

Submittal Package

Suite 1200 tenant finish

Order WO-20260912-RF2A · September 16, 2026

Prepared for Ridgeline Interiors
Jobsite Union Station Tower, 2761 Railroad Ave, Denver, CO 80216
PO number RI-4488
Prepared through Walls.one

In this package

#	Product and manufacturer	Part no.	Documents	Page
1	Regular Drywall CertainTeed	—	Submittal Sheet - Regular Drywall · 3 pages https://certainteed.widen.net/content/wtnoyawce1/pdf/regular-data-sheet-07-05-881-NA-EN-2409ctg.pdf?u=nwk4fd	2
2	EasyClip™ U-Series™ Clip Angles ClarkDietrich	U543	EasyClip™ U-Series™ Clip Angle Catalog Page · 1 page https://www.clarkdietrich.com/sites/default/files/media/documents/CD_ClipExpressCatalog-EasyClipUSeries.pdf	6
3	ProSTUD® / ProTRAK® with Smart Edge™ Technology ClarkDietrich	362PDT250-18, 362PDS125-18	ProSTUD® Product Catalog · pages 1, 7, 13, 17, 20, 22-23, 28 of 32 https://www.clarkdietrich.com/sites/default/files/media/documents/CD_ProSTUD_Catalog.pdf Smart Edge™ Technology Tech Sheet · 1 page https://www.clarkdietrich.com/sites/default/files/media/documents/CD_SmartEdgeTechSheet.pdf	8
4	Fast Top™ Clip (FTC) ClarkDietrich	FTC3	FTC Catalog Page · 12 pages https://www.clarkdietrich.com/sites/default/files/media/documents/CD_ClipExpressCatalog-FastTopClip.pdf	18
5	Safety Data Sheets 2 documents, with an index	—	Safety Data Sheet SDS - Paper Faced Gypsum Panels · 7 pages SDS For ASTM A1003 Steel Framing Products · 9 pages	31

 Where a sheet lists more than one item, the part on this order is marked in colour.

Each sheet is the manufacturer's own document as published at the address shown beside it; check there for the current revision.

Regular Drywall

CertainTeed

On this order	220 x Regular Drywall — 1/2" · 12'
Documents	Submittal Sheet - Regular Drywall · 3 pages Safety Data Sheet SDS - Paper Faced Gypsum Panels · in the Safety Data Sheets section at the back

This sheet covers the whole line; the item on this order is Regular Drywall — 1/2" · 12'.



CertainTeed® Regular

DRYWALL PANEL

CertainTeed Regular Drywall Panel is an interior drywall panel that consists of a non-combustible gypsum core enclosed in 100% recycled face and back paper. Long edges are slightly tapered, allowing joints to be reinforced and concealed with joint tape and joint compound.

Basic Uses

CertainTeed Regular Drywall Panel is used for interior walls and ceilings in standard residential or commercial applications. It can be used for new construction or renovations over wood or steel framing. It is typically nailed or screwed to studs spaced 16" (406 mm) o.c., but can be applied by laminating or with the use of an adhesive.

1/4" (6.4 mm) Regular Drywall Panel is recommended as an additional layer in double-layer wood or steel-framed partitions, and as a face layer for use over old wall surfaces.

3/8" (9.5 mm) Regular Drywall Panel is recommended in single or double-layer wood or steel-framed wall and ceilings, as an additional layer for use over old wall and ceiling surfaces.

Advantages

- Uniformly flat, attractive appearance.
- High edge hardness.
- No wavy edges, warps, bows or deformities.
- Uniform high-strength cores eliminate crumbling, cracking.
- Edge tapers consistent to form perfect joints.
- GREENGUARD Gold Certified.

Job Name _____

Contractor _____

Date _____

Products Specified _____

PRODUCT DATA

PROPERTIES	CERTAINTEED REGULAR DRYWALL PANELS
Thickness	1/4" (6.4 mm), 3/8" (9.5 mm)
Width	4' (1220 mm)
Length	8' (2440 mm)
Weight	1/4" (6.4 mm) – 1.13 lb/ft ² (5.5 kg/m ²) 3/8" (9.5 mm) – 1.25 lb/ft ² (6.1 kg/m ²)
Edges	Tapered
Packaging	Two pieces per bundle, face to face and end-taped.

