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National Gypsum Product Reference Guide

National Gypsum®

NATIONAL GYPSUM PRODUCT REFERENCE GUIDE

TABLE OF CONTENTS

TRADEMARKS

The following names are trademarks owned by National Gypsum Company or its subsidiary, National Gypsum Properties, LLC:

DURABASE®
DURASAN®
EASY FINISH®
E-Z STRIP®
FIRE-SHIELD®
FIRE-SHIELD C™
GOLD BOND®
GOLD BOND 54®
GRIDMARX®
GRIDSTONE®
GYPSOLITE®
HIGH FLEX®
HI-ABUSE®
HI-IMPACT®
KAL-KORE®
KAL-KORNER BEAD®
KAL-KOTE®
KAL-MESH®
MULTI-FLEX®
NGC®
1-800 NATIONAL®
PERFECT SPRAY®
PERMABASE®
PERMABASE FLEX®
PROFORM®
SHAFTLINER®
SHAFTLINER XP®
STA-SMOOTH®
ULTRA™
UNI-KAL®
X-KALIBUR®
XP®

Charlotte, North Carolina, is the home of the new National Gypsum Company.

National Gypsum Company is a fully integrated manufacturer and supplier of building and construction products worldwide.

Our primary emphasis is on Gold Bond® BRAND gypsum gypsum board, ProForm® BRAND joint treatment products and PermaBase® BRAND cement board, in addition to plaster and framing systems.

PRODUCT SPECIFICATION DIRECTORY

FOREWORD

This directory is designed to provide a convenient, up-to-date reference to some of the products marketed by National Gypsum Company, and to the ASTM and Federal Specifications with which they comply.

The General Services Administration has cancelled many Federal procurement documents. These have been superseded by ASTM Specifications. Federal Specifications are listed for reference.

This is to certify that the following materials comply in all respects with listed specifications.

GYPSUM BOARD PRODUCTS			Specification Standards	
	Product	**Description and Use**	**ASTM**	**Federal**
Gypsum Board	**Regular Gypsum Board or Sta-Smooth**	Fire resistant. Will take decoration after proper surface preparation of interior walls and ceilings.	C 1396	SS-L-30D Type III
	XP Gypsum Board	1/2" (12.7 mm) gypsum board with a moisture resistant gypsum core and mold/mildew resistant purple paper. Will take decoration after proper surface preparation of interior walls and ceilings.	C 1396	SS-L-30D Type III
	Fire-Shield Gypsum Board (Includes "C")	1/2" (12.7 mm) and 5/8" (15.9 mm) gypsum board with specially processed core highly resistant to fire; type X core.	C 1396 Type X	SS-L-30D Type III Grade X
	XP Fire-Shield Gypsum Board (Includes "C")	1/2" (12.7 mm) and 5/8" (15.9 mm) gypsum board with a moisture resistant gypsum core highly resistant to fire and mold/mildew resistant purple paper; type X core.	C 1396 Type X	SS-L-30D Type III Grade X
	Foil Back Gypsum Board	Standard gypsum board with aluminum foil on backside providing vapor retarder for interior walls and ceilings.	C 1396	SS-L-30D Type III Form C
	Soundbreak Gypsum Board	5/8" (15.9mm) acoustically enhanced gypsum board used in construction of high rated STC assemblies.	C 1396	SS-L-30D Type III
	Fire-Shield Shaftliner (Includes XP)	1" (25.4 mm) thick, 2' (610 mm) wide, for solid partitions, shaft walls and Area Separation Walls; type X core.	C 1396 Type X	SS-L-30D Type IV Grade X
	Regular or Fire-Shield Exterior Soffit Board	Gypsum board with extra resistance to moisture and sagging used for exterior soffit.	C 1396 Type X	None
	Durasan Prefinished Regular Gypsum Board	Gypsum board with a vinyl surface, combines texture and pattern in colors. No decoration required.	C 1396	SS-L-30D Type III Class 3
	Durasan Prefinished Fire-Shield Gypsum Board	Gypsum board with a vinyl surface, combines texture and pattern in colors; type X core.	C 1396 Type X	SS-L-30D Type III Grade X Class 3
	High Flex Gypsum Board	1/4" (6.4 mm) flexible gypsum board designed for use in radius wall and ceiling construction.	C 1396	SS-L-30D Type III
	High Strength Ceiling Board	1/2" (12.7 mm) gypsum board with core formulated to provide increased sag resistance.	C 1396	SS-L-30D Type III
	Hi-Abuse XP Fire-Shield Gypsum Board	5/8" (15.9 mm) gypsum board with heavy abrasion resistant mold/mildew resistant purple paper and a special core to provide greater resistance to surface indentation; type X core.	C 1396 Type X	SS-L-30D Type III Grade X
	Hi-Impact XP Fire-Shield Gypsum Board	5/8" (15.9 mm) gypsum board with heavy abrasion resistant mold/mildew resistant purple paper and a special moisture resistant gypsum core backed with reinforcing fiber glass mesh; type X core.	C 1396 Type X	SS-L-30D Type III Grade X
	Gridstone Ceiling Panels	1/2" x 2' x 2' (12.7 mm x 610 mm x 610 mm) 1/2" x 2' x 4' (12.7 mm x 610 mm x 1219 mm) gird panels with Fire-Shield G type X core and vinyl laminate.	C 1396 Type X, Class 1; E 1264, Type XX, Patterns E, G	None

GYPSUM BOARD PRODUCTS (cont.)		Description and Use	ASTM	Federal
Gypsum Board	**Gridstone Hi-Strength Ceiling Panels**	5/16" x 2' x 2' (7.9 mm x 610mm x 610 mm) 5/16" x 2' x 4' (7.9 mm x 610 mm x 1219 mm) grid panels with non-combustible gypsum core and vinyl laminate.	C 1396 Class 1	None
	Gridstone CleanRoom Ceiling Panels	1/2" x 2' x 2' (12.7 mm x 610 mm x 610mm) 1/2" x 2' x 4' (12.7 mm x 610 mm x 1219 mm) grid panels with Fire-Shield G type x core and vinyl laminate. Completely sealed on face, back and edges.	C 1396 Type X, Class 1; E 1264, Type XX, Patterns E, G	None
	Durabase Gypsum Board	5/16" (7.9 mm), 3/8" (9.5 mm), 1/2" (12.7 mm), and 5/8" (15.9 mm) gypsum board for printing application or laminating base.	C 1396	None
Sheathing	**Regular Gypsum Sheathing Sheathing T & G, Jumbo**	1/2" (12.7 mm) gypsum board to be used as a sheathing for exterior wall construction.	C 1396	SS-L-30D Type II
	Fire-Shield Jumbo Gypsum Sheathing	5/8" (15.9 mm) gypsum board to be used as sheathing for fire rated exterior wall construction; type X core.	C1396 Type X	SS-L-30D Type II Grade X

LATH, DRYWALL JOINT TREATMENT, TEXTURES AND ACCESSORIES			Specification Standards	
	Product	**Description and Use**	**ASTM**	**Federal**
Lath	**Kal-Kore Plaster Base**	3/8" (9.5 mm), 1/2" (12.7 mm) Gypsum base for veneer plaster systems.	C 1396	SS-L-30D Type VI
	Kal-Kore Fire-Shield Plaster Base (includes "C")	1/2" (12.7 mm), 5/8" (15.9 mm) Gypsum base for veneer plaster systems; type X core.	C 1396 Type X	SS-L-30D Type VI Grade X
	Regular or Fire-Shield Hi-Abuse Kal-Kore Plaster Base	Gypsum base with special core to provide greater resistance to surface indentation. Designed for high abuse areas.	C 1396 Type X	SS-L-30D TypeVI Grade X
Joint Treatment	**ProForm All Purpose Joint Compound**	A conventional full-weight ready mix joint compound used for all phases of drywall finishing.	C 475	SS-J-570B
	ProForm XP Joint Compound	A conventional full-weight ready mix joint compound formulated for additional mold resistance.	C 475	SS-J-570B
	ProForm Multi-Use Joint Compound	A ready mix compound that combines the best attributes of All Purpose and Lite for use in all phases of drywall finishing.	C 475	SS-J-570B
	ProForm Lite Joint Compound	A full "Lite" weight ready mix for use in finishing gypsum board, gypsum board joints, spotting fasteners and finishing accessories.	C 475	SS-J-570B
	ProForm Ultra Joint Compound	An all purpose joint compound that pulls and sands easier than conventional ready mix with up to 50% less shrinkage.	C 475	SS-J-570B
	ProForm Taping Joint Compound	Ready mixed joint compound used to enhance bond when embedding joint tape and applying cornerbeads and accessories.	C 475	SS-J-570B
	ProForm Topping Joint Compound	Ready mixed topping compound designed as a finish coat over joint compound.	C 475	SS-J-570B
	ProForm Texture Grade	A nonaggregated, ready mixed material formulated for texturing interior walls and ceilings.	C 475	SS-J-570B
	ProForm Sta-Smooth, Sta-Smooth Lite, and Sta-Smooth HS Joint Compounds	A setting type powder compound used for joint finishing.	C 475	SS-J-570B
Surfacer/ Primer	**ProForm Surfacer/Primer**	A white, high-build interior coating used in lieu of a skim coat and primer coat to provide a high quality Level Five Finish.	None	None

LATH, DRYWALL JOINT TREATMENT, TEXTURES AND ACCESSORIES (cont.)			Specification Standards	
	Product	**Description and Use**	**ASTM**	**Federal**
Textures	**ProForm Wall and Ceiling Spray Texture**	White, aggregated spray texture for interior use over ceilings of gypsum board or monolithic concrete.	None	None
	ProForm Perfect Spray Textures	A white, aggregated spray texture for interior use on walls and ceilings.	None	None
	ProForm Perfect Spray EM & HF Textures	A white, nonaggregated spray texture for interior use on walls and ceilings.	None	None
Accessories	**Gypsum Board Cornerbead**	Used to protect exterior corners.	C 1047	None
	Gypsum Board Casing Bead	Used to reinforce and trim around doors and windows.	C 1047	None
	Arch Cornerbead	Used straight for exterior corners or may be snipped and bent to form arches.	C 1047	None
	ProForm Joint Tape	A paper tape for concealment of gypsum board joints.	C 475*	SS-J-570B*
	ProForm Fiberglass Mesh Tape	A self-adhering glass fiber mesh tape to be used only with setting compounds.	C 475	None
	ProForm Multi-Flex Tape Bead	Used to form inside or outside corners that are less or greater than 90°.	None	None
	E-Z Strip Expansion Joint	Vinyl extrusion used as an expansion or control joint for drywall and veneer plaster walls and ceilings.	C 1047	None
	.093 Zinc Expansion Joint	All zinc part used as an expansion or control joint for drywall and veneer plaster walls and ceilings.	C 1047	None

FIRE AND SMOKE STOP COMPOUND		Specification Standards	
Product	**Description and Use**	**ASTM**	**Federal**
ProForm Sta-Smooth FS 90 Compound	Setting type product formulated to provide protection in fire stopping applications through gypsum and other fire rated assemblies. Meets ASTM E 814 and ANSI/UL 1479.	None	None

PLASTER PRODUCTS AND ADDITIVES			Specification Standards	
	Product	**Description and Use**	**ASTM**	**Federal**
Basecoat Plasters	**Gold Bond Two-Way Hardwall Gypsum Plaster**	For use with job-mixed aggregate. Machine spray or trowel application.	C 28	SS-P-00402B Type II
	Gold Bond Gypsolite Plaster	Mill-mixed with perlite. Add only water on the job.	C 28	SS-P-00402B Type I
	Kal-Kote Base Plaster	Basecoat plaster for veneer system. Add only water on the job.	C 587 Type VI	SS-P-00402B
Finish Plasters	**Gold Bond Gypsum Gauging Plaster**	Used with lime for trowel finish or run-in-place ornamental work.	C 28	SS-P-00402B Type V
	Gold Bond Gypsum Moulding Plaster	Used with lime for run-in-place ornamental work or with water only for precast ornaments.	C 59	SS-P-00402B Type V
	Kal-Kote Smooth Finish Plaster	Hard, thin, smooth finish over Kal-Kote base plaster or conventional basecoat plasters.	C 587	SS-P-00402B Type VI
	Kal-Kote Texture Finish Plaster	Hard, thin, textured finish over Kal-Kote base plaster or conventional basecoat plasters.	C 587	SS-P-00402B Type VI
	Uni-Kal Veneer Plaster	One coat finish over Kal-Kore. Can also be used as finish over Kal-Kote base or conventional plaster.	C 587	SS-P-00402B Type VI
	X-KALibur Veneer Plaster	Extended set time, one coat finish over Kal-Kore. Can also be used as finish over Kal-Kote base or conventional basecoat plasters.	C 587	SS-P-00402B Type VI
Special Additives	**Gold Bond Retarder**	A powder used to slow the set of gypsum plaster.	None	None
	Gold Bond Accelorator	A powder used to quicken the set of gypsum plaster.	None	None

*Paper tape meeting these specifications available on special order.

VENEER PLASTER ACCESSORIES			Specification Standards	
	Product	**Description and Use**	**ASTM**	**Federal**
Accessories	**Kal-Korner Bead**	Used to protect exterior corners in veneer plaster systems.	C 1047	None
	Expanded Veneer Cornerbead	Used as an alternate to the Kal-Korner bead for exterior corners.	C 1047	None
	Veneer J Trim Casing Bead	Used as a finished edge at door and window jambs.	C 1047	None
	Veneer L Trim Casing Bead	Used as a finished edge at door and window jambs.	C 1047	None
	Kal-Mesh Tape	A coated non-adhesive fiberglass tape which is stapled to Kal-Kore to reinforce all joints and interior angles.	C 475	None

CEMENT BACKERBOARDS		Specification Standards	
Product	**Description and Use**	**ASTM**	**Federal**
PermaBase* Cement Board	Lightweight cement board composed of portland cement, aggregates and glass fiber mesh reinforcement, 1/4" (6.3 mm) (counters/floors only), 1/2" (12.7 mm) and 5/8" (15.9 mm) thickness, 32" (813 mm), 36" (914 mm), and 48" (1219 mm) widths, 48" (1219 mm), 60" (1524 mm), 72" (1829 mm) and 96" (2438 mm) lengths. For interior or exterior use. May be used on exterior surfaces with imposed wind loads up to 40 PSF.	C 1325	None
PermaBase Flex* Cement Board	Lightweight Polymer-modified cement board with glass fiber mesh reinforcement, 1/2" (12.7 mm) thick, 48" (1219 mm) width, 96" (2438 mm) length. For use anywhere an even curved surface is required.	None	None

*Complies with ANSI A118.9

ASTM APPLICATION SPECIFICATIONS	
Used in conjunction with ASTM Product Specifications	
C 754	Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
C 840	Standard Specification for Application and Finishing of Gypsum Board.
C 841	Standard Specification for Installation of Interior Lathing and Furring.
C 842	Standard Specification for Application of Interior Gypsum Plaster.
C 843	Standard Specification for Application of Gypsum Veneer Plaster.
C 844	Standard Specification for Application of Gypsum Base to Receive Gypsum Veneer Plaster.
C 919	Standard Practice for use of Sealants in Acoustical Applications.
C 1280	Standard Specification for Application of Gypsum Sheathing Board.

ANSI APPLICATION SPECIFICATIONS	
Used in conjunction with ANSI Product Specifications	
A 108.11	Standard for Interior Installation of Cementious Backer Units.

