Beverly, OH; Fibrous Glass from Long Beach, CA – shipped from Japan)

# Sustainability Tables



SHEETROCK® gypsum panels	MR 4.1 & 4.2			MR 5.1 & 5.2 – Manufacturing Location & Raw Material Locations
Plant Locations	Post-Consumer	Pre-Consumer	Recycle Content	94% Gypsum, 5% Recycled Paper, 1% Starch; Special panel with wax and glass fiber
Aliquippa, PA *	5% (4)	94% (95)	99%	FGD gypsum from Pleasants, WV; paper from Oakfield, NY
Baltimore, MD *, **	5% (4) (2)	13% (13.5) (14)	19% (17.5) (16)	Natural gypsum shipped from Nova Scotia; FGD gypsum from Westmoreland, PA; paper from Clark, NJ
Bridgeport, AL *	5% (4)	94% (95)	99%	FGD gypsum barged from Jefferson, KY, paper trucked from Jacksonville, FL
East Chicago, IN	5% (4)	94% (95)	99%	FGD gypsum from Porter, IN; paper from Gypsum, OH
Empire, NV	5% (4)	0% (0)	5% (4)	Natural gypsum onsite; paper from Otsego, MI
Galena Park, TX	5% (4)	94% (95)	99%	FGD gypsum from Brown, OH; paper local
Hagersville, ON, Canada	5% (4)	26% (27)	31% (31)	Natural gypsum onsite; FGD gypsum from Westmoreland, PA; paper from Clark and Oakfield, NY
Jacksonville, FL *	5% (4)	20% (21)	25% (25)	Natural gypsum shipped from Nova Scotia, Canada; FGD gypsum from Duval, FL; paper local
Montreal, Quebec, Canada	5% (4)	94% (95)	99%	FGD from Belledune, New Brunswick, Canada; paper from Clark, NY
Norfolk, VA	5% (4)	20% (20)	25% (25)	Natural gypsum shipped from Nova Scotia, Canada; FGD gypsum from Chesapeake, VA; paper trucked from Oakfield, NY
Plaster City, CA *, **	9% (8) (7)	0% (0) (0)	9% (8) (7)	Natural gypsum onsite; paper from Otsego, MI
Rainier, OR *	16% (15)	0% (0)	16% (15)	Natural gypsum from Mexico; paper railed from Otsego, MI
Shoals, IN *, **, **	5% (4) (3) (2)	51% (52) (52) (53)	56% (56) (55) (55)	Natural gypsum onsite, FGD gypsum from Pike, IN; paper from Kansas City, MO
Sigard, UT	5% (4)	0%	5% (4)	Natural gypsum onsite; paper railed from Kansas City, MO
Southard, OK	5% (4)	0%	5% (4)	Natural gypsum onsite; paper from Kansas City, MO
Sperry, IA *	5% (4)	3% (3)	8% (7)	Natural gypsum onsite; paper from Gypsum, OH
Stony Point, NY *	9% (8)	0% (0)	9% (8)	Natural gypsum barged from Nova Scotia; paper from Oakfield, NY
Sweetwater, TX *, **	5% (4) (2)	0% (0) (0)	5% (4) (2)	Natural gypsum onsite, paper from Galena Park, TX
Washingtonville, PA	5% (4)	94% (95)	99%	FGD gypsum from York, PA; paper from Oakfield, NY
St Johns, New Brunswick, Canada	5% (4)	94% (95)	99%	FGD from Belledune, New Brunswick, Canada, paper from Oakfield, NY

Embodied energy of SHEETROCK gypsum panels is about 1.3 kWh/SF for ½” regular and at a density of 43-50 lbs./cu. ft.. Above values based on 2008 actual plant contents & based on ½” panels assuming 5% by weight paper (as shown under last column); 5/8” panels would have 4% paper, 95% gypsum; ¾” panels – 3% paper, 96% gypsum; 1” panels – 2% paper, 97% gypsum; ¼” panels – 8% paper, 91% gypsum. Therefore Recycled Contents, Post-Consumer and Pre-Consumer values will change per panel thickness used (see color for values if changed)!

\* In addition to all ½” & 5/8” SHEETROCK gypsum panels, ½” & 5/8” SHEETROCK Mold Tough Panels are manufactured at these locations; special paper from Kansas City, MO.

\*\* In addition to all ½” & 5/8” SHEETROCK gypsum panels, ¾” SHEETROCK UltraCode Panels are manufactured at these locations; special paper from Kansas City, MO.

\*\*\* In addition to all ½” & 5/8” SHEETROCK gypsum panels, 1” SHEETROCK Liner Panels are manufactured at these locations, special paper from Kansas City, MO.