Custom lengths may be available on special order. Consult your CertainTeed sales representative.

TECHNICAL DATA

APPLICABLE STANDARDS AND REFERENCE	
Product Standard	ASTM C1396
Installation Guidelines	ASTM C840 / GA-216
Finishing Guidelines	ASTM C840 / GA-214
Code References	International Building Code (IBC)
Code References	International Residential Code (IRC)
Code References	National Building Code of Canada (NBCC)

certainteed
SAINT-GOBAIN

PHYSICAL PROPERTIES	1/4" (6.4 mm) REGULAR	3/8" (9.5 mm) REGULAR	TEST METHOD
Nominal Width	4' (1220 mm)	4' (1220 mm)	-
Standard Lengths	8' (2440 mm)	8' (2440 mm)	-
Face Surface	Paper	Paper	-
Weight - lb/ft² (kg/m²)	1.13 lb/ft² (5.5 kg/m²)	1.25 lb/ft² (6.1 kg/m²)	-
Edge Profile	Tapered	Tapered	
Surface Burning Characteristics - Flame Spread	15 (15)	15 (15)	ASTM E84 / UL 723 (CAN/ULC-S102)
Surface Burning Characteristics - Smoke Developed	0 (0)	0 (0)	ASTM E84 / UL 723 (CAN/ULC-S102)
Surface Burning Characteristics	Class A	Class A	ASTM E84 / UL 723 (CAN/ULC-S102)
Nail Pull	≥ 36 lbf (160 N)	≥ 56 lbf (249 N)	ASTM C473 (Method B)
Core Hardness - End	≥ 11 lbf (49 N)	≥ 11 lbf (49 N)	ASTM C473 (Method B)
Core Hardness - Edge	≥ 11 lbf (49 N)	≥ 11 lbf (49 N)	ASTM C473 (Method B)
Flexural Strength - Parallel	≥ 16 lbf (71 N)	≥ 26 lbf (116 N)	ASTM C473 (Method B)
Flexural Strength - Perpendicular	≥ 46 lbf (205 N)	≥ 77 lbf (343 N)	ASTM C473 (Method B)
Humidified Deflection	N/A	≤ 1-7/8" inch (48mm)	ASTM C473

Installation

LIMITATIONS

- Exposure to continuous moisture or extreme temperatures should be avoided. Not recommended for continuous exposure to temperatures exceeding 125°F (52°C).
- 1/4" (6.4 mm) Regular Drywall Panel is not recommended for ceiling application.
- Ceiling framing spacing should not exceed 16" (406 mm) o.c.
- Wall framing spacing should not exceed 16" (406 mm) o.c..
- Store indoors and off ground surface. Storage should be in accordance with the Gypsum Association GA-801, *Handling and Storage of Gypsum Panel Products*.
- Panels should be stacked flat with care taken to prevent sagging or damage to edges, ends and surfaces.
- Storing panel lengthwise leaning against the framing is not recommended.
- Panels should be carried, not dragged, to place of installation to prevent damaging finished edges.
- Cutting and scoring should be done from the face side.
- In cold weather or during joint finishing, temperatures within the enclosure should stay within the range of 50° to 95°F (10° to 35°C) and with sufficient ventilation to carry off excess moisture.

Decoration

CertainTeed Regular Drywall Panel accepts most types of paints, texture and wall covering materials. The surface shall be primed with a full-bodied latex primer before applying a final decorative material. This will equalize the suction between the joint compounds and the paper surface.

For best painting results, all surfaces, including joint compound, should be clean, dust-free and not glossy. If glossy paints are used, a thin skim coat of compound over the entire surface, Level 5 finish, is recommended to reduce highlighting or joint photographing. This method is also recommended for areas of critical sidelighting of natural or artificial light sources.

A sealer application under wallpaper or other wall covering is also recommended so the panel surface will not be damaged if the covering is subsequently removed during redecorating. Joint treatment must be thoroughly dry before proceeding with primer-sealer application and final decoration.