Code Report References

- ICC ESR-1338
  Gypsum Wall and Ceiling Assemblies and Gypsum Board Interior and Exterior Applications
- ICBO ES, Inc. ER-1352
  Gold Bond Gypsum board - Wood Framing
- ICBO ES, Inc. ER-1601
  Gold Bond Screw Steel Studs and Furring Channels
- ICBO ES, Inc. ER-3579
  One and Two Hour Fire-Rated Gold Bond Interior Partition Systems
- ICBO ES, Inc. ER-5731
  PermaBase Cement Board
- ICBO ES, Inc. ER-5733
  Half-Inch Gold Bond High-Strength Ceiling Board
- ICC ES, Inc. Legacy Report 90-26.01
  Gold Bond Fire Wall/Party Wall
- ICC ES, Inc. Legacy Report 89-35.01
  Gold Bond I-Stud Cavity Shaftwall System
- ICC ES, Inc. Legacy Report 92-19
  Dietrich H-Stud Area Separation Wall
- ICC ES, Inc. Legacy Report 9525B
  Gold Bond I-Stud Cavity Shaftwall System
- ICC ES, Inc. Legacy Report 496
  Half-Inch Gold Bond High Strength Ceiling Board
- ICC ES, Inc. Legacy Report NER-506
  Dietrich Shaftwall and Stairwell Fire-Resistive Assemblies
- National Evaluation Service, Inc., Report No. NER-578
  PermaBase Cement Board

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

NOTES FOR USE OF QUICK SELECTOR

The construction systems shown here are representative of the many National Gypsum Drywall partitions and ceilings systems using Gold Bond BRAND products that have been the subject of controlled laboratory testing or engineering evaluations. For a given Fire Resistance Rating or Sound Isolation value, simply scan the appropriate columns. Design references prefixed by "Based on..." are extrapolations from test data on similar assemblies.

In the drawings, in steel or wood stud partitions where insulation is shown in half of the partition cavity, the insulation is required for sound ratings only. Where shown across full cavity, insulation is required for fire rating. Size of studs are minimum and spacing of studs are maximum for fire rating. Steel studs are 25 gauge if not specified.

In the following Quick Selector, Underwriters Laboratories, Inc. Design Numbers refer to designs contained in the *UL Fire Resistance Directory*. National Gypsum Company, Gold Bond Fire-Shield and Fire-Shield C products bear the UL Classification Mark and are covered by UL's Classification and Follow-Up Service.

In the following listings, 5/8" Fire-Shield C gypsum board may be substituted for 5/8" Fire-Shield in all designs listed for 5/8" Fire-Shield. 5/8" Fire-Shield C must be used in designs listed for 5/8" Fire-Shield C.

Descriptions in the Quick Selector tables are summaries. For copies of tests and/or for detailed information, consult your National Gypsum Field Representative (reference inside back cover).

GYPSUM BOARD CORE UL DESIGNATIONS

1/2" (12.7 mm) Fire-Shield C:	FSW-C
1/2" (12.7 mm) XP Fire-Shield C:	FSMR-C
5/8" (15.9 mm) Fire-Shield:	FSW
5/8" (15.9 mm) XP Fire-Shield:	FSW-3
5/8" (15.9 mm) Fire-Shield C:	FSW-C
1/2" (12.7 mm) Fire-Shield C Kal-Kore:	FSK-C
5/8" (15.9 mm) Fire-Shield Kal-Kore:	FSK
5/8" (15.9 mm) Hi-Abuse XP Fire-Shield:	FSW
5/8" (15.9 mm) Hi-Impact XP Fire-Shield:	FSW-5
5/8" (15.9 mm) Fire-Shield Exterior Soffit Board:	FSW
5/8" (15.9 mm) Fire-Shield Jumbo Sheathing:	FSW-3
1" (25.4 mm) Fire-Shield Shaftliner:	FSW
1" (25.4 mm) Fire-Shield Shaftliner XP:	FSW

KEY TO ABBREVIATIONS:

UL – Underwriters Laboratories, Inc.
OSU – Building Research Laboratories
The Ohio State University
FM – Factory Mutual Research Corporation
GA – Gypsum Association
OC – Owens-Corning Fiberglas Corp.
(Tests by Geiger & Hamme)
BBN – Bolt Beranek & Newman
TL – Indicates tests for National Gypsum Company by Riverbank Acoustical Laboratories
NGC – National Gypsum Company
WHI – Warnock-Hersey International, Inc.
U. of Cal. – University of California
PFS – PFS Corporation
NBS – National Bureau of Standards
BMS – Building Materials and Structures
ITS – Intertek Testing Services

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Plaster Partitions - Metal Lath (CAD FILE NAME GOLDA.DWG OR GOLDA.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
1	1 hr.		OSU	T-147	1 1/2" (38.1 mm) gypsum plaster, 100:2 1/2 perlite (scratch and brown coats), on metal lath attached to 3/4" (19.0 mm) channel studs at 16" o.c. (406 mm).	None	None
2	1 hr.		OSU	T-129	2" (51 mm) gypsum plaster, 1:2 sand, on 3.4 diamond mesh lath attached to 3/4" (19.0 mm) channel studs at 16" o.c. (406 mm).	37	NBS 171A
3	2 hr.		UL	U413	2 1/2" (63.5 mm) gypsum plaster, 100:2 perlite, on 3.4 diamond mesh lath attached to 3/4" (19.0 mm) channel studs at 16" o.c. (406 mm).	33	Est.
4	2 hr.		NBS		2 1/2" (63.5 mm) gypsum plaster, 100:2 vermiculite scratch coat, 100:3 vermiculite brown coat on metal lath attached to 3/4" (19.0 mm) channel studs at 16" o.c. (406 mm).	None	None

*The fire resistance of the above assemblies was determined with one plane of metal lath. The assemblies with two planes of metal lath may be considered to have equivalent fire-resistant ratings.

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Plaster Fireproofing Columns (10WF49 or heavier) (CAD FILE NAME GOLDB.DWG OR GOLDB.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
1	1 hr.		BMS GA	92-Table 40 CM 1300	3/4" (19.0 mm) gypsum plaster, 1:3 sand scratch, 1:3 sand brown on metal lath.	None	None
2	2 hr.		UL GA	X402 CM 2320	1" (25.4 mm) gypsum plaster, 100:2 perlite scratch, 100:3 perlite brown, on self-furring lath.	None	None
3	3 hr.		UL GA	X402 CM 3310	1 3/8" (34.9 mm) gypsum plaster, 100:2 perlite scratch, 100:3 perlite brown, on self-furring lath.	None	None
4	4 hr.		UL GA	X402 CM 4410	1 3/4" (44.5 mm) gypsum plaster, 100:2 perlite scratch, 100:3 perlite brown, on self-furring lath.	None	None

Gypsum Plaster Fireproofing Beams (8WF24 or heavier) (CAD FILE NAME GOLDC.DWG OR GOLDC.DXF)

1	2 hr.		UL GA	R4197-1 BM 2221	1 1/8" (28.6 mm) gypsum plaster, 100:2 1/2 perlite scratch coat, 100:2 1/2 perlite brown coat on self-furring lath.	None	None
2	3 hr.		UL GA	R4197-1 BM 3110	1 1/4" (38.1 mm) gypsum plaster, 100:2 1/2 perlite scratch coat, 100:2 1/2 perlite brown coat on self-furring lath.	None	None

Veneer Plaster Partitions-Wood Framing (CAD FILE NAME GOLDD.DWG OR GOLDD.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
1	1 hr.		U. of Cal.	E.S. 6727	3/32" (2.4 mm) Veneer Plaster applied to 1/2" (12.7 mm) Fire-Shield C Kal-Kore nailed to both sides of wood studs 16" o.c. (406 mm).	34	NGC 2161

Veneer Plaster Partitions-Steel Framing (CAD FILE NAME GOLDE.DWG OR GOLDE.DXF)

1	1hr.		U. of Cal.	E.S. 6892	3/32" (2.4 mm) Veneer Plaster applied to 1/2" (12.7 mm) Fire-Shield C Kal-Kore on both sides of 2 1/2" (63.5 mm) steel studs 24" o.c. (610 mm) with 1" (25.4 mm) screws 12" o.c. (144 mm) and 9" o.c. (229 mm) along edges. Studs 16" o.c. (406 mm) preferred method.	42 est.	

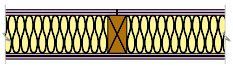
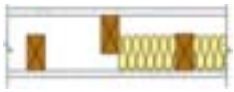
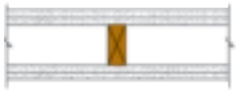
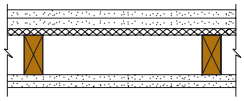
For additional Kal-Kore Fire and Sound rated systems reference Gypsum board systems.

Gypsum Board Partitions-Wood Framing (load-bearing) (CAD FILE NAME GOLDH.DWG OR GOLDH.DXF)

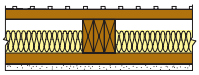
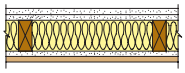
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
	FIRE – SOUND						
1	45 min.		UL	U317	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base nailed both sides 2 x 4 (38 mm x 89 mm) studs, 16" o.c. (406 mm).	34	NGC 2161
2	1 hr.		UL GA	U305 WP 3605	5/8" (15.9 mm) Fire-Shield gypsum board, 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base or 5/8" (15.9 mm) XP Fire-Shield Gypsum Board nailed both sides 2 x 4 (38 mm x 89 mm) wood studs, 16" o.c. (406 mm).	35	NGC 2403

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

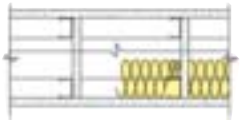
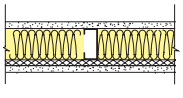
Gypsum Board Partitions-Wood Framing (load-bearing) (cont'd) (CAD FILE NAME GOLDH.DWG OR GOLDH.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
3	1 hr.		UL GA	U309 WP 3510	5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) XP Fire-Shield gypsum board nailed both sides 2 x 4 (38 mm x 89 mm) studs, 24" o.c. (610 mm).	38	NGC 2404
4	N/A		N/A	N/A	5/8" SoundBreak gypsum board applied vertically to each side of 2X4 studs spaced 24" o.c. with 1-1/4" type W screws 12" o.c. 3-1/2" glass fiber in stud cavity.	53	RAL TL07-145
5	1 hr.		UL	U340	5/8" (15.9 mm) Fire-Shield C gypsum board nailed or screwed 7" o.c. (178 mm) to 2x4 (51 mm x 102 mm) wood studs 24" o.c. (610 mm) staggered 12" o.c. (305 mm). Single 6" (152 mm) plate. Sound rating with 3 1/2" (88.9 mm) glass fiber in cavity.	45	Based on NGC 2375
6	1 hr.		WHI UL GA	694-0200 U311 WP 3241	5/8" (15.9 mm) Fire-Shield C gypsum board, screw applied to Resilient Furring Channel spaced 24" o.c. (610 mm) one side only, on 2 x 4 (38 mm x 89 mm) studs spaced 24" o.c. (610 mm). Other side 5/8" (15.9 mm) Fire-Shield C gypsum board screw attached direct to studs. 3" (76 mm) mineral wool (3 pcf) in stud cavity.	50	Based on TL 77-138
7	1 hr.		UL FM GA	U312 WP-147 WP 3341	1/2" (12.7 mm) Fire-Shield C gypsum board, 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base or 1/2" (12.7 mm) Fire-Shield C Durasan laminated to 1/4" gypsum board nailed to both sides 2 x 4 (38 mm x 89 mm) studs, spaced 16" o.c. (406 mm).	45	NGC 2321
8	2 hr.		FM GA	WP-360 WP 4135	5/8" (15.9 mm) Fire-Shield gypsum board base layer nail applied horizontally to both sides 2 x 4 (38 mm x 89 mm) wood studs, spaced 24" o.c. (610 mm). Face layer 5/8" (15.9 mm) Fire-Shield gypsum board nail applied horizontally to both sides. Rating also applies with 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base.	40	Based on NGC 2363
9	est. 2 hr.		FM GA	Based on WP-360 Based on WP 4135	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board nailed one side to 2 x 4 (38 mm x 89 mm) wood studs, 16" o.c. (406 mm). Two layers other side screw applied to Resilient Furring Channels spaced 24" o.c. (610 mm). Rating also applies with 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base.	50	NGC 2368
10	2 hr.		FM GA	Based on WP-360 WP 3910	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board nail applied horizontally to both sides of 2 x 4 (38 mm x 89 mm) wood studs 16" o.c. (406 mm) staggered 8" o.c. (203 mm). Single 6" (152 mm) plate. Rating also applies with 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base.	51	NGC 2377
11	2 hr.		FM GA	Based on WP-360 WP 3820	5/8" (15.9 mm) Fire-Shield gypsum board base layer applied vertically, nailed 24" o.c. (610 mm). Face layer 5/8" (15.9 mm) Fire-Shield gypsum board applied horizontally, nailed 8" o.c. (203 mm). Double row of 2 x 4 (38 mm x 89 mm) wood studs 16" o.c. (406 mm) on separate plates, sound rating with 3 1/2" (88.9 mm) mineral wool or glass fiber in cavity. Rating also applies with 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base.	58	NGC 3056
12	2 hr.		UL	U301	Two layers of 5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base nail applied to 2 x 4 (38 mm x 89 mm) wood studs spaced 16" o.c (406 mm). Boards may be applied horizontally or vertically with all joints staggered.	40	NGC 2363
EXTERIOR WALLS							
13	2 hr.		UL GA	U302 WP 8410	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board nailed horizontally or vertically to inside face of 2 x 4 (38 mm x 89 mm) wood studs 16" o.c. (406 mm). 1/2" (12.7 mm) gypsum sheathing nailed to outside face of studs, brick veneer facing.		
14	1 hr.		UL GA	Based on U305 WP 8105	5/8" (15.9 mm) Fire-Shield gypsum board nailed horizontally or vertically to inside face of 2 x 4 (38 mm x 89 mm) wood studs 16" o.c. (406 mm). 5/8" (15.9 mm) Fire-Shield gypsum Sheathing nailed vertically to outside face of studs 7" o.c. (178 mm) in field, 4" o.c. (102 mm) perimeter. Exterior cladding attached through sheathing to studs.		

Gypsum Board Partitions-Wood Framing (load-bearing) (cont'd) (CAD FILE NAME GOLDH.DWG OR GOLDH.DXF)

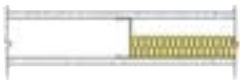
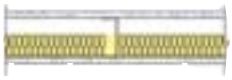
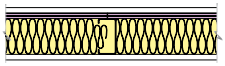
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
15	1 hr.		WHI	651-0319	5/8" (15.9 mm) Fire-Shield C gypsum board horizontally nailed to one side of horizontal 2 x 4 (38 mm x 89 mm) girts spaced 24" o.c. on 6 x 6 wood columns spaced 8'-0" o.c. Metal cladding vertically screw attached to exterior horizontal girts with 3" thick mineral fiber insulation nailed to interior of exterior girts.		
16	2 hr.		UL GA	U371 WP 8417	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board screw attached horizontally or vertically to inside face of 2 x 4 (38 mm x 89 mm) wood studs spaced 16" o.c. 5/8" (15.9 mm) Fire-Shield gypsum Sheathing nail or screw attached horizontally to outside of studs. Portland Cement Stucco facing. 3" (76 mm) mineral wool in stud cavity.		