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Related USGBC LEED for Schools Credits		MR 4.1 & 4.2				EQ 8	EQ Pre 3 & EQ 9			EQ 3.2 & EQ 4		MR 6	MR 5.1/5.2 & EQ 10
Product Family: Acoustical Panels & Tiles		Post-Consumer		Pre-Consumer		LR	NRC	CAC	Approx. Density lbs/cu.ft.	CHPS	Formaldehyde & VOC Emissions	Rapid Renew	Raw Materials/Comments (percentage by weight)
		Class A	FC	Class A	FC								
'X'-technology - Cloquet, MN	ASTRO™ CLIMAPLUS™ (Illusion)	0%	0%	65%	69%	.86	.50/.55	35	18-21	Pass	Low	3%	'X'-technology manufactured at Cloquet, MN  Slag wool (Pre-consumer%) from Red Wing, MN; 5% Acrylate Polymer (local), starch (Rapid Renew %) from Clinton, MN FC panels 20% clay from Gleason, TN  Estimated embodied energy ~ 9 kWh/SF for a 17 lbs/cu.ft. ¾" thick panel
	ECLIPSE™ CLIMAPLUS™ (Illusion)	0%	0%	77%	62%	.86	.65/.70	35	17			1-2%	
	MILLENNIA™ CLIMAPLUS™ (Illusion) & High NRC	0%	0%	75%	62%	.87	.70/.75	35	17			1-3%	
	MARS™ CLIMAPLUS™	0%	NA	76%	NA	.89	.70	35	17			2%	
	MARS™ CLIMAPLUS™ High NRC	0%	NA	77%	NA	.89	.80	35	17			2%	
Cast products - Walworth, WI	BRIO™ CLIMAPLUS™	0%	NA	71%	NA	.81	.70	35	20	Pass/ Zero	Zero	12.5%	Cast products manufactured at Walworth, WI  Slag wool (Pre-consumer %) made onsite, slag within 100 miles, starch (rapid Renew %) from Clinton, IA, Class A panels 10% plaster of paris East Chicago, IN, FC panels 14% clay from Macon, GA  Estimated Embodied Energy ~ 7 kWh/SF for a 20 lbs/cu.ft. ¾" thick panel
	"F" FISSURED™	0%	NA	71%	NA	.79	.70	35	24			12.5%	
	FRESCO™ CLIMAPLUS™	0%	NA	71%	NA	.83	.70	35	20			12.5%	
	FROST,™ FROST™ CLIMAPLUS™	0%	0%	71%	70%	.85	.70	40	24			12.5%	
	GLACIER™	0%	0%	71%	70%	.70	.65	35	22-24			12.5%	
	SANDRIFT™ CLIMAPLUS™	0%	0%	71%	70%	.83	.70	38	20			12.5%	
	SUMMIT™ CLIMAPLUS™	NA	0%	NA	63%	.81	.70	38/40	24			11%	
WetFelt Products - Greenville, MS	OLYMPIA™ MICRO CLIMAPLUS™ (Illusion)	13%	NA	39%	NA	.87	.50	30/35	18	Pass	Low	8%	WetFelt Products manufactured at Greenville, MS  Slag wool (Pre-consumer %) railed from Red Wing, MN; perlite 20-50% railed from Socorro, NM; Recycled paper (Post-consumer %) from Senatobia, MS; Starch (Rapid Renew %) from Decatur, AL; and clay 2-12% from Crenshaw, MS  Embodied energy ~ 3.5 kWh/SF for a 17 lbs/cu.ft. ¾" thick panel
	ASPEN™ (Illusion)	16%	NA	13%	NA	.87	.52/.55	35/40	18-22			7%	
	PEBBLED™ CLIMAPLUS™	17%	NA	17%	NA	.86	.55	35	14			6.5%	
	ROCK FACE™ CLIMAPLUS™	NA	6%	NA	43%	.86	.55	35	24			7%	
	TOUCHSTONE™ CLIMAPLUS™	NA	6%	NA	43%	.86	.55	35	26			7%	
	RADAR™ CLIMAPLUS™ (Illusion)	16%	6%	13%	43%	.84	.55	33/35	13-14			7%	
	FISSURED™	17%	6%	8%	43%	.81	.55	33/35	12-20			7%	
	RADAR™ (Illusion)	17%	6%	8%	43%	.85	.55/.60	33/35	13-14			7%	