Certifications

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BIM/CAD INFORMATION

The BIM and CAD UL fire rated assemblies and sound assemblies can be found on CertainTeed's BIM and CAD Design Studio at bimlibrary.saint-gobain.com/certainteed. CertainTeed's BIM and CAD Design Studio provides BIM and CAD details to many UL fire rated assemblies and sound assemblies in easy to view experience. Plus, downloadable Revit and DWG and PDF CAD Details are available.

SUSTAINABILITY

Sustainable documentation, including recycled content, EPD's, HPD's, VOC Certifications, can be found at saintgobain.ecomedes.com.

NOTICE

The information in this document is subject to change without notice. CertainTeed assumes no responsibility for any errors that may inadvertently appear in this document.

For Fire Resistance, no warranty is made other than conformance to the standard under which the assembly was tested. Minor discrepancies may exist in the values of ratings, attributable to changes in materials and standards, as well as differences between testing facilities. Assemblies are listed as "combustible" (wood framing) and "noncombustible" (concrete and/or steel construction).



CertainTeed

CEILINGS • GYPSUM • INSULATION • ROOFING • SIDING • TRIM
20 Moores Road, Malvern, PA 19355 800-233-8990 certainteed.com

EasyClip™ U-Series™ Clip Angles

ClarkDietrich

Part no.	U543
On this order	300 x EasyClip™ U-Series™ Clip Angles — U543 · 16 ga · 1-1/2 x 1-1/2 x 3-3/8
Documents	EasyClip™ U-Series™ Clip Angle Catalog Page · 1 page SDS For ASTM A1003 Steel Framing Products · in the Safety Data Sheets section at the back

Look for the highlighted code.

EasyClip™ U-Series™ Clip Angle

Secures U-channel (cold-rolled channel) to framing members for lateral bridging, miscellaneous rigid connections, and multipurpose reinforcing supports

ClarkDietrich EasyClip™ U-Series™ clip angles are used to secure U-channel to wall studs for lateral bridging or for miscellaneous rigid connections. U-channel is passed through the stud knockout and an EasyClip U-Series clip is screw-attached or welded to provide a rigid connection. Available in a variety of lengths and gauges, EasyClip U-Series clips are prepunched for faster and more accurate fastener placement. U-Series clip angles and U-channel should not be used in bridging applications when the stud width exceeds 6".

ALTERNATIVE PRODUCTS

FastBridge™ Clip
EasyClip™ X-Series™ Clip Angle
SwiftClip™ LS-Series™ Support Clip
Spazzer® 5400 and Spazzer® 9200 Spacer Bars

PRODUCT DIMENSIONS

1-1/2" x 1-1/2" x 3-3/8"
1-1/2" x 1-1/2" x 5-3/4"
1-1/2" x 1-1/2" x 7-3/4"
1-1/2" x 1-1/2" x 9-3/4"

MATERIAL SPECIFICATIONS

Gauge: 16 gauge (54mils)
Design Thickness: 0.0566 inches

Gauge: 14 gauge (68mils)
Design Thickness: 0.0713 inches

Gauge: 12 gauge (97mils)
Design Thickness: 0.1017 inches

Coating: G90

Yield Strength: 50ksi

ASTM: A653/A653M

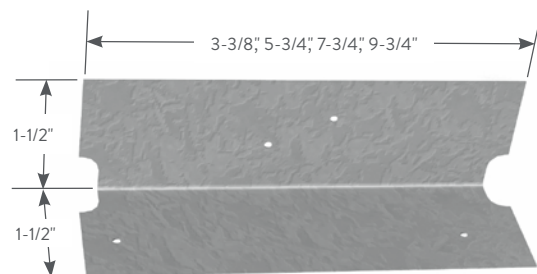


INSTALLATION

U-channel is inserted into the stud punchout (as specified by design) and rotated into place. U-Series clip angles are attached horizontally to the outside or hard side of the cold-formed steel (CFS) framing members. The clip must be firmly seated against the web of the U-channel. The clip should not be more than 1/4" less than the cold-formed framing member. U-Series clips are fastened using #10 minimum self-drilling screws driven through the clip holes into the steel framing. Clips may also be welded to the CFS framing.