Gypsum Board Partitions-Steel Framing (CAD FILE NAME GOLDJ.DWG OR GOLDJ.DXF)

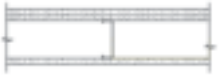
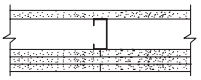
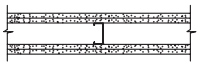
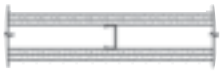
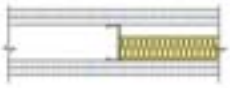
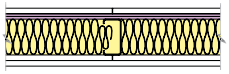
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
1	1 hr.		OSU GA	T-3296 WP 1340	5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (12.7 mm) Fire-Shield Kal-Kore plaster base screw attached vertically to both sides 1 5/8" (41.3 mm) steel studs, 24" o.c. (610 mm). Gypsum board joints staggered.	38	NGC 2384
2	1 hr.		UL GA	U420 WP 5015	Chase wall, 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically to both sides. Air space minimum 4 1/2" (114.3 mm) between inside gypsum board faces. Sound rating with 3 1/2" (88.9 mm) mineral wool or glass fiber. 1 5/8" (41.3 mm) steel studs, 24" o.c., (610 mm) cross braced at third points with 5/8" (15.9 mm) gypsum board gussets 9 1/2" x 12" (241.3 mm x 305 mm) or 9 1/2" (241.3 mm) long stud track.	52	TL 76-155
3	1 hr.		OSU	Based On T-3296	5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (12.7 mm) Fire-Shield Kal-Kore plaster base screw attached vertically to both sides 2 1/2" (63.5 mm) steel studs, 24" o.c. (610 mm). Gypsum board joints staggered.	40	NGC 2438
			GA	WP 1340	With 2 1/2" (63.5 mm) of mineral wool or glass fiber in cavity.	45	NGC 2391
4	1 hr.		UL UL FM GA	V401 V438 WP-51 WP 1070	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw attached vertically to both sides 2 1/2" (63.5 mm) steel studs, 24" o.c. (610 mm). 2" (51 mm) mineral wool [2.5 pcf (40 kg/m^3)] in stud cavity. Gypsum board joints staggered.	45	NGC 2179
	1 hr.		UL UL FM GA	V401 V438 WP-731 WP 1071	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw attached horizontally to both sides, 2 1/2" (63.5 mm) steel studs, 24" o.c. (610 mm). 2" (51 mm) mineral wool [3 pcf (48 kg/m^3)] in stud cavity. Horizontal joints not staggered with those on the opposite side of partition.		
5	1 hr.		UL	U451	1/2" (12.7 mm) Fire-Shield C gypsum board screw applied to resilient furring channel spaced 24" o.c. (610 mm) one side only, on 2 1/2" (63.5 mm) steel studs spaced 24" o.c. (610 mm). Other side 1/2" (12.7 mm) Fire-Shield C gypsum board screw attached direct to studs 3" (76 mm) mineral wool (3pcf) in stud cavity.	est. 50	
6	N/A		N/A	N/A	5/8" SoundBreak gypsum board vertically applied to each side of 3-5/8" steel studs spaced 24" o.c. with 1" type S screws 12" o.c. Vertical joints staggered 24" on opposite sides. 3-1/2" glass fiber in stud cavity.	55	RAL TL06-336

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Partitions-Steel Framing (cont'd) (CAD FILE NAME GOLDJ.DWG OR GOLDJ.DXF)

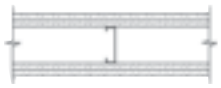
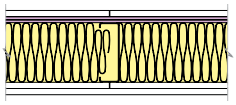
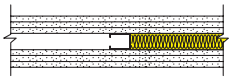
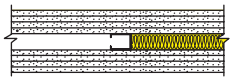
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
7	1 hr.		FM GA	WP 45 WP 1350	5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base screw attached horizontally to both sides 3 5/8" (92.1 mm) steel studs, 24" o.c. (610 mm). All gypsum board joints staggered.	38	NGC 2005004
			OSU	T-1770	5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically to both sides 3 5/8" (92.1 mm) steel studs, 24" o.c. (610 mm). Gypsum board joints staggered.		
					2 1/2" (63.5 mm) mineral wool or glass fiber in cavity.	47	NGC 2386
			UL UL	U465 V438	5/8" (15.9 mm) Fire-Shield gypsum board, 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base or 5/8" (15.9 mm) Hi-Impact XP Fire-Shield gypsum board screw attached vertically with fasteners 8" o.c. (203 mm) at edges and 12" o.c. (305 mm) in the field of the board to 3 5/8" (92.1 mm) board to 3 5/8" (92.1 mm) steel studs spaced maximum 24" o.c. (610 mm) with joints staggered on opposite sides of the wall.		
8	1 hr.		UL ITS/WHI	V452 J99-4001	1/2" (12.7 mm) PermaBase cement board screw attached horizontally or vertically on one side to 3 5/8" steel studs 16" o.c. (406 mm) and 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically on opposite side, joints staggered, 3" (76 mm) thick mineral wool batts [2.5 pcf (40 kg/m^3)] in stud cavity.	45	NGC 2099015
9	45 min.		FM	Based on WP-51	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw attached vertically to both sides 3 5/8" (92.1 mm) steel studs, 24" o.c. (610 mm). 2" (51 mm) glass fiber in stud cavity. Gypsum board joints staggered.	45	NGC 2146
10	1 hr.		UL FM GA	Based on V401 Based on WP-51 WP 1070	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw attached vertically to both sides 3 5/8" (92.1 mm) steel studs, 24" o.c. (610 mm). 2" (51 mm) mineral wool [2.5 pcf (40 kg/m^3)] in stud cavity. Gypsum board joints staggered.	45	NGC 2149
11	1 hr.		FM GA	WP-66 WP 1021	1/2" (12.7 mm) Fire-Shield C gypsum board screw vertically applied to 2 1/2" (63.5 mm) steel stud. Double layer on one side, single layer on the other. Base layer screw attached, face layer and single layer screwed at edges, adhesively attached along center. Gypsum board joints staggered.	43	Based on NGC 2248
			FM GA	WP-733 WP 1022	2 1/2" (63.5 mm) screw studs, 24" o.c. (610 mm) double layer of 1/2" (12.7 mm) Fire-Shield gypsum board screw applied horizontally one side with face layer staggered 2' (610 mm) from base layer. Other side one layer screw applied horizontally. Face layer horizontal joints each side not staggered.		
12	1 hr.		FM GA	Based on WP-66 Based on	1/2" (12.7 mm) Fire-Shield C gypsum board screw attached vertically to both sides 2 1/2" (63.5 mm) steel studs, spaced 24" o.c. (610 mm). Second layer screw attached vertically to one side only and 3" (76 mm) glass fiber in cavity. Gypsum board joints staggered.	50	NGC 2253
13	1 hr.		FM	Based on WP-66	1/2" (12.7 mm) Fire-Shield C gypsum board screw attached vertically to both sides 3 5/8" (92.1 mm) steel studs, spaced 24" o.c. (610 mm). Second layer screw attached vertically to one side only. Gypsum board joints staggered.	44	NGC 2323
			GA	Based on WP 1021	3" (76 mm) glass fiber cavity.	50	Based on NGC 2253
14	1 hr.		UL	Based on U465	Base layer 5/8" SoundBreak gypsum board vertically applied to 3-5/8" steel studs spaced 24" o.c. with 1" type S screws 24" o.c. Face layer 5/8" Fire-Shield wallboard vertically applied with 1-5/8" type S screws 12" o.c. Opposite side 5/8" Fire-Shield wallboard vertically applied with 1" type S screws 12" o.c. Vertical joints staggered 24" each layer and opposite sides. 3-1/2" glass fiber in stud cavity.	57	RAL TL06-334

Gypsum Board Partitions-Steel Framing (cont'd) (CAD FILE NAME GOLDJ.DWG OR GOLDJ.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
15	1 hr.		UL FM GA	U410 WP-152 WP 1051	1/2" (12.7 mm) Fire-Shield C gypsum board, 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base or 1/2" (12.7 mm) Fire-Shield Durasan laminated to 1/4" (6.35 mm) gypsum board screw attached both sides 2 1/2" (63.5 mm) steel studs, 24" o.c. (610 mm). Gypsum board joints staggered. 2" (51 mm) mineral wool or glass fiber in cavity.	45 53	NGC 2328 NGC 2318
16	1 1/2 hr.		OSU	T-3240	5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) XP Fire-Shield gypsum board screw attached vertically to both sides 3 5/8" (92.1 mm) steel studs, 24" o.c. (610 mm). Second layer one side only, laminated vertically. Gypsum board joints staggered.	44	NGC 2388
17	2 hr.		UL	V449	5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically to both sides 3 1/2" (88.9 mm) steel studs, spaced 24" o.c. (610 mm) triple layer one side, single layer on the other.Gypsum board joints staggered.		
18	2 hr.		UL	V438	Two layers 1/2" (12.7 mm) Fire-Shield C gypsum board screw attached both sides 1 5/8" (41.3 mm) steel studs 24" o.c. (610 mm). Base layers applied vertically, face layers applied vertically or horizontally. Vertical joints staggered.		45 est.
19	2 hr.		UL GA	U420 WP 5105	Chase wall. Two layers 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically to 1 5/8" (41.3 mm) steel studs, 24" o.c. (610 mm). Air space minimum 4 1/2" (114.3 mm). Sound rating with 3 1/2" (88.9 mm) mineral wool or glass fiber. 1 5/8" (41.3 mm) steel studs, 24" o.c., (610 mm) cross braced at thrid points with 5/8" (15.9 mm) gypsum board gussets 9 1/2" x 12" (241.3 mm x 305 mm) or 9 1/2" (241.3 mm) long stud track.	57	TL-76-156
20	2 hr.		UL FM GA	U412 WP-635 Based on WP 1615	Two layers 1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) XP Fire-Shield C gypsum board screw attached both sides 2 1/2" (63.5 mm) steel studs, spaced 24" o.c. (610 mm). Base layers vertical, face layers horizontal. All vertical joints staggered.	46	NGC 2250
			U. of Cal. GA	UC9-7-64 Based on WP 1545	3" (76 mm) glass fiber in cavity.	53	NGC 2252
21	2 hr.		UL GA	U411 WP1616	Base layer 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically both sides to 2 1/2" (63.5 mm) steel studs 24" o.c. (610 mm). Face layer laminated or screw attached vertically both sides. 2 1/2" (63.5 mm) mineral wool or glass fiber in cavity. Gypsum board joints staggered.	53	Based on NGC 2007002
			WHI GA	495-0236 WP 1548	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board screw attached horizontally with vertical and horizontal joints staggered and 2 1/2" (63.5 mm) mineral wool or glass fiber in cavity.		
22	2 hr.		UL	V438	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) Hi-Impact XP Fire-Shield g ypsum board base layer screw attached vertically to both sides 2 1/2" (63.5 mm) steel studs 24" o.c. (610 mm). Vertical joints staggered.		
23	2 hr.		UL FM	U412 Based on WP-635	Two layers 1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) XP Fire-Shield C gypsum board screw attached both sides 3 5/8" (92.1 mm) steel studs, spaced 24" o.c. (610 mm). Base layers vertical, face layers horizontal. All vertical joints staggered.	48	NGC 2282
			GA	Based on WP 1630	3" (76 mm) mineral wool or glass fiber in cavity.	53	NGC 2288
24	1 hr.		GA	Based on WP1052	Base layer 5/8" SoundBreak gypsum board vertically applied to 3-5/8" steel studs spaced 24" o.c. with 1" type S screws 24" o.c., face layer 5/8" Fire-Shield wallboard vertically applied with 1-5/8" type S screws 12" o.c. Opposite side two layers 5/8" Fire-Shield wallboard vertically applied. Base layer attached with 1" type S screws 24" o.c., face layer attached with 1-5/8" type S screws 12" o.c. Vertical joints staggered 24" each layer and opposite sides. 3-1/2" glass fiber in stud cavity.	60	RAL TC07-168

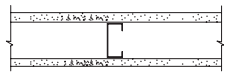
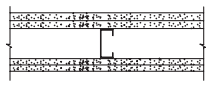
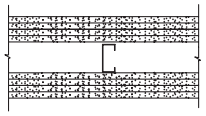
QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Partitions-Steel Framing (cont'd) (CAD FILE NAME GOLDJ.DWG OR GOLDJ.DXF)

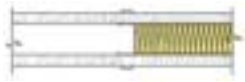
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
25	2 hr.		OSU	T-1771	First layer 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically both sides 3 5/8" (92.1 mm) steel studs, spaced 24" o.c. (610 mm). Second layer laminated vertically both sides. Vertical joints staggered.	48	NGC 2282
26	2 hr.		UL GA	U411 WP 1616	First layer 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically both sides 3 5/8" (92.1 mm) steel studs, spaced 24" o.c. (610 mm). Second layer laminated or screw attached vertically both sides and 3" (76 mm) mineral wool or glass fiber in cavity. Vertical joints staggered.	53	NGC 2007002
27	2 hr.		UL ITS/WHI	V452 J98-32931	1/2" (12.7 mm) PermaBase cement board face layer screw attached vertically over 1/2" (12.7 mm) Fire-Shield C gypsum board base layer on one side to 3 5/8" steel studs 16" o.c. (406 mm) and double layer of 1/2" (12.7 mm) Fire-Shield C gypsum board applied vertically to opposite side with 3" (76 mm) thick mineral wool insulation batts [2.5 pcf (40 kg/m^3)] in stud cavity. All joints staggered between face and base layers.	52	NGC 2099016
28	1 hr.		GA	Based on WP1052	Base layer 5/8" SoundBreak gypsum board vertically applied to 6" steel studs spaced 24" o.c. with 1" type S screws 24" o.c., face layer 5/8" Fire-Shield wallboard vertically applied with 1-5/8" type S screws 12" o.c. Opposite side two layers 5/8" Fire-Shield wallboard vertically applied. Base layer attached with 1" type S screws 24" o.c. face layer attached with 1-5/8" type S screws 12" o.c. Vertical joints staggered 24" each layer and opposite sides. 3-1/2" glass fiber stud cavity.	61	NRCC B-3456.2
29	3 hr.		UL WHI GA	U435 694-0084 WP 2921	Three layers of 1/2" (12.7 mm) Fire-Shield C gypsum board screw attached to each side of 1 5/8" (41.3 mm) steel studs, 24" o.c. (610 mm). Base and second layer vertical, face layer horizontal. All gypsum board joints staggered.	48	NGC 2631
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	53	NGC 2636
30	3 hr.		UL	V438	Three layers of 5/8" (15.9 mm) Fire-Shield gypsum board screw attached to each side of 1 5/8" (41.3 mm) steel studs, 24" o.c. (610 mm). Base and second layer vertical, face layer vertical or horizontal. All gypsum board joints staggered.	48	Based on NGC 2631
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	53	Based on NGC 2633
31	4 hr.		UL WHI GA	U435 694-108.1 WP 2970	Four layers of 1/2" (12.7 mm) Fire-Shield C gypsum board screw attached to each side of 1 5/8" (41.3 mm) steel studs, 24" o.c. (610 mm). Base, second and third layer vertical, face layer horizontal. All gypsum board joints staggered except long joints of base and second layer fall on the same studs.	51	NGC 2633
			GA	WP 2960	1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	55	NGC 2634
32	4 hr.		UL	V438	Four layers of 5/8" (15.9 mm) Fire-Shield gypsum board screw attached to each side of 1 5/8" (41.3 mm) steel studs, 24" o.c. (610 mm). Base, second and third layer vertical, face layer vertical or horizontal. All gypsum board joints staggered.	51	Based on NGC2633
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	55	Based on NGC2633

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

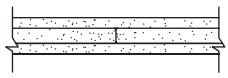
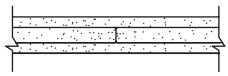
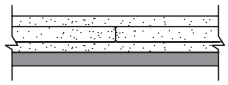
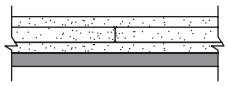
Gypsum Board Partitions-Steel Framing (load-bearing) (CAD FILE NAME GOLDJ.DWG OR GOLDJ.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
1	1 hr.		UL GA	U425 WP 1206	One layer 5/8" (15.9 mm) Fire-Shield gypsum board screw applied vertically to each side of 3 1/2" (88.9 mm) 20 gauge steel studs spaced 24" o.c. (610 mm), studs laterally braced and fastened to tracks. All gypsum board joints staggered on opposite sides.		
2	2 hr.		FM GA	WP-199 WP 1714	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board screw applied vertically to each side of 18 gauge 2 1/2" (63.5 mm) steel studs spaced 16" o.c. (406 mm). Base layer joints staggered 16" (406 mm) from joints of base layer. Steel bridging required.	40 est.	
3	2 hr.		UL GA	U425 WP 1716	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board screw attached vertically to each side of 3 1/2" (88.9 mm) 20 gauge steel studs spaced 24" o.c. (610 mm), studs laterally braced and fastened to tracks. All gypsum board joints staggered on opposite sides. (Tested at 80 percent of design load.)		
4	3 hr.		UL	U426	Four layers of 1/2" (12.7 mm) Fire-Shield C gypsum board screw attached to each side of 3 1/2" (88.9 mm) 20 gauge steel studs spaced 24" o.c. (610 mm), studs laterally braced and fastened to tracks. Base, second and third layers applied vertical; face layer may be applied either horizontal or vertical. All gypsum board joints staggered from joints in adjacent layers and on opposite sides of studs.		