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Related USGBC LEED for Schools Credits		MR 4.1 & 4.2				EQ 8	EQ Pre 3 & EQ 9			EQ 3.2 & EQ 4		MR 6	MR 5.1/5.2 & EQ 10	
Product Family: Acoustical Panels & Tiles		Post-Consumer		Pre-Consumer		LR	NRC	CAC	Approx. Density lbs/cu.ft.	CHPS	Formaldehyde & VOC Emissions	Rapid Renew	Raw Materials/Comments (percentage by weight)	
		Class A	FC	Class A	FC									
Wet felt products - Cloquet, MN	RADAR™ CLIMAPLUS™ (Illusion)	13%	6%	31%	44%	.84	.55	33/35	13-14	Pass	Low	6-10%	<b>Wet felt products manufactured at Cloquet, MN;</b>  Slag wool (Pre-consumer %) from Red Wing, MN, perlite 20-50% from Socorro, NM; recycled paper (Post-consumer %) local; starch (Rapid Renew %) from Clinton, MN; clay 2-12% from Gleason, TN  Estimated Embodied Energy ~ 4 kWh/SF for a 17 lbs./cu.ft. ¾" thick panel	
	FISSURED™	18%	6%	7%	44%	.81	.50/.55	33/35	12-20			6-7%		
	RADAR™ (Illusion) High NRC/CAC	18%	6%	7%	44%	.85	.55/.60	33/35	13-14			6-7%		
	RADAR™ CLIMAPLUS™ High CAC/NRC	NA	1%	NA	57%	.84	.55/.70	40/35	18			10%		
	CLEAN ROOM™ CLIMAPLUS™	NA	6%	NA	45%	.79	.55	35	21			6%		
	RADAR™ Ceramic CLIMAPLUS™	NA	0%	NA	45%	.82	.50	40	26	Pass/ Zero	Zero	2%		

Related USGBC LEED for Schools Credits		MR 4.1 & 4.2				EQ 8	EQ Pre 3 & EQ 9			EQ 3.2 & EQ 4		MR 6	MR 5.1/5.2 & EQ 10	
Product Family: Specialty Panels & Tiles		Post-Consumer		Pre-Consumer		LR	NRC	CAC	Approx. Density lbs/cu.ft.	CHPS	Formaldehyde & VOC Emissions	Rapid Renew	Raw Materials/Comments (%s by weight)	
		Class A	FC	Class A	FC									
PREMIER HI-LITE™ CLIMAPLUS™		8%	NA	23%	NA	.76	.60/.75	20	28	No	Meets state of Washington	0%	<b>Glass fiber Products Manufactured at Greenville, MS</b>  Estimated Embodied Energy ~4.0 kWh/SF	
HALCYON™ CLIMAPLUS™ (varies w/ thickness and backing)		39%	NA	1%	NA	.88	.90/1.00	20/30	6			0%		
PREMIER NUBBY™ CLIMAPLUS™ (varies w/ thickness and backing)		29%	NA	0%	NA	.87	.85/.90	25	6			0%		
SHEETROCK™ lay-in ceiling panel CLIMAPLUS™		NA	***	NA	***	.77	—	35/40	48	Pass/ Zero	Zero	1%	<b>Gypsum Panel and vinyl product manufactured at Shoals, IN (gypsum panels onsite); Sweetwater, TX (gypsum panels onsite); Stony Point, NY (gypsum panels onsite); and Plaster City, CA (gypsum panel onsite)</b>	
SHEETROCK™ lay-in CLEAN ROOM		NA	***	NA	***	.77	—	40	48			1%	<b>Gypsum Panel and vinyl product manufactured at Sweetwater, TX (gypsum panel onsite)</b>	

# Sustainability Tables



USGBC LEED Credits	MR 4		EQ 8	MR 5
Product Family: Specialty Panels & Grid	Post-Cons	Pre-Consumer	NRC	Raw Materials/Comments (%s by weight)
Billo	0%	0%	N/A	US produced virgin polycarbonate raw material, manufactured in Franklin, WI
Cadre & Quadra	0%	0%	N/A	Tijuana, MX
Celebration steel suspension System	0%	25%	N/A	US and foreign steel, manufactured in Westlake, OH
Celebration aluminum panels	0%	70%	Up to .65 with A116 perf.	US aluminum, manufactured in Oakville, ON
C <sup>2</sup> Paired Compasso, steel	0%	25%	N/A	US and foreign steel, manufactured in Westlake, OH
Compasso (2 ¼", 4", 6" and 8" painted steel)	0%	25%	N/A	US and foreign steel, manufactured in Westlake, OH
Compasso (10" and 12" painted aluminum)	0%	70%	N/A	US aluminum, manufactured in Oakville, ON
Compasso Slim, aluminum	0%	0%	N/A	Virgin aluminum, manufactured in City of Industry, CA
Curvatura steel suspension system and trim	0%	25%	N/A	US and foreign steel, manufactured in Westlake, OH
Curvatura aluminum panels	0%	70%	N/A	US aluminum, manufactured in Oakville, ON
Curvatura Diamondflex steel panels	0%	25%	N/A	US and foreign steel, manufactured in Vernon Hills, IL
Curvatura Lexan™ panels	0%	0%	N/A	Coburg, ON
Geometrix aluminum panels	0%	70%	N/A	US aluminum, manufactured in Oakville, ON
GridWare, steel suspension	0%	25%	N/A	US and foreign steel, manufactured in Westlake, OH
Libretto aluminum panels	0%	70%	N/A	US aluminum, manufactured in Oakville, ON
Libretto profile trim and Suspension, steel	0%	25%	N/A	US and foreign steel, manufactured in Westlake, OH
Panz aluminum panels	0%	70%	Up to .65 with A116 perf.	US aluminum, manufactured in Oakville, ON
Paraline aluminum pans	0%	70%	N/A	US and foreign aluminum, manufactured in Westlake, OH
Topo aluminum suspension	0%	50%	N/A	US aluminum, manufactured in Oakville, ON
Topo Lexan™ panels	0%	0%	N/A	US produced virgin polycarbonate raw material, manufactured in Franklin, WI
Transluents, Lexan™ panels	0%	0%	N/A	US produced virgin polycarbonate raw material, manufactured in Franklin, WI
Transluents, FRP panels	0%	0%	NA	
Transparencies acrylic panels	0%	0%	N/A	Westlake, OH
WireWorks steel panels	80%	20%	N/A	US and foreign steel, manufactured in Chicago, IL
Transluents, PETG panels	0%	40%	NA	