EasyClip™ U-Series™ Clip Angles

Clip Designation	Thickness		Size (in)	Packaging Pcs./Bucket
	mils (ga)	Design Thickness (in)		
U543	54 (16)	0.0566	1-1/2 x 1-1/2 x 3-3/8	400
U545	54 (16)	0.0566	1-1/2 x 1-1/2 x 5-3/4	200
U547	54 (16)	0.0566	1-1/2 x 1-1/2 x 7-3/4	100
U549	54 (16)	0.0566	1-1/2 x 1-1/2 x 9-3/4	100
U683	68 (14)	0.0713	1-1/2 x 1-1/2 x 3-3/8	200
U685	68 (14)	0.0713	1-1/2 x 1-1/2 x 5-3/4	170
U687	68 (14)	0.0713	1-1/2 x 1-1/2 x 7-3/4	100
U689	68 (14)	0.0713	1-1/2 x 1-1/2 x 9-3/4	100
U973	97 (12)	0.1017	1-1/2 x 1-1/2 x 3-3/8	200
U975	97 (12)	0.1017	1-1/2 x 1-1/2 x 5-3/4	130
U977	97 (12)	0.1017	1-1/2 x 1-1/2 x 7-3/4	100
U979	97 (12)	0.1017	1-1/2 x 1-1/2 x 9-3/4	80



EasyClip U-Series Clip Angle

ProSTUD® / ProTRAK® with Smart Edge™ Technology

ClarkDietrich

Part nos.	362PDT250-18 362PDS125-18
On this order	64 x ClarkDietrich ProTRAK® EQ Track — 3-5/8" (362T) · 20 ga EQ · 18 mil · 70 ksi · 2-1/2" · G40EQ / CP60 (standard) — 10' 260 x ClarkDietrich ProSTUD® EQ Drywall Stud — 3-5/8" (362S) · 20 ga EQ · 18 mil · 70 ksi · G40EQ / CP60 (standard) — 10'
Documents	ProSTUD® Product Catalog · pages 1, 7, 13, 17, 20, 22-23, 28 of 32 Smart Edge™ Technology Tech Sheet · 1 page SDS — ASTM A1003 Steel Framing Products · in the Safety Data Sheets section at the back

Look for the highlighted code.



**STRONGER
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DRYWALL FRAMING SYSTEM

IN CONFORMANCE WITH: IBC 2024 • AISI S100 • AISI S220

ProSTUD® 20 (18mil) Drywall Stud**ClarkDietrich ProSTUD 20 (18mil) physical and structural properties**

Member	Design thickness (in)	Fy (ksi)	Gross Section Properties						Effective Section Properties at Fy						Torsional Properties					Lu (in)
			Area (in²)	Weight (lb/ft)	Ix (in⁴)	Rx (in)	Iy (in⁴)	Ry (in)	Ae (in²)	Ix (in⁴)	Sx (in³)	Ma (in-lbs)	Vag (lb)	Vanet (lb)	Jx1000 (in⁴)	Cw (in⁶)	Xo (in)	Ro (in)	β Beta	
162PDS125-18	0.0190	70	0.086	0.29	0.040	0.685	0.019	0.468	0.039	0.035	0.028	1194	405	149	0.01032	0.012	-1.105	1.382	0.361	24.8
250PDS125-18	0.0190	70	0.104	0.35	0.107	1.017	0.023	0.470	0.043	0.099	0.056	2361	256	204	0.01250	0.031	-1.004	1.504	0.555	24.5
362PDS125-18	0.0190	70	0.126	0.43	0.254	1.421	0.026	0.456	0.044	0.234	0.074	3102	174	170	0.01512	0.070	-0.884	1.734	0.740	24.3
400PDS125-18¹	0.0190	70	0.133	0.45	0.321	1.551	0.027	0.453	0.046	0.286	0.084	3532	157	157	0.01605	0.089	-0.859	1.830	0.780	24.2
600PDS125-18²	0.0190	70	0.173	0.59	0.855	2.223	0.032	0.431	0.046	0.669	0.141	5891	104	104	0.02083	0.233	-0.739	2.382	0.904	23.6

ProTRAK® 20 (18mil) Drywall Track**ClarkDietrich ProTRAK 20 (18mil) physical and structural properties**