Gypsum Board Partitions/Durasan Prefinished Gypsum Board (CAD FILE NAME GOLDK.DWG OR GOLDK.DXF)

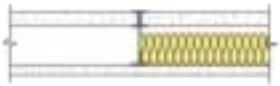
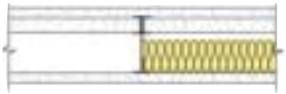
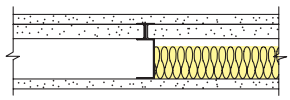
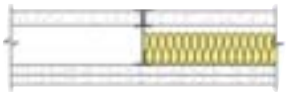
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
1	1 hr.		FM GA	WP-109 WP 6130	30" (762.0 mm) wide 5/8" (15.9 mm) Fire-Shield Durasan applied vertically to 2 1/2" (63.4 mm) steel studs 30" o.c. (762 mm) with steel batten retainers attached to each stud with 1 1/4" (31.8 mm) Type S screws spaced 9" o.c. (229 mm). Attach battens over retainers. 2" (51 mm) glass fiber in cavity.	44	NGC 2218
			UL GA	U405 WP 6040	48" (1219 mm) wide 5/8" (15.9 mm) Fire-Shield Durasan applied vertically to 2 1/2" (63.5 mm) steel studs 24" o.c. (610 mm) with steel batten retainers attached to each stud with 1 1/4" (31.8 mm) Type S screws spaced 9" o.c. (229 mm). Stagger joints on opposite sides 24" o.c. (610 mm). Attach battens over retainers.	41	G&H NG-145FT
2	2 hr.		UL GA	U411 WP 1711	5/8" (15.9 mm) Fire-Shield Durasan laminated vertically with joint compound over base layer 5/8" (15.9 mm) Fire-Shield gypsum board attached to 3 5/8" (92.1 mm) steel studs 24" o.c. (610 mm). Face layer laminated with 3/8" (9.5 mm) beads of joint compound 2" o.c. (51 mm). Face layer secured across top and bottom with 1 5/8" (41.3 mm) Type S screws 12" o.c. (305 mm). Joints of outer layer offset 12" (305 mm) from base layer joints. 3" (76 mm) glass fiber or mineral wool in cavity.	56	NGC 3022

Gypsum Board Partitions/Solid (CAD FILE NAME GOLDL.DWG OR GOLDL.DXF)

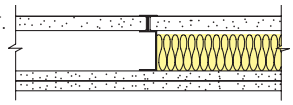
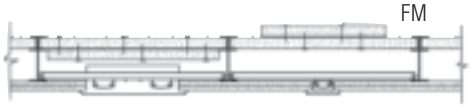
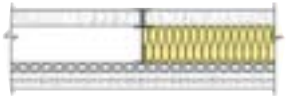
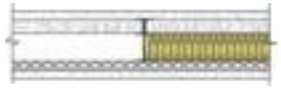
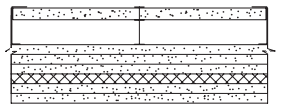
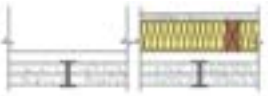
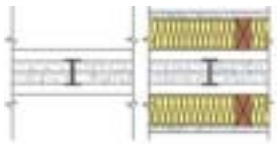
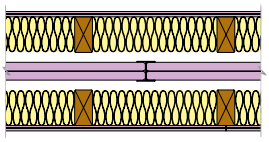
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
1	1 hr.		FM GA	WP-671 WP 1311	1" (25.4 mm) Fire-Shield Shaftliner with 1/2" (12.7 mm) regular gypsum board laminated vertically with Sta-Smooth joint compound, both sides.	34	Based on NGC 2359
2	2 hr.		UL FM GA	U525 WP-668 WP 1841	1" (25.4 mm) Fire-Shield Shaftliner with 1/2" (12.7 mm) Fire-Shield C gypsum board laminated vertically with Sta-Smooth joint compound, both sides.	34	Based on NGC 2359
3	2 hr.		UL GA	U505 WP 7210	1" (25.4 mm) Fire-Shield Shaftliner with 5/8" (15.9 mm) Fire-Shield gypsum board laminated vertically with Sta-Smooth joint compound, both sides.		
4	2 hr.		UL	U529	1" (25.4 mm) Fire-Shield Shaftliner with 1/2" (12.7 mm) Fire-Shield C gypsum board laminated vertically with Sta-Smooth joint compound, both sides.		

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Partitions-Shaftwalls, Area Separation Walls (CAD FILE NAME GOLDM.DWG OR GOLDM.DXF)

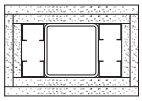
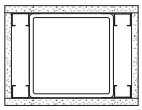
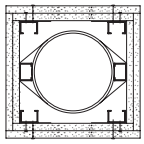
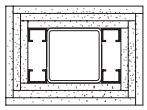
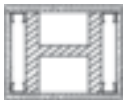
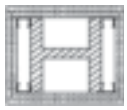
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.
		FIRE – SOUND					
1	1 hr.		UL FM GA	U499 WP-755 WP 6905	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) I-Studs, C-T Studs or C-H Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP, one layer of 5/8" (15.9 mm) Fire-Shield gypsum board applied horizontally or vertically on side opposite shaftliner. Fire tested both sides.	37	NGC 2001003
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	42	NGC 2542
2	2 hr.		UL FM GA GA	U498 WP-545 WP 7079 ASW 1215	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) I-Studs, C-T Studs or C-H Studs 24" o.c (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP, and 1 layer of 1/2" (12.7 mm) Fire-Shield C gypsum board, 1/2" (12.7 mm) Fire-Shield C Kal-Kore veneer plaster base, or 1/2" (12.7 mm) XP Fire-Shield C Gypsum Board applied horizontally on each side. Horizontal and vertical joints staggered. Fire tested both sides.	40	NGC 2618
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	45	NGC 2617
			U. of Cal. GA	75-19 ES 7407 WP 7077	5/8" (15.9 mm) Fire-Shield gypsum board as face layers.	40	Based on NGC 2618
3	2 hr.		UL GA	U429 WP 7084	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) C-T Studs or C-H Studs 24" o.c. (610 mm), 1" (25.4 mm), 6" Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and 1 layer of 1/2" (12.7 mm) Fire-Shield C gypsum board applied vertically on each side. Joints staggered 24" on opposite sides.	40	Based on NGC 2618
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	45	Based on NGC 2617
4	2 hr.		UL FM GA	U497 WP-636 WP 7080	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) I-Studs, C-T Studs or C-H Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and 2 layers of 1/2" (12.7 mm) Fire-Shield C gypsum board, 1/2" (12.7 mm) Fire-Shield C Kal-Kore veneer plaster base, or 1/2" (12.7 mm) XP Fire-Shield C Gypsum Board on corridor side only, base layer horizontal, face layer vertical. Fire tested both sides.	40	NGC 2615
					1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	47	NGC 2616
			UL WHI	U497 651-0500.05	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) I-Studs, C-T Studs or C-H Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and two layers 1/2" (12.7 mm) Fire-Shield C gypsum board applied horizontally on corridor side. Fire tested both sides.	40	Based on NGC 2615
			U. of Cal. GA	75-17 ES 7408 WP 7076	2 layers 5/8" (15.9 mm) Fire-Shield gypsum board on corridor side.	40	Based on NGC 2615

Gypsum Board Partitions-Shaftwalls, Area Separation Walls (CAD FILE NAME GOLDM.DWG OR GOLDM.DXF)

No.	Fire Rating	Ref.	Design No.	Description	STC	Test No.
	FIRE – SOUND					
5	2 hr. 	UL GA	U428 WP 7051	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) C-T Studs or C-H Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and 2 layers of 1/2" (12.7 mm) Fire-Shield C gypsum board, base layer horizontal, face layer vertical. 1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	40 47	Based on NGC 2615 Based on NGC 2616
6	2 hr. 	FM FM	WP-621 WP-612	Elevator Control Boxes, 4" (102 mm) or 6" (152 mm) I-Studs 24" o.c (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and two layers 1/2" (12.7 mm) Fire-Shield C gypsum board on side only, base layer horizontal, face layer vertical. Control boxes corridor and conduit penetrations.	None	None
7	est. 2 hr. 	FM	Based on WP-636	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) I-Studs, C-T Studs or C-H Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield gypsum Shaftliner, or 1" Fire-Shield Shaftliner XP, Resilient Furring Channels 24" o.c. (610 mm) on corridor side and two layers 1/2" (12.7 mm) Fire-Shield C gypsum board on channels, 1 1/2" (38.1 mm) mineral wool or glass fiber in stud cavity.	51	BBN NGC 2609
8	2 hr. 	FM	Based on WP-545	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm) I-Studs, C-T Studs or C-H Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and 1 layer of 1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C MR Board on one side. Other side 1 layer 1/2" (12.7 mm) Fire-Shield C gypsum board screwed to Resilient Furring Channels 24" o.c. (610 mm) attached to I-Studs with screws in alternate legs. 1 1/2" (38.1 mm) mineral wool or glass fiber in cavity.	50	BBN NGC 2610
9	4 hr. 	UL GA	V451 WP 7691	4" (102 mm) I-Studs, C-T Studs or C-H Studs 24" o.c. (610 mm) 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP and five layers of 5/8" (15.9 mm) Fire-Shield C gypsum board applied vertically to corridor side. Furring channel applied horizontally 16" o.c. (406 mm) over third layer. Vertical joints staggered.		
10	2 hr. 	WHI	694-0200.6	2 layers of 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP inserted in 2" H-Stud 24" o.c. (610 mm). H-Studs and Track covered by 1/2" (12.7 mm) Fire-Shield C gypsum 6" (152 mm) wide strips.	35	NGC 2827
11	2 hr. 	WHI	651-0508	2 layers of 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP inserted in 2" H-Stud 24" o.c. (610 mm). One nominal 2 x 4 (38 mm x 89 mm) wood stud wall one side. 1" (25.4 mm) air space between Shaftliner and wood studs. Wood studs 16" o.c., (406 mm) faced with one layer 1/2" regular gypsum board. 3 1/2" (88.9 mm) mineral wool or glass fiber in wood stud cavity.	50 55	NGC 2826 NGC 2825
12	2 hr. 	UL GA	U347 ASW 1005	2 layers of 1" (25.4 mm) Fire-Shield Shaftliner or 1" Fire-Shield Shaftliner XP inserted in 2" H-Stud 24" o.c. (610 mm). Adjacent construction each side. Minimum 3/4" (19.0 mm) air space between Shaftliner and adjacent construction. 3 1/2" (88.9 mm) mineral wool or glass fiber in both wood stud cavities. 3 1/2" (88.9 mm) mineral wool or glass fiber in wood stud cavity one side.	50 61 55	NGC 2823 TL 05-199 NGC 2824
13	2 hr. 	UL	U347	Two layers of 1" Fire-Shield Shaftliner or Fire-Shield Shaftliner XP inserted in 2" H-studs spaced 24" o.c. Minimum 3/4" air space between shaftliner and adjacent construction. 5/8" SoundBreak gypsum board applied vertically to outside of 2x4 studs spaced 16" o.c. with 1-1/4" type W screws 12" o.c. 3-1/2" glass fiber in stud cavitiy.	67	NRCC B-3451.1

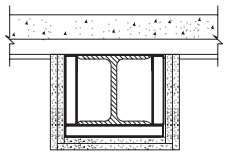
QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Column Fireproofing (CAD FILE NAME GOLDN.DWG OR GOLDN.DXF)

No.	Fire Rating		Ref.	Design No.	Description
LIGHT COLUMN					
1	1 hr.		UL GA	X528 CM 1452	Two layers of 1/2" (12.7 mm) Fire-Shield C gypsum board furred from TS 4x4x0.188 tube steel column by 1 5/8" (43.3 mm) steel stud each corner.
2	1 hr.		UL GA	X528 CM 1851	One layer of 5/8" (15.9 mm) Fire-Shield gypsum board furred from TS 8x8x0.250 tube steel column by 1 5/8" (43.3 mm) steel stud each corner.
3	1 1/2 hr.		UL	X531	Two layers of 1/2" (12.7 mm) Fire-Shield C gypsum board furred from 4 1/2" OD steel pipe column (Min. wall thickness 0.109) by 1 5/8" (43.3 mm) steel framing.
4	2 hr.		UL GA	X528 CM 2452	Base and second layer 1/2" (12.7 mm) Fire-Shield C gypsum board furred from TS 4x4x0. 188 tube steel column by 1 5/8" (43.3 mm) steel stud each corner. Face layer 5/8" (15.9 mm) Fire-Shield Gypsum board.
COLUMN (10WF–49)					
5	1 hr.		UL GA	X528 CM 1001	One layer of 1/2" (12.7 mm) Fire-Shield C gypsum board furred from column by 1 5/8" (41.3 mm) steel studs at each corner.
6	2 hr.		UL GA	X528 CM 2017	Base layer of 5/8" (15.9 mm) Fire-Shield gypsum board furred from column by 1 5/8" (41.3 mm) steel studs at each corner. Face layer 1/2" (12.7 mm) Fire-Shield C gypsum board.
7	3 hr.		UL GA	X510 CM 3120	Three layers of 5/8" (15.9 mm) Fire-Shield gypsum board furred from column by 1 5/8" (41.3 mm) steel studs at each corner.
8	4 hr.		UL	X501	Four layers of 5/8" (15.9 mm) Fire-Shield C gypsum board on each side of column. Inner two layers furred from column by 1 5/8" (41.3 mm) steel studs at column corners. Outer two layers attached to 2" x 2" (51 mm x 51 mm) sheet metal angles which are applied at corners over first two layers of board.
COLUMN (14WF–228)					
9	2 hr.		UL GA	X520 CM 2110	One layer of 1/2" (12.7 mm) Fire-Shield C gypsum board furred from column by 1 5/8" (41.3 mm) steel studs at each corner.
10	3 hr.		UL GA	X513 CM 3130	Two layers of 1/2" (12.7 mm) Fire-Shield C gypsum board furred from column by 1 5/8" (41.3 mm) steel studs at each corner.

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Beam Fireproofing (8WF24 or heavier) (CAD FILE NAME GOLDN.DWG OR GOLDN.DXF)

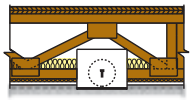
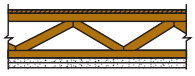
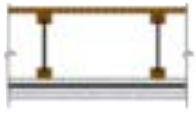
No.	Fire Rating		Ref.	Design No.	Description
1	2 hr.		UL GA	N501 BM 2120	Two layers of 5/8" (15.9 mm) Fire-Shield Gypsum board applied to beam cage fabricated from 25 gauge steel channel brackets spaced 24" o.c.