# Sustainability Tables



The above information is the values for each product from various plant locations average over the year of 2008, content changes from plant to plant and even day to day at any one plant due to availability.

USG is committed to provide replicable scientific data supporting our product claims, and is committed to marketing conduct inline with the letter and spirit of the **Federal Trade Commission Environmental Marketing Guides 16 C.F.R. § 260.7(d)**.

## **Test Protocols:**

Recycled Content (**Post-Consumer & Post-Industrial**) per Federal Trade Commission Environmental Marketing Guides.

**Post-Industrial** and **Pre-Consumer** are one in the same under the USGBC LEED Rating systems!

**LR** (Light Reflectance) tested per ASTM C1477.

**NRC** (Noise Reduction Coefficient per ASTM C423.

**CAC** (Ceiling Attenuation Class) tested per ASTM 1414.

**TVOC** (Total Volatile Organic Compound) emission measured per ASTM D 5116, State of Washington allows for 500 ug/m<sup>3</sup>.

**CHPS** (Collaborative for High Performance Schools) follow EPA Section 01350 for VOC's emission and determination on PASS.

**Formaldehyde** emissions measured during CHPS testing per Section 01350, for most products CHPS allows 13.5 ppb & State of Washington allows for 50 ppb.

**Zero emissions** is defined as the quantity less than test chamber background concentrations as required by Section 3.8.4.2 of the "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers, Supercedes previous versions of small-scale environmental chamber testing portion of California Specification 01350, July 15, 2004." Section 3.8.4.3 states "Background concentrations in the empty chamber ventilated at 1.0 air changes per hour shall not exceed 2 µg m<sup>-3</sup> for any individual VOC, and 25 µg m<sup>-3</sup> for TVOC.

**Embodied Energy** calculations for USG manufactured products and raw materials are based on 'Cradle to Gate' and averages for all plants within North America from Life Cycle Assessment studies conducted by USG following ISO 14040: 2006 Guidelines.

**Estimated Embodied Energy** calculations are based on public 'Cradle to Gate' information from Life Cycle Assessment studies conducted in Canada, Europe and Australia.

**\*\* Embodied energy** of aluminum is low due to recycled aluminum does not counting transportation from job to manufacturing or energy to separate from waste.

**\*\*\* Recycled Content** varies based on gypsum panel's recycled content from that specific plant location. Form Recycled Content and gypsum source at that plant; please review Gypsum Panel Plant information shown above.

**Plant Efficiencies** are based on all raw materials going into the plant versus all the materials coming out as a finish product, minus water or water vapor. For example SHEETROCK gypsum panels' Plant Efficiencies run over 95% (over 95% of all solid materials raw materials exit the plant in a finished product & 3% is used to create slutters, drywall strips used to separate lifts)

## **Trademarks**

The following are trademarks of USG Corporation or a related company: ASPEN, ASTRO, BRIO, CLEAN ROOM, CLIMAPLUS, DUROCK, ECLIPSE, FIBEROCK, "F" FISSURED, FISSURED, FRESCO, FROST, GLACIER, HALCYON, MARS, MICORE, MILLENNIA, OLYMPIA MICRO, PEBBLED, PREMIER HI-LITE, PREMIER NUBBY, RADAR, RED TOP, ROCK FACE, SANDRIFT, SHEETROCK, SUMMIT, TOUCHSTONE, TUFF-HIDE. LEED is a registered trademark of the U.S. Green Building Council.

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