Gypsum Board Floor/Ceilings – Wood Framing (wood joists) (CAD FILE NAME GOLDS.DWG OR GOLDS.DXF)

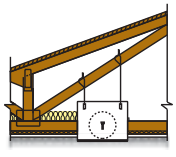
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.	IIC	
								No Carpet	Carpet & Pad
1	1 hr.		UL GA	L522 FC 5410	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base nail attached to 2 x 10 (38 mm x 241 mm) wood joists spaced 16" o.c. (406 mm). UL design L522 permits option of floor topping over plywood.	37	NGC 4042 NGC 5032A NGC 5033	32	66
	1 hr.		UL GA	L501 FC 5420	5/8" (15.9 mm) Fire-Shield gypsum board, 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base or 5/8" (15.9 mm) F.S. Soffit Board nail attached to 2 x 10 (38 mm x 241 mm) wood joists spaced 16" o.c. (406 mm). UL design L501 permits option of Floor Topping Mixture over plywood.	37	Based on NGC 4024	32	66
2	1 hr.		UL	L515	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw attached to Resilient Furring Channels spaced 24" o.c. (610 mm) on 2 x 10 (38 mm x 241 mm) wood joists 16" o.c. (406 mm). Gypsum board secured to channels with 1" self-drilling screws 12" o.c. (305 mm). Option in UL L515 allows Drywall Suspension System to be hung from joists. **No insulation in plenum.**	45	NGC 4010 NGC 4107 NGC 5161 NGC 5165	39	63
			FM	FC 181	With 3 1/2" (88.9 mm) glass fiber.	est. 50			
3	1 hr.		FM	FC 193	1/2" (12.7 mm) Fire-Shield C gypsum board attached to Resilient Furring Channels spaced 24" o.c. (610 mm) with screws spaced 12" (305 mm). Elastizell concrete floor 1 1/2" (38.1 mm) thick, 3 1/2" (88.9 mm) mineral wool or glass fiber insulation 2 x 10 (38 mm x 241 mm) wood joists 16" o.c. (406 mm).	58	OC-2MT		
4	1 hr.		FM GA GA GA	FC-172 FC 5406 RC 2601 RC 2602	Base layer 5/8" (15.9 mm) Fire-Shield gypsum board attached with screws 24" o.c. (610 mm) to wood joists or trusses 24" o.c. (610 mm). Second layer 5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) F.S. Soffit Board screw attached 12" o.c. (305 mm). 1/2" (12.7 mm) plywood floor. **Ceiling provides one hour fire resistance protection for wood framing.**				
5	2 hr.		UL GA	L505 FC 5724	5/8" (15.9 mm) Fire-Shield C gypsum board, base layer nailed at right angles to 2 x 10 (38 mm x 241 mm) wood joists spaced 16" o.c. (406 mm), resilient furring channels spaced 24" o.c. (610 mm) and nailed through base board into and at right angles to joists. Face layer of 5/8" (15.9 mm) Fire-Shield C board screwed to furring channel. Nominal 1" (25.4 mm) T & G sub and finish floor. Optional floor systems consist of Floor Topping Mixture over plywood. Rating also applies with 5/8" (15.9 mm) Fire-Shield C Kal-Kore plaster base.	est. 45			

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Floor/Ceilings – Wood Framing (floor truss) (CAD FILE NAME GOLDS.DWG OR GOLDS.DXF)

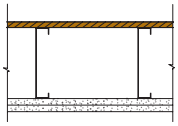
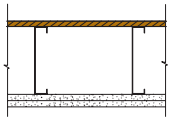
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.	IIC
6	1 hr.		UL GA	L558 FC 5514	One layer 5/8" (15.9 mm) Fire-Shield C gypsum board or 5/8" (15.9 mm) Fire-Shield C Kal-Kore plaster base screw attached to 1/2" (12.7 mm) resilient furring channel spaced 12" o.c. to lower chord of 18" (457.2 mm) deep wood trusses of 2 x 4 (38 mm x 89 mm) lbr. with steel truss plates spaced 24" o.c. (610 mm) 23/32" (18.2 mm) plywood subfloor with 15/32" (11.9 mm) plywood finish floor. Optional - 3 1/2" thick glass fiber insulation draped over furring channels - Optional Ceiling damper.			
7	1 hr.		FM GA	FC-442 FC 5517	One layer 5/8" (15.9 mm) Fire-Shield C gypsum board applied perpendicular and screw attached directly to the lower chord of 14" (35.6 mm) deep wood-webbed trusses of 2 x 4 (38 mm x 89 mm) lbr. with Type I.L.S. plates spaced 24" o.c. (610 mm). Edge joints backed with 2 x 4 (38 mm x 89 mm) wood blocks fastened to lower chord with Z-clips. 19/32" (15.1 mm) plywood floor sheathing.			
8	1 hr.		UL FM GA	L528 FC-448 FC 5516	One layer 5/8" (15.9 mm) Fire-Shield C gypsum board screw attached to 7/8" (22.2 mm) furring channel wire tied perpendicular to lower chord of wood-webbed trusses of 2 x 4 (38 mm x 89 mm) lbr. with steel truss plates spaced 24" o.c. (610 mm). Floor 3/4" (19.1 mm) nominal plywood. Optional resilient furring channels.			
9	1 hr.		FM GA	FC 214 FC 5512	Two layers 1/2" (12.7 mm) Fire-Shield C gypsum board each screwed perpendicular, with all joints of face layer staggered 24" o.c. (610 mm) from base layers, to 24" o.c. (610 mm) trusses fabricated using connectors produced by members of the Truss Plate Institute. 5/8" (15.9 mm) T & G (long sides) plywood flooring nail applied across top chord of trusses.	est. 43		
10	2 hr.		UL	L538	5/8" (15.9 mm) Fire-Shield C gypsum board, base layer screw attached perpendicular to bottom chord of 9 1/2" (241.3 mm) deep "I" shaped wood spaced 19.2" (487.8 mm) o.c. Resilient furring channel or 7/8" (22.2 mm) deep furring channel spaced 16" o.c. screw attached through base layer into and at right angles to joist. 5/8" (15.9 mm) Fire-Shield C gypsum board, middle and face layers screw attached perpendicular to resilient furring channel or 7/8" (22.2 mm) deep furring channel. 5/8" (15.9 mm) T & G plywood floor sheathing. Rating also applies with 5/8" (15.9 mm) Fire-Shield C Kal-Kore plaster base.			

Gypsum Board Roof/Ceilings – Wood Framing (Pitched Roof Truss)

11	1 hr.		UL GA	P533 RC 2603	Roof/ceiling, One layer 5/8" (15.9 mm) Fire-Shield C gypsum board attached to 1/2" (12.7 mm) resilient furring channel spaced 12" o.c. screw fastened perpendicular to lower chord of wood trusses of 2 x 4 (38 mm x 89 mm) lbr. with steel truss plates, spaced 24" o.c. (610 mm). Roofing system UL Class A, B or C. Optional - 3 1/2" thick glass fiber insulation draped over furring channels - Optional Ceiling damper.			

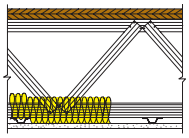
QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Floor/Ceilings – Light Gauge Steel Framing

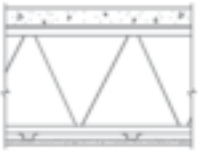
No.	Fire Rating		Ref.	Design No.	Description
1	1 hr.		UL GA	L524 FC 4502	Two layers 1/2" (12.7 mm) Fire-Shield C gypsum board screw attached perpendicular, face layer joints staggered from base layer joints, to 7" (178 mm) deep, 18 gauge steel "C" shaped joists spaced 24" o.c. (610 mm). 5/8" (15.9 mm) T & G plywood floor sheathing.
2	1 1/2 hr.		UL	L527	Two layers 5/8" (15.9 mm) Fire-Shield C gypsum board screw attached perpendicular, face layer joints staggered from base layer joints, to resilient furring channels spaced 16" (406 mm) o.c. on 9 3/8" deep, 16 gauge steel "C" shaped joists spaced 24" o.c. (610 mm). 3/4" (19.0 mm) T & G plywood floor sheathing.

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

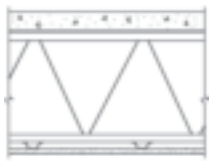
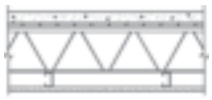
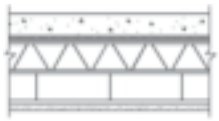
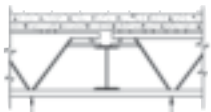
Gypsum Board Floor/Ceilings – Light Gauge Steel Framing (floor truss) (CAD FILE NAME GOLDS.DWG OR GOLDS.DXF)

No.	Fire Rating		Ref.	Design No.	Description
1	1 hr.		UL GA	L565 FC 4515	One layer 5/8" (15.9 mm) Fire-Shield C gypsum board attached to 1/2" (12.7 mm) resilient furring channels screw fastened perpendicular to lower chord of light gauge steel trusses spaced a maximum 48" o.c. 23/32" (18.2 mm) plywood plywood subfloor with 15/32" (11.9 mm) plywood finish floor. Optional, mineral wool or glass fiber insulation draped over furring channels.

Gypsum Board Floor/Ceilings – Steel Framing (steel joists with concrete floor) (CAD FILE NAME GOLDP.DWG OR GOLDP.DXF OR GOLDR.DWG OR GOLDR.DXF)

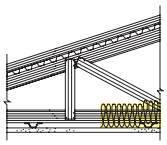
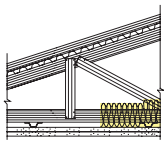
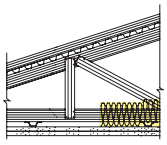
No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.	IIC	
								No Carpet	Carpet & Pad
1	1 hr.		OSU	T-1936	5/8" (15.9 mm) Fire-Shield gypsum board screw attached to furring channels spaced 24" o.c. (610 mm) attached to steel bar joists spaced 24" o.c. (610 mm). Concrete floor 2" (51 mm) thick.	53	Based on NGC 4075	21 Based on NGC 5121	67 Based on NGC 5122
	2 hr.		UL	G503	5/8" (15.9 mm) Fire-Shield gypsum board or 5/8" (15.9 mm) Fire-Shield Kal-Kore plaster base screw attached to furring channels spaced 12" o.c. (305 mm) attached to or suspended from steel bar joists spaced 24" o.c. (610 mm). Concrete floor 2 1/2" (63.5 mm) thick.	53	(Direct) Based on NGC 4075	21 Based on NGC 5121	67 Based on NGC 5122
						57	(Susp.) Based on NGC 4078	28 Based on NGC 5126	75 Based on NGC 5127

Gypsum Board Floor/Ceilings – Steel Framing (steel joists with concrete floor) (CAD FILE NAME GOLDP.DWG OR GOLDP.DXF OR GOLDR.DWG OR GOLDR.DXF)

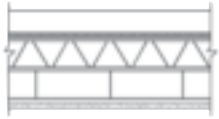
No.	Fire Rating		Ref. Design No.		Description	STC	Test No.	IIC	
								No Carpet	Carpet & Pad
2	2 hr.		UL GA	G514 FC 2030	1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw attached to furring channels spaced 24" o.c. (610 mm) attached or suspended from steel bar joists spaced 24" o.c. (610 mm) with wire ties spaced 48" (1219 mm). Concrete floor 2 1/2" (63.5 mm) thick.	53	(Direct) NGC 4075	21 NGC 5121	67 NGC 5122
						57	(Susp.) Based on NGC 4078	28 Based on NGC 5126	75 Based on NGC 5127
	3 hr.		UL GA	G512 FC 3012	5/8" (15.9 mm) Fire-Shield C gypsum board screw attached to furring channels spaced 24" o.c. (610 mm) attached to steel bar joists spaced 24" o.c. (610 mm) with wire ties. Concrete floor 2 1/2" (63.5 mm) thick.	53	Based on NGC 4075		
3	1 hr.		FM GA	FC-134 FC 1105	1/2" (12.7 mm) Fire-Shield C gypsum board applied across 3 5/8" (92.1 mm) steel studs 24" o.c. (610 mm) with drywall screws 12" o.c. (305 mm). Studs wire-tied 8' o.c. (2440 mm) to steel bar joists spaced 24" o.c. (610 mm). 3/8" (9.5 mm) rib metal lath supporting 2 1/2" (63.5 mm) thick concrete slab.	52	Based on NGC 4075	21	67
4	2 hr.		UL	G523	Single layer 1/2" (12.7 mm) Fire-Shield C gypsum board or 1/2" (12.7 mm) Fire-Shield C Kal-Kore plaster base screw applied perpendicular to cross tees of a drywall suspension system that is suspended from steel bar joists 24" o.c. (610 mm), 2 1/2" (63.5 mm) concrete floor over 3/8" (9.5 mm) rib lath.	est. 50			
5	2 hr.		UL	D502	Single layer of 5/8" (15.9 mm) Fire-Shield C gypsum board screw applied perpendicular to the cross tees of a drywall suspension system suspended from a steel deck. Concrete floor 2 1/2" (63.5 mm) thick.	est. 50			
6	2 hr.		UL FM GA	G222 FC-299 FC- 2190	Nominal 2' x 2' (610 mm x 610 mm) x 1/2" (12.7 mm) Fire-Shield G gypsum Boards laid in fire-rated metal grid suspension system supported by hanger wire from steel joists supporting 2 1/2" (63.5 mm) concrete.				
	1 1/2 hr.		UL FM GA	G259 FC-300 FC-1290	Nominal 2' x 4' (610 mm x 1219 mm) x 1/2" (12.7 mm) Fire-Shield G gypsum Boards laid in fire-rated metal grid suspension system supported by hanger wire from steel joists supporting 2 1/2" (63.5 mm) concrete.				

QUICK SELECTOR FOR FIRE AND SOUND RATED SYSTEMS

Gypsum Board Roof/Ceilings – Light Gauge Steel Framing (pitched roof truss) (CAD FILE NAME GOLDP.DWG OR GOLDP.DXF OR GOLDR.DWG OR GOLDR.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.	IIC
1	1 hr.		UL GA	P540 RC-2501	One layer 5/8" (15.9 mm) Fire-Shield C gypsum board attached to 1/2" (12.7 mm) resilient furring channels screw fastened perpendicular to lower chord of light gauge steel trusses spaced a maximum 48" o.c. Roofing system UL Class A, B or C. Optional, mineral wool or glass fiber insulation draped over furring channels.			
2	1 hr.		UL	P541	Two layers 5/8" (15.9 mm) Fire-Shield gypsum board attached to 1/2" (12.7 mm) resilient furring channels screw fastened perpendicular to lower chord of light gauge steel trusses spaced a maximum 48" o.c. Roofing system UL Class A, B or C. Optional, mineral wool or glass fiber insulation draped over furring channels.			
3	2 hr.		UL GA	P543 RC 2752	Two layers 5/8" (15.9 mm) Fire-Shield C gypsum board attached to 1/2" (12.7 mm) resilient furring channels screw fastened perpendicular to lower chord of light gauge steel trusses spaced a maximum 48" o.c. Roofing system UL Class A, B or C. Optional, mineral wool or glass fiber insulation draped over furring channels.			

Gypsum Board Roof/Ceilings – Steel Framing (steel joists) (CAD FILE NAME GOLDP.DWG OR GOLDP.DXF)

No.	Fire Rating		Ref.	Design No.	Description	STC	Test No.	IIC
1	1 hr.		FM	RC-227	(12.7 mm) Fire-Shield C gypsum board secured to 22 gauge steel deck with Lexsuco clips and washers 24" o.c. (610 mm). Deck supported by 10" (254 mm) bar joists 68" o.c. (1727 mm). IRMA roof system with 1" (25.4 mm) to 4" (102 mm) Styrofoam and 3 plies of 15 lb. (6.8 kg) felt. Ceiling 1/2" (12.7 mm) Fire-Shield C Gypsum board on screw furring channels 24" o.c. (610 mm).	est. 53		

Gypsum Board Horizontal Shaftwall Duct Protection (CAD FILE NAME GOLDT.DWG OR GOLDT.DXF)

No.	Fire Rating		Ref.	Design No.	Description
1	2 hr.		WHI	694-0300.1	2 1/2" (63.5 mm), 4" (102 mm) or 6" (152 mm), I-Studs 24" o.c. (610 mm). 1" (25.4 mm) Fire-Shield Shaftliner. 3 layers 1/2" (12.7 mm) Fire-Shield C gypsum board. Base and middle layers parallel to studs. Face layer perpendicular.

National Gypsum®

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(1-800-628-4662)

Conventional Plaster

National Gypsum®

BASECOAT PLASTERS

GOLD BOND BRAND TWO-WAY HARDWALL GYPSUM PLASTER

DESCRIPTION

Gold Bond BRAND Two-Way Hardwall Plaster is a basecoat plaster which requires the job site addition of an aggregate and water to provide working qualities and is designed for interior use over all accepted plaster bases. It may be applied by hand or used through pump/spray plastering machines.

Bag Weight
100 lbs. (45.4 kg)

GOLD BOND BRAND GYPSOLITE PLASTER

DESCRIPTION

Gold Bond BRAND Gypsolite is a lightweight gypsum basecoat plaster mixed at the mill with correctly sized and proportioned perlite aggregate, requiring only the addition of water on the job. It is manufactured to be trowel-applied over gypsum or metal lath.

Bag Weight
80 lbs. (36.3 kg)

FINISH PLASTERS

GOLD BOND BRAND GYPSUM GAUGING PLASTER (SUPER-WHITE)

DESCRIPTION

Gold Bond BRAND Gauging Plaster, quick set or slow set type, is designed for use with finish lime. It is specially ground, calcined gypsum, which readily mixes with water and lime putty. Proper proportioning is essential, since gauging adds strength and hardness to the finish surface by reinforcing the plastic non-setting lime against shrinkage and cracking. A finish coat of gypsum gauging plaster and finish lime, job mixed 2 parts hydrated lime to 1 part plaster by weight, is designed primarily for interior smooth trowel application over a gypsum plaster basecoat. Smooth finish plasters should be applied at a thickness of not more than 1/16". Texture finishes should be applied at a thickness of not more than 1/8".

Bag Weight
Quick Set: 100 lbs. (45.4 kg) (50 lb. (22.7 kg) bags available in limited areas)
Slow Set: 100 lbs. (45.4 kg) (50 lb. (22.7 kg) bags available in limited areas)

GOLD BOND BRAND GYPSUM MOULDING PLASTER (SUPER-WHITE)

DESCRIPTION

Gold Bond BRAND Moulding Plaster is a very white, finely ground gypsum, primarily used for all kinds of ornamental plaster work. Because of its low expansion, excellent strength and hardness, it is specially adaptable for casting in rubber, gelatin and other types of moulds. For casting purposes, only water is added. For run-in-place ornamental work, such as cornices, the moulding plaster is used with lime putty, mixed 2 parts lime to 1 part moulding plaster by weight.

Bag Weight
100 lbs. (45.4 kg) (50 lbs. (22.7 kg) available in limited areas)

Veneer Plaster

National Gypsum®

VENEER PLASTERS

KAL-KOTE BRAND BASE PLASTER

Kal-Kote Base Plaster is a specially designed high strength basecoat plaster for application 1/16" minimum thickness over Kal-Kore, masonry or monolithic concrete that has been treated with a bonding agent.

Strength of Kal-Kote Base is substantially greater than that exhibited by typical sanded basecoat plaster.

Bag Weight
80 lbs. (36.3 kg)

KAL-KOTE BRAND SMOOTH FINISH PLASTER

Kal-Kote Smooth Finish is designed to provide a white smooth trowel finish using conventional plastering techniques. Apply not exceeding 1/16" over Kal-Kote Base.

Requires the addition of water only. It may also be used as a finish for conventional basecoat plasters. Small amounts of commercial retarder may be cautiously used to slow the setting time when used over conventional basecoat plasters.

Bag Weight
50 lbs. (22.7 kg)

KAL-KOTE BRAND TEXTURE FINISH PLASTER

Kal-Kote Texture Finish is designed to provide a variety of decorative surfaces using common plastering techniques. Applied as a 1/16" finish coat over Kal-Kote Base. It requires the addition of water only.

Bag Weight
50 lbs. (22.7 kg)

UNI-KAL BRAND VENEER PLASTER

Uni-Kal and is a single component veneer plaster for application over tapered edge 1/2" Regular or 5/8" Fire-Shield Kal-Kore, or as a finish coat over Kal-Kote base. When applied in a thin coat 3/32" thick and troweled to a smooth finish, it provides a durable, abrasion-resistant surface for further decoration.

Bag Weight
50 lbs. (22.7 kg)

X-KALIBUR BRAND VENEER PLASTER

X-KALibur is a single component veneer plaster for application over tapered edge 1/2" Regular or 5/8" Fire-Shield Kal-Kore, or as a finish coat over Kal-Kote base. When applied in a thin coat 3/32" thick and troweled to a smooth finish, it provides a durable, abrasion-resistant surface for further decoration. X-KALibur has a longer extended working time.

Bag Weight
50 lbs. (22.7 kg)

KAL-KORE BRAND PLASTER BASE - Refer to page 27

Gypsum Board

National Gypsum®

GYPSUM BOARD Products

National Gypsum Company features a wide variety of gypsum board products and accessories including regular gypsum board, Fire-Shield fire resistant gypsum board, 1/4″ High Flex gypsum board, 1/2″ High Strength Ceiling Board, Hi-Impact gypsum board, Gridstone Ceiling Boards, gypsum sheathing, Fire-Shield Shaftliner, Durasan Prefinished gypsum board, Exterior Soffit Board, and joint treatment products.

Our concentration isn't on building products alone, however. At the National Gypsum Research and Testing Center, we develop complete construction systems. In such systems, products are evaluated together as complete building assemblies–walls, partitions, floors and ceilings.

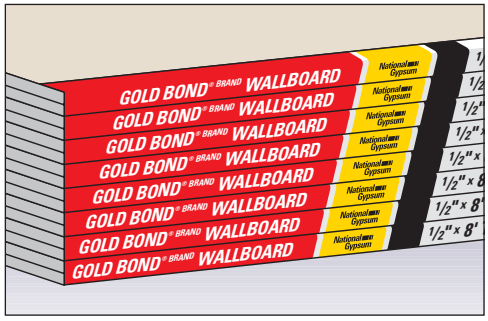
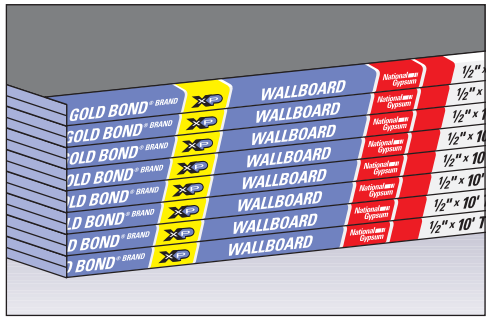
We have included in this section details and application instructions for many of those assemblies: Steel Frame Partitions, Steel Frame Ceilings/Furring Channels or Studs, Wood Frame Wall and Ceilings, gypsum board Over Foam Insulated Masonry and Solid Laminated Partitions.

Before a National Gypsum System is released to the building industry, it is thoroughly tested, and results are correlated and charted to make it easier for the builder or specifier to match a system to his needs or to the building codes.

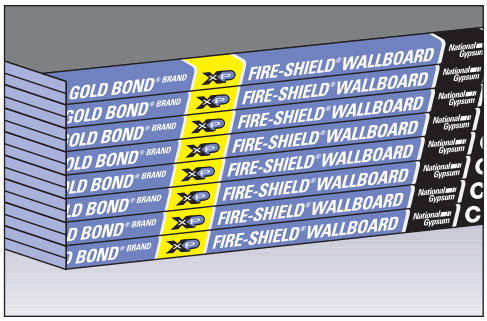
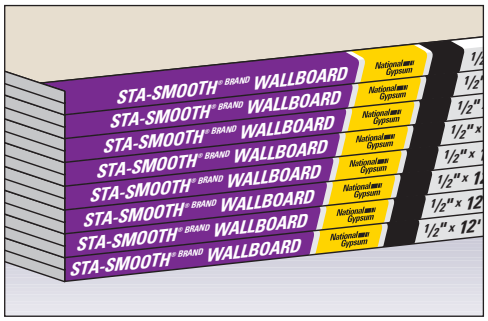
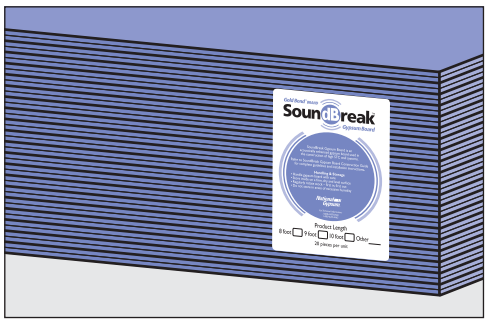
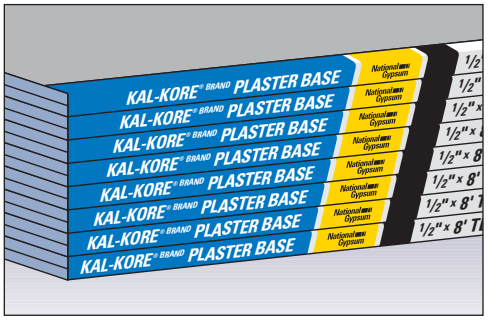
The drywall construction systems referred to in this catalog are designed primarily with materials manufactured by National Gypsum Company. Substitution of any product or other brands in a tested system is not recommended.

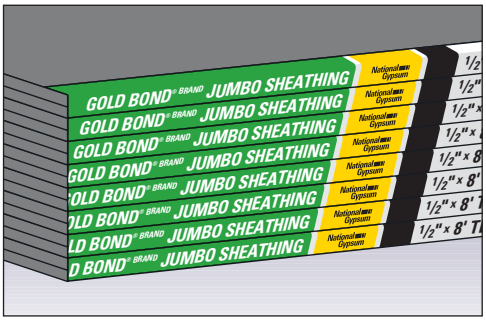
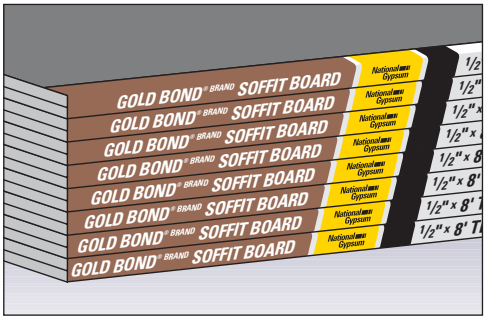
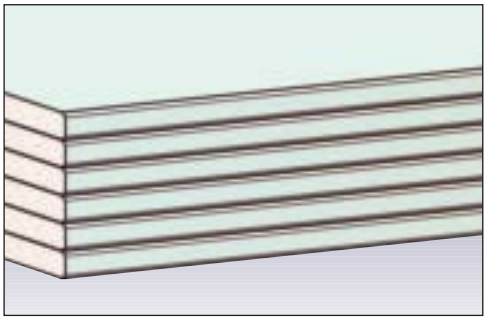
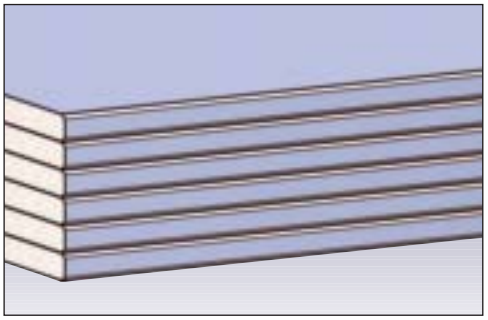
Field installation of tested systems must be identical to laboratory installation to produce optimum performance of these systems. Performance tests are conducted in accordance with accepted national standards under controlled laboratory conditions to minimize variances and to permit comparison of test results with all types of systems, similar and dissimilar.

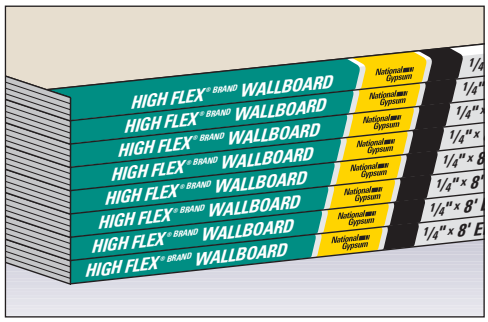
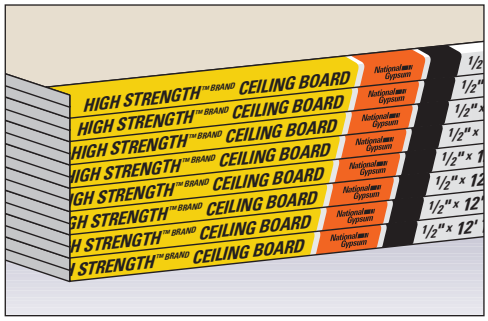
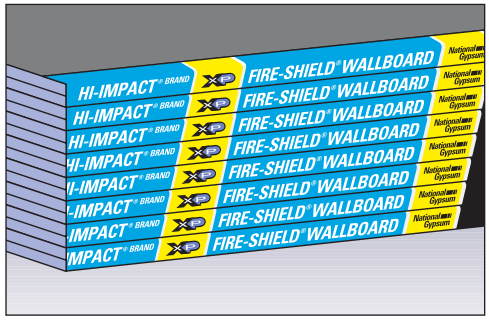
DESCRIPTION

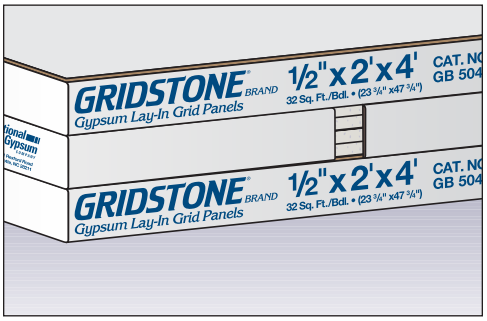
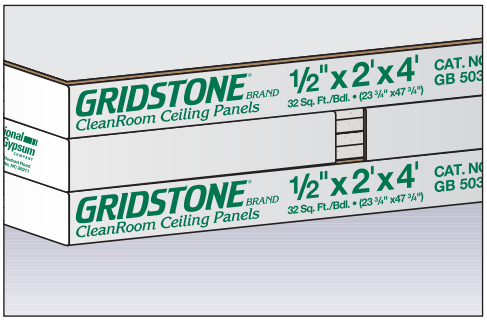
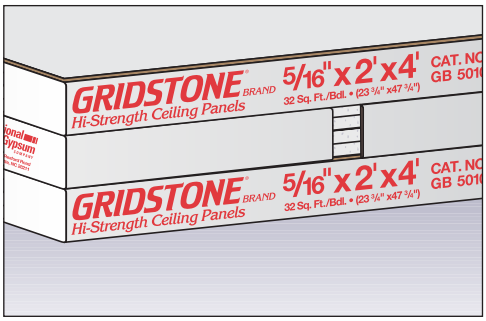
	Description	Core	Thickness/Type	Width/Edge	Lengths
	**Gold Bond BRAND Gypsum Board** with tapered edge permits smooth joint treatment; surface takes any decoration. Basic recommendations: 1/2" board for single layer; 3/8" board for 2-layer; 1/4" board is regular Gypsum board used in remodeling and for sound control in double layer applications.	Regular	1/4" (6.3 mm) 3/8" (9.5 mm)* 1/2" (12.7 mm)*	4' (1219 mm) Square or Tapered	6' (1828 mm) thru 16' (4876 mm)
		Note: 1/2" gypsum board available in 54" widths.			
	**Gold Bond BRAND XP Gypsum Board** is designed to provide extra protection against mold and mildew compared to standard gypsum board products. Tapered edge permits smooth joint treatment.	Regular 1/2" (12.7 mm)		4' (1219 mm) Square or Tapered	8' (2438 mm) 10' (3048 mm) 12' (3657 mm)
	**Gold Bond BRAND Fire-Shield Gypsum Board** is manufactured with a type X core to achieve fire resistance ratings when used in recommended systems. **Gold Bond BRAND Fire-Shield C Gypsum Board** has a specially formulated type X core to achieve superior performance when used in specific fire rated assemblies. May be used in designs requiring Fire-Shield gypsum board (type X core).	Type X	5/8" (15.9 mm) FSW*	4' (1219 mm) Square or Tapered	6' (1828 mm) thru 16' (4876 mm)
		Type X	1/2" (12.7 mm) FSW-C	4' (1219 mm) Square or Tapered	6' (1828 mm) thru 16' (4876 mm)
		Type X	5/8" (15.9 mm) FSW-C	4' (1219 mm) Square or Tapered	8' (2438 mm) thru 14' (4267 mm)
		Note: 5/8" Fire-Shield gypsum board available in 54" widths.			

Reference www.nationalgypsum.com for fire safety information.

	Description	Core	Thickness/Type	Width/Edge	Lengths
	**Gold Bond BRAND XP Fire-Shield Gypsum Board** is manufactured with a fire resistive type X gypsum core and is designed to provide extra protection against mold and mildew.	Type X	5/8" (15.9 mm) FSW-3	4' (1219 mm) Square or Tapered	8' (2438 mm) thru 12' (3657 mm)
		Type X	1/2" (12.7 mm) FSMR-C	4' (1219 mm) Square or Tapered	8' (2438 mm) thru 12' (3657 mm)
	Gold Bond BRAND XP Fire-Shield C Gypsum Board has a specially formulated type X gypsum core to achieve superior fire resistance performance and is designed to provide extra protection against mold and mildew.				
	**Gold Bond BRAND Sta-Smooth Gypsum Board,** used with Sta-Smooth Joint Compound, forms a drywall system offering maximum joint strength. Two edge configurations provide relief on joint deformities. The round edge configuration solves joint deformity problems caused by twisted framing, damaged gypsum board edges, poor alignment and extremes in humidity and temperature.	Regular	1/2" (12.7 mm)	4' (1219 mm) Sta-Smooth	6' (1828 mm) thru 16'(4876 mm)
		Type X	1/2" (12.7 mm) FSW-C 5/8" (15.9 mm) FSW	4' (1219 mm) Sta-Smooth	6' (1828 mm) thru 16' (4876 mm)
		Type X	5/8" (15.9 mm) FSW-C	4' (1219 mm) Sta-Smooth	8' (2438 mm) thru 14' (4267 mm)
	Note: 1/2" regular Sta-Smooth gypsum board available in 54" widths.				
	**Gold Bond BRAND Soundbreak Gypsum Board** is an acoustically enhanced gypsum board used in contruction of high rated STC assemblies. This board consists of a layer of viscoelastic damping polymer sandwiched between two pieces of high density mold resistant gypsum board.	Regular	5/8" (15.9 mm)	4' (1219 mm) Tapered	8' (2438 mm) 9' (2743 mm) 10' (3048 mm) 12' (3658 mm)
	**Kal-Kore BRAND Plaster Base** is a tapered edge gypsum board plastering base having a blue absorptive face paper surface designed to permit rapid trowel application and strong bond of veneer or conventional gypsum plaster.	Regular	3/8" (9.5 mm) 1/2" (12.7 mm)	4' (1219 mm) Square or Tapered	8' (2438 mm) thru 16' (4876 mm)
		Type X	1/2" (12.7 mm) FSK-C 5/8" (15.9 mm) FSK	4' (1219 mm) Square or Tapered	8' (2438 mm) thru 16' (4876 mm)
	Note: 1/2" regular Kal-Kore plaster base available in 54" widths.				

	Description	Core	Thickness/Type	Width/Edge	Lengths
	**Gold Bond BRAND Gypsum Sheathing** is used as an underlayment on exterior walls. Finish materials are applied with fasteners through sheathing into studs or furring strips.	Regular	1/2" (12.7 mm)	4' (1219 mm) Square	8' (2438 mm) 9' (2743 mm) 10' (3048 mm)
		Type X	5/8" (15.9 mm) FSW-3	4' (1219 mm) Square	8' (2438 mm) 9' (2743 mm) 10' (3048 mm)
	**Gold Bond BRAND Exterior Soffit Board** is designed to provide, in a fire resistive gypsum ceiling board, the extra resistance to moiture and sagging required to meet protected outdoor conditions.	Regular	1/2" (12.7 mm)	4' (1219 mm) Sta-Smooth	8' (2438 mm) thru 12' (3658 mm)
		Type X	5/8" (15.9 mm) FSW	4' (1219 mm) Sta-Smooth	8' (2438 mm) thru 12' (3658 mm)
	**Gold Bond BRAND Fire-Shield Shaftliner** is used as a component in shaftwall systems, in area separation walls and in solid gypsum partitions. The product has moisture resistant green paper on both faces.	Type X	1" (25.4 mm) FSW	2' (610 mm) Beveled Edges	Custom Cut 7' (2134 mm) thru 14' (4267 mm)
	**Gold Bond BRAND Fire-Shield Shaftliner XP** is used as a component in shaftwall systems, area separation walls and solid laminated gypsum partitions. The product has moisture/ mold/mildew resistant purple paper on both faces.	Type X	1" (25.4 mm) FSW	2' (610 mm) Beveled Edges	Custom Cut 7' (2134 mm) thru 14' (4267 mm)

	Description	Core	Thickness/Type	Width/Edge	Lengths
	**Gold Bond® BRAND High Flex Gypsum Board** is specifically designed for radius construction such as curved walls, archways and stairways. It can be used for both concaved and convex surfaces. 1/4" High Flex is typically applied in double layers.	Regular	1/4" (6.3 mm)	4' (1219 mm) Eased	8' (2438 mm) thru 10' (3048 mm)
	**Gold Bond® BRAND High Strength Ceiling Board** is designed to resist sagging equal to 5/8" gypsum board. Installed perpendicular to framing, span can be up to 24" o.c. Can be decorated with spray textures and will support insulation.	Regular	1/2" (12.7 mm)	4' (1219 mm) Tapered	6' (1828 mm) thru 16' (4876 mm)
	**Gold Bond® BRAND Hi-Abuse XP Fire-Shield Gypsum Board** is designed for use in areas where surface durability and indentation resistance are major concerns. The product is manufactured with a mold and fire resistive Type X gypsum core encased in heavy smooth abrasion resistant, mold/mildew resistant purple paper on the face side and heavy mold/mildew resistant liner paper on the back side.	Regular	5/8" (15.9 mm) FSW	4' (1219 mm) Square or Tapered	8' (2438 mm) thru 12' (3657 mm)
	**Gold Bond® BRAND Hi-Impact XP Fire-Shield Gypsum Board** is designed for use in areas where impact/penetration resistance is a major concern. The product is manufactured with a mold, moisture and fire resistant Type X gypsum core encased in heavy smooth abrasion resistant, moisture, mold/mildew resistant purple paper on the face side and heavy mold/mildew resistant liner paper on the back side. A fiberglass mesh is embedded in the board to provide additional impact/penetration resistance.	Type X	5/8" (15.9 mm) FSW-5	4' (1219 mm) Tapered	8' (2438 mm) thru 12' (3657 mm)

	Description	Core	Thickness/Type	Width/Edge	Lengths
	**Gridstone BRAND Ceiling Panels** have a fire resistant Fire-Shield G, type X core with a 2-mil textured vinyl laminate surface suited for interior or exterior application in exposed grid systems.	Type X	1/2" (12.7 mm) FSW-G	2' (610 mm) 2' (610 mm) Square	2' (610 mm) 4' (1219 mm)
	**Gridstone BRAND CleanRoom Panels** are designed for areas requiring high levels of air cleanliness for airborne particulate. Boards are sealed on face, back and long edges with a 2-mil rigid vinyl film and exposed edges are factory sealed with durable coating providing a completely sealed panel.	Type X	1/2" (12.7 mm) FSW-G	2' (610 mm) 2' (610 mm) Square	2' (610 mm) 4' (1219 mm)
	**Gridstone BRAND Hi-Strength Ceiling Panels** have a non-combustible high strength sag resistant gypsum core with a 2-mil textured vinyl laminate surface suited for interior or exterior application in exposed grid systems.	Regular	5/16" (7.9 mm)	2' (610 mm) 2' (610 mm) Square	2' (610 mm) 4' (1219 mm)

METRIC CAPABILITIES

The Federal Government has mandated that each federal agency make a transition to the use of metric units in all federal procurement, grants and business-related activities. National Gypsum Company, in complying with this order, provides a full line of gypsum board products in "hard" metric dimensions with regard to width and length. Standard board offerings are made in the width of 1200 mm and a length of 3600 mm. Job size lengths are available on a special order basis requiring minimum orders and extended lead times. Contact your local National Gypsum Company representative for further information. Thickness of gypsum board will be "soft" converted to the metric equivalent.

ENVIRONMENTAL CONDITIONS

Maintain a room temperature of not less than 40˚F (4˚C) during application of gypsum board except when adhesive is used for the attachment of gypsum board. For the bonding of adhesive, joint treatment, texturing, and decoration, the room temperature shall be maintained at least at 50˚F (10˚C) for 48 hours prior to application and continuously thereafter until completely dry.

Note 1: *Precaution*–When a temporary heat source is used, the temperature shall not exceed 95˚F (35˚C) in any given room or area.

Note 2: *Precaution*–Maintain adequate ventilation in the working area during installation and curing period.

Protect gypsum board products from direct exposure to rain, snow, sunlight, or other excessive weather conditions.

GUIDELINES FOR PREVENTION OF MOLD GROWTH ON GYPSUM BOARD

Gypsum board does not generate or support the growth of mold when it is properly transported, stored, handled, installed, and maintained. However, mold spores are present everywhere and when conditions are favorable, mold can grow on practically any surface. Observing these guidelines will help minimize the potential for mold growth on gypsum board. Gypsum board must be kept dry to prevent the growth of mold.

Transportation and Receiving

Gypsum board must be protected during transit with a weather-tight cover in good condition.

Plastic shipping bags are intended to provided protection during transit only and must be promptly removed upon arrival of the load. Failure to remove the shipping bag can increase the likelihood of developing conditions favorable to the growth of mold.

Storage and Handling

Gypsum board must be stored in an area that protects it from adverse weather conditions, condensation, and other forms of moisture.

Job site conditions that can expose gypsum board to water or moisture must be avoided.

Gypsum board must be delivered to the job site as near to the time it will be used as possible.

Application

Provisions must be made to keep gypsum board dry throughout application.

Gypsum board that has visible mold growth must not be used.

Gypsum board on walls must be applied with a minimum 1/4" (6.35 mm) gap between the gypsum board and the floor.

Gypsum board must not be applied over building materials where conditions exist that are favorable to mold growth.

Maintenance Following Application

Essential elements of sound weather tight building envelope must be properly maintained, such as the roof, sealants, windows, etc.

Immediate and appropriate remediation measures must be taken as soon as water leaks or condensation sources are identified.

Routine cleaning and maintenance operations must be performed so as to prevent saturation of the gypsum board.

Additional Sources of Information

The following Web sites provide information and recommendations for treating mold growth; other sites also provide similar suggestions.

California Indoor Air Quality Program at http://www.cal-iaq.org/iaqsheet.html

Federal Emergency Management Agency at http://www.fema.gov/pdf/hazards/fststpbr.html

New York City Department of Health at http://www.ci,nyc.ny.us/html/doh/html/epi/moldrpt1.html

U. S. Environmental Protection Agency at http://www.epa.gov/iedweb00/pubs/moldresources.html

GA-238, Copyright Gypsum Association

LIMITATIONS

1. Maximum stud spacing for single layer application of 1/2" and 5/8" Gypsum board is 24" o.c. If 3/8" Gypsum board is used, it must be applied in two layers, with the second layer adhesively applied; 24" o.c. stud spacing may be used.
2. Where long, continuous runs of this wall system are employed, control joints must be provided every 30' or less.
3. Where structural movement may impose direct loads on these systems, isolation details are required.
4. Partitions should not be used where frequently exposed to excessive moisture unless all surfaces are waterproofed.
5. To prevent weakening due to calcining, Gypsum board should not be exposed to temperatures over 125˚F (52˚C) for extended periods of time.
6. Gypsum board joints on single layer, or the face layer on two layer applications, shall not occur within 12" of the corners of door frames unless control joints are installed at the corners.
7. When gypsum board abuts concrete floors, cut board to allow for 1/8" to 1/4" clearance between board and floor to prevent potential wicking.

ProForm® BRAND Joint Treatment

ProForm BRAND
All Purpose Joint Compound

A pre-mixed compound that may be used directly from the container. It is designed for tape application, fastener spotting, and the complete joint finishing of gypsum board. It contains sufficient binder to secure the reinforcing tape and develops its strength and hardness by drying. There are two types: regular is for use with hand tools, and machine grade, a thinner version, used in mechanical tool application. It can also be used to repair cracks in plaster walls and for skimming and texturing.

Packaged in:
61.7 lb. (28 kg) pails
50 lb. (22.7 kg) cartons
61.7 lb. (28 kg) cartons
12 lbs./1 gal. (5.4 kg) pail
3 lbs./1 qt. (1.3 kg) pail

West Coast only:
47 lb. (21.3 kg) cartons

Southwest only:
48 lb. (21.8 kg) cartons

ProForm BRAND
Multi-Use Joint Compound

A multi-use ready-mix joint compound designed for all phases of drywall finishing: taping, fasteners, finishing, texturing, trims and cornerbead.

Packaged in:
4.5 gal. (17 L) pails
3.5 gal. (13.2 L) cartons
4.5 gal. (17 L) cartons

West Coast only:
46 lb. (20.8 kg) cartons

ProForm BRAND
Lite Joint Compound

A lightweight joint compound designed to be used for finishing gypsum board joints, spotting fasteners, finishing cornerbead and texturing. ProForm Lite is designed to make your job easier. Approximately 30% lighter than conventional compounds, Lite pulls and sands easier and reduces shrinkage by up to 20%.

Packaged in:
4.5 gal. (17 L) pails
3.5 gal. (13.2 L) cartons
4.5 gal. (17 L) cartons
1 gal. pail

West Coast only:
3.59 gal. (13.6 L) cartons

ProForm BRAND
Ultra Joint Compound

A lightweight joint compound designed to be used for finishing gypsum board, spotting fasteners and finishing cornerbead. ProForm Ultra is approximately 50% lighter than conventional ready mix and approximately 30% lighter than other lightweight products. Ultra provides a superior finish with less pocking and excellent sanding characteristics and is the lowest shrinkage ready mix on the market (10-14%).

Packaged in:
4.5 gal. (17 L) pails
3.5 gal. (13.2 L) cartons
4.5 gal. (17 L) cartons

ProForm BRAND
XP Joint Compound
A pre-mixed all-purpose joint compound formulated for additional mold resistance. Can be used with XP gypsum board to construct wall or ceiling systems with enhanced resistance to mold.

Packaged in:
61.7 lb. (28 kg) pails
50 lb. (22.7 kg) cartons

ProForm BRAND
Taping Joint Compound
A ready-mix joint compound designed to enhance bond when embedding joint tape or when applying tape-on corner bead and accessories. Taping compound is also an excellent product to enhance bond when laminating gypsum board.

Packaged in:
61.7 lb. (28 kg) pails
46 lb. (20.8 kg) cartons

ProForm BRAND
Topping Joint Compound
Designed specially as a finish used over joint compound. It is not recommended for embedding paper tape or the first coat over cornerbeads. It exhibits easy working and spreading characteristics and is suitable for floating or finishing taped joints, spotting nail or screw heads and the finish coats over cornerbead. Its excellent sanding qualities make it preferred as a finishing compound. Topping Compound can also be used for texturing.

Packaged in:
61.7 lb. (28 kg) pails
50 lb. (22.7 kg) cartons
61.7 lb. (28 kg) cartons
West Coast only:
49 lb. (22.2 kg) cartons

ProForm BRAND
Texture Grade Joint Compound
An all-purpose ready-mixed material specially formulated for texturing walls and ceilings. Use to create a variety of textures, the most typical are Spray Spatter, Spatter Knockdown, Orange Peel and Skip Trowel. Bonds well with many surfaces including gypsum board, gypsum plaster and above grade interior concrete/ masonry.

Packaged in:
61.7 lb. (28 kg) pails
50 lb. (22.7 kg) cartons

ProForm BRAND
Sta-Smooth Joint Compound
A special setting (hardening) type compound that is not affected by humidity once it has set and dried. It was developed for use in the Sta-Smooth System to reduce joint deformities such as ridging and beading. Sta-Smooth compound firmly bonds the tape to the board and the Sta-Smooth board edges to each other. Sta-Smooth compound is suitable for filling voids left in above-grade interior concrete. Required for finishing joints on exterior soffit board.

Sta-Smooth compounds are recommended for use in poor drying conditions. Recoating characteristics save trips to jobs. Product exhibits low shrinkage making it excellent for pre-filling and quick patches. Available in set times of 20, 45, 90, and 210 minutes.

Packaged in:
25 lb. (11.3 kg) bags

ProForm BRAND
Sta-Smooth Lite Joint Compound
A lightweight setting compound offering the advantages of a hardening compound, but also sandable. Available in set times of 5, 20, 45, 90, and 210 minutes.

Packaged in:
18 lb. (8.2 kg) bags

ProForm BRAND
Sta-Smooth HS Joint Compound (High Strength)
Developed for use in the manufactured housing industry. A hardening or setting compound which develops high early strength. Available in set times of 20, 30, 45, and 60 minutes.

Packaged in:
25 lb. (11.3 kg) bags

ProForm BRAND
Sta-Smooth FS 90 Compound
A setting type compound designed to provide protection in fire-stopping penetrations through fire-rated partitions or assemblies in both new and retrofit construction. Sta-Smooth FS 90 seals out smoke, toxic gas and water, plus it provides a seal to stop sound and dust infiltration.

Packaged in:
25 lb. (11.3 kg) bags

ProForm® BRAND Joint Tapes

ProForm BRAND
Joint Tape
Joint tape conceals and reinforces gypsum board joints. The tape is buffed on both sides to ensure the best working qualities and bond. A center creasing process allows easy folding for use at corners.

Available in:
75' rolls (22.9 m)
20 rolls per carton
250' rolls (76.2 m)
20 rolls per carton
500' rolls (152.4 m)
10 rolls per carton

ProForm BRAND
Fiberglass Mesh Tape
A 1.9" wide, self-adhering fiberglass tape for use with Sta-Smooth compounds. 300' per roll. Not recommended for use with drying type compounds.

Available in:
300' rolls (91.4 m)
12 rolls per carton

ProForm BRAND
Multi-Flex Tape Bead
A combination of joint tape and metal strips laminated to form an outside or inside corner for gypsum board. It is particularly recommended for inside corners on cathedral ceilings, kneewalls, stairways, or any outside or inside corner less or greater than 90˚F. It is applied with the metal side to the face of the gypsum board and is embedded into the joint compound.

Available in:
100' rolls (30.5 m)
10 rolls per carton

ProForm® BRAND Surfacer/Primer

ProForm® BRAND
Surfacer/Primer
A high-build interior coating designed for use with airless sprayers. It is used in lieu of a skim coat and primer coat to provide a high quality Level 5 finish in one spray application. This coating hides minor surface imperfections and is also an ideal finish for smooth ceilings.

Packaged in:
5 gal. (18.9 L) pails

Approx. Coverage:
110-135 sq. ft./gallon at 12-14 wet mils
(Coverage will vary based on substrate condition and spraying techniques)

ProForm® BRAND Texture Products

ProForm BRAND
Perfect Spray

A decorative texture product for fast spray application to interior ceiling surfaces. Its shredded polystyrene aggregate gives this texturing product greater whiteness, better hide and bold accent. Recommended for interior ceilings that are formed of new or previously painted gypsum board or monolithic concrete or plaster. Available coarse, medium, and fine.

Packaged in:
40 lb. (18.2 kg) bags

ProForm BRAND
Perfect Spray II

The commercial/ residential formulation of Perfect Spray is a competitively-priced interior ceiling texture. Its white appearance effectively hides minor surface defects and irregularities.

Packaged in:
40 lb. (18.2 kg) bags

ProForm BRAND
Wall and Ceiling Spray

Proform Wall and Ceiling Spray is a non-aggregated texture product used to create a wide range of wall surfaces.When used in conjunction with textured ceilings Proform Wall and Ceiling Spray can be applied without overspray affecting the ceiling previously sprayed with (aggregated) Perfect Spray. By adjusting mixture consistency and/or varying the atomizing pressure, Proform Wall and Ceiling Spray create an almost endless variety of textures, the most typical of which are Spray Spatter, Spatter Knockdown and Orange Peel. Surfaces can be finished with a coat of paint. Proform Wall and Ceiling Spray (nonaggregated) is specially formulated for easy mixing and easy pumping and is available in 50 lb. bags.

Packaged in:
50 lb. (22.7 kg) bags

ProForm BRAND
Perfect Spray EM –
Perfect Spray HF

Perfect Spray EM and Perfect Spray HF are a non-aggregated texture product used to create a wide range of wall surfaces.When used in conjunction with textured ceilings Perfect Spray EM and Perfect Spray HF can be applied without overspray affecting the ceiling previously sprayed with (aggregated) Perfect Spray or Spray Quick. By adjusting mixture consistency and/or varying the atomizing pressure, Perfect Spray EM and Perfect Spray HF create an almost endless variety of textures, the most typical of which are Spray Spatter, Spatter Knockdown and Orange Peel. Surfaces can be finished with a coat of paint. Perfect Spray EM (nonaggregated) is specially formulated for easy mixing and easy pumping and is available in 50 lb. bags.

Perfect Spray HF mixes and pumps easily and dries to a harder finish.

Packaged in:
EM 50 lb. (22.7 kg) bags
HF 40 lb. (18.2 kg) bags

1-800 NATIONAL® HAS THE ANSWERS TO HELP YOU GET ON WITH THE JOB

FIELD REPRESENTATION

National Gypsum has a vast store of knowledge and experience to deal with virtually any problem or situation, and we've put that technical experience in the field with our representatives. Their job is to answer your questions and help you use the right products effectively, properly and productively.

Your National Gypsum Field Representative brings to each situation years of actual hands-on experience with gypsum and related products. Each Field Representative has also received extensive specialized training at the National Gypsum Research Center in evaluating specifications and meeting building code standards. So, before you start your next job, talk to your National Gypsum Field Representative to determine the products, the systems, the application procedures and the specifications needed to assure the job is done right, right from the start.

EXPERIENCE ON THE LINE!

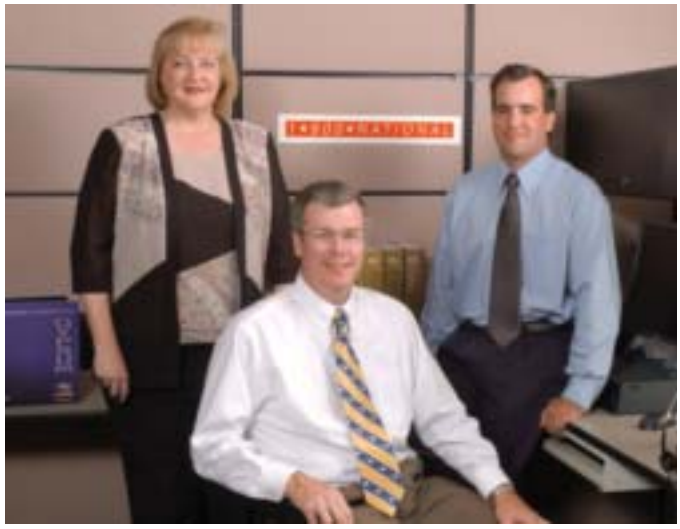
When questions need to be answered immediately, National Gypsum's nationwide technical assistance hotline puts a wealth of experience and computerized data right at your fingertips.

A VALUABLE RESOURCE

With years of accumulated research, on-the-job experience and knowledge of building products and their application, National Gypsum's technical service experts are your resource for technical information. Beyond simply manufacturing and providing quality building products, National Gypsum has made a total commitment to technical assistance for our customers all along the line, at every stage of a project's development.

DIRECT AND IN PERSON

With one phone call from anywhere in the Continental U.S., Hawaii and Alaska or Canada, you have a direct, personal link to National Gypsum's database of current technical information. For your convenience, National Gypsum's toll free technical assistance is available from 8:00 a.m. through 4:45 p.m. (E.T.), Monday through Friday. They will get back to you within 48 hours with a specific and accurate answer to your gypsum application and installation problems. All with a single toll free phone call.



HOW CAN NATIONAL GYPSUM HELP YOU?

Ask us about specifications, code regulations, product usage, installation and more:

- Fire and sound rated walls and ceilings
- Metal stud height information
- Cavity shaftwalls, mechanical shafts, air ducts and stairwells
- PermaBase® BRAND cement board
- Durasan® BRAND prefinished vinyl gypsum wall panels
- Area separation walls acting as fire barriers for wood frame dwellings
- Levels of Gypsum Board Finish
- Veneer plaster systems, one and two coat
- Gridstone® BRAND vinyl laminated ceiling grid panels
- ProForm® BRAND Joint Treatment products
- ProForm® BRAND spray textures for walls and ceilings
- Gold Bond BRAND High Strength® ceiling board
- ProForm® BRAND Sta-Smooth® FS-90 Fire-Shield® fire and smoke stop compound
- Gold Bond BRAND Hi-Abuse® XP Gypsum Board
- Gold Bond BRAND Hi-Impact® XP Gypsum Board
- Gold Bond BRAND 1/4" High Flex® Gypsum Board
- Gold Bond BRAND SoundBreak™ Gypsum Board

National Gypsum®

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(800) 628-4662

LIMITED WARRANTY AND REMEDIES

Products manufactured and sold by National Gypsum Company are warranted by National Gypsum Company to its customers to be free from defects in materials and workmanship at the time of shipment. THIS EXPRESS WARRANTY IS THE ONLY WARRANTY APPLICABLE TO SUCH PRODUCTS, AND IS IN LIEU OF AND EXCLUDES ALL OTHER EXPRESS ORAL OR WRITTEN WARRANTIES AND ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

National Gypsum Company will not be liable for any incidental or consequential losses, damages or expenses. The customer's exclusive remedy for any type of claim or action for defective products will be limited to the replacement of the products (in the form originally shipped) or, at National Gypsum Company's option, to a payment or credit not greater than the original purchase price of the products.

National Gypsum Company will not be liable for products claimed to be defective where the defect resulted from causes not within National Gypsum Company's control, or which arose or occurred after shipment, including but not limited to accidents, misuse, mishandling, improper installation, contamination or adulteration by other materials or goods, or abnormal conditions of temperature, moisture, dirt or corrosive matter.

Any claim that products sold by National Gypsum Company were defective or otherwise did not conform to the contract of sale is waived unless the customer submits it in writing to National Gypsum Company within thirty (30) days from the date the customer discovered or should have discovered the defect or nonconformance. No legal action or proceeding complaining of goods sold by National Gypsum Company may be brought by the customer more than one year after the date the customer discovered or should have discovered the defect or problem of which it complains.

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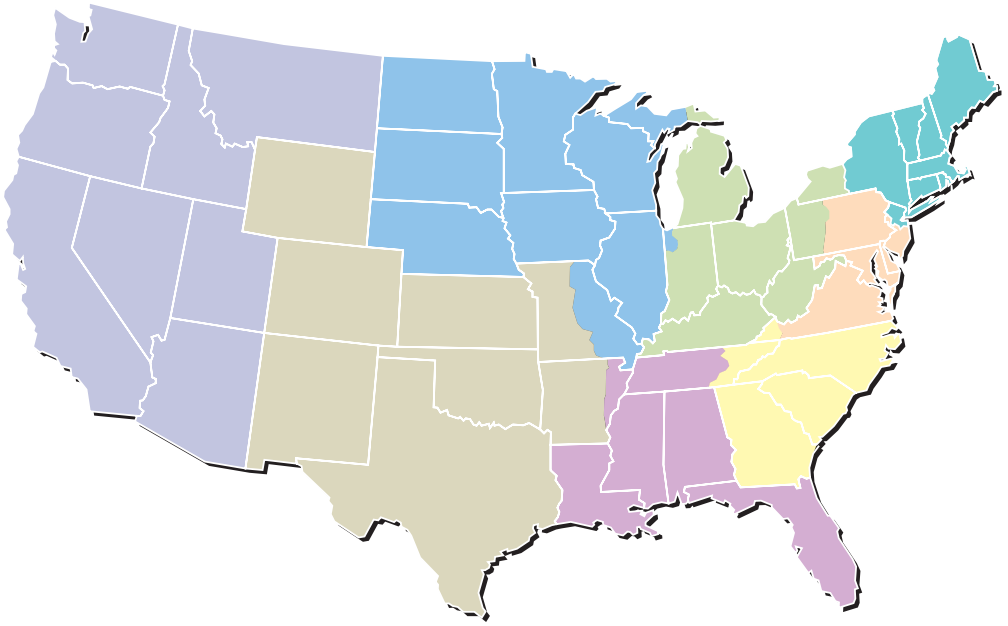

Atlantic Area
Ph: (800) 237-9167
Fx: (877) 252-0430

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Ph: (800) 252-1065
Fx: (866) 232-0440

Gulf Area
Ph: (800) 343-4893
Fx: (866) 482-8940

Midwest Area
Ph: (800) 323-1447
Fx: (866) 692-8590

Northeast Area
Ph: (800) 253-3161
Fx: (866) 632-1480

Southeast Area
Ph: (800) 548-9394
Fx: (866) 732-1990

Southwest Area
Ph: (800) 548-9396
Fx: (866) 792-7520

Western Area
Ph: (800) 824-4227
Fx: (800) 438-6266

National Accounts
Ph: (800) 440-1230
Fx: (866) 622-3590

Manufactured Housing
Ph: (800) 455-3185
Fx: (800) 639-1714

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National Gypsum Company will not be liable for any incidental, indirect or consequential losses, damages or expenses. The customer's exclusive remedy for any type of claim or action for defective products will be limited to the replacement of the products (in the form originally shipped) or, at National Gypsum's option, to a payment or credit not greater than the original purchase price of the products.

National Gypsum Company will not be liable for products claimed to be defective where the defect resulted from causes not within National Gypsum's control, or which arose or occurred after shipment, including but not limited to accidents, misuse, mishandling, improper installation, contamination or adulteration by other materials or goods, or abnormal conditions of temperature, moisture, dirt or corrosive matter.

Any claim that products sold by National Gypsum Company were defective or otherwise did not conform to the contract of sale is waived unless the customer submits it in writing to National Gypsum within thirty (30) days from the date the customer discovered or should have discovered the defect or nonconformance. No legal action or proceeding complaining of goods sold by National Gypsum may be brought by the customer more than one year after the date the customer discovered or should have discovered the defect or problem of which it complains.

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Excellence Across The Board®