Member	Design thickness (in)	Fy (ksi)	Gross Section Properties						Effective Section Properties at Fy						Torsional Properties				
			Area (in²)	Weight (lb/ft)	Ix (in⁴)	Rx (in)	Iy (in⁴)	Ry (in)	Ae (in²)	Ix (in⁴)	Sx (in³)	Ma (in-lbs)	Vag (lb)	Jx1000 (in⁴)	Cw (in⁶)	Xo (in)	Ro (in)	β Beta	
162PDT125-18	0.0190	50	0.078	0.27	0.040	0.718	0.013	0.411	0.028	0.027	0.022	663	380	0.00943	0.007	-0.879	1.207	0.470	
250PDT125-18	0.0190	50	0.095	0.32	0.102	1.038	0.015	0.400	0.029	0.073	0.034	1029	248	0.01143	0.017	-0.770	1.353	0.676	
362PDT125-18	0.0190	50	0.116	0.40	0.236	1.426	0.017	0.380	0.029	0.173	0.050	1497	170	0.01400	0.041	-0.666	1.619	0.831	
400PDT125-18	0.0190	50	0.123	0.42	0.297	1.550	0.017	0.374	0.029	0.211	0.055	1653	154	0.01486	0.051	-0.638	1.718	0.862	
600PDT125-18²	0.0190	50	0.161	0.55	0.778	2.195	0.019	0.342	0.029	0.469	0.083	2473	102	0.01943	0.130	-0.523	2.282	0.947	
162PDT200-18	0.0190	50	0.107	0.36	0.061	0.753	0.047	0.662	0.028	0.032	0.021	642	380	0.01285	0.024	-1.577	1.869	0.288	
250PDT200-18	0.0190	50	0.123	0.42	0.149	1.099	0.054	0.661	0.029	0.088	0.034	1016	248	0.01486	0.063	-1.429	1.920	0.446	
362PDT200-18	0.0190	50	0.145	0.49	0.333	1.517	0.061	0.648	0.029	0.188	0.050	1500	170	0.01743	0.145	-1.280	2.088	0.624	
400PDT200-18	0.0190	50	0.152	0.52	0.414	1.651	0.063	0.642	0.029	0.230	0.055	1661	154	0.01828	0.181	-1.238	2.161	0.672	
600PDT200-18²	0.0190	50	0.190	0.65	1.039	2.339	0.070	0.607	0.030	0.532	0.084	2525	102	0.02286	0.461	-1.057	2.637	0.840	
162PDT250-18	0.0190	50	0.126	0.43	0.074	0.767	0.085	0.823	0.028	0.035	0.021	635	380	0.01514	0.045	-2.056	2.344	0.231	
250PDT250-18	0.0190	50	0.142	0.48	0.180	1.125	0.098	0.830	0.029	0.091	0.034	1011	248	0.01714	0.115	-1.891	2.351	0.353	
362PDT250-18	0.0190	50	0.164	0.56	0.398	1.558	0.111	0.823	0.029	0.195	0.050	1498	170	0.01971	0.264	-1.718	2.461	0.512	
400PDT250-18	0.0190	50	0.171	0.58	0.492	1.697	0.114	0.818	0.029	0.239	0.055	1661	154	0.02057	0.331	-1.669	2.517	0.560	
600PDT250-18²	0.0190	50	0.209	0.71	1.214	2.410	0.129	0.786	0.030	0.555	0.085	2533	102	0.02514	0.838	-1.450	2.920	0.753	

Notes:

- Calculated properties are based on AISI S100-16 (2020) w/S2-20 North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-20 North American Standard for Cold-Formed Steel Framing—Nonstructural Members.
 - Effective properties incorporate the strength increase from the cold work of forming as applicable per Section A3.3.2 of AISI S100-16 (2020) w/S2-20.
 - Tabulated gross properties, including torsional properties, are based on full-unreduced cross section of the studs, away from punchouts.
 - Tabulated gross properties, including torsional properties, are based on full-unreduced cross section of the tracks.
 - For deflection calculations, use the effective moment of inertia.
 - Allowable moment includes cold work of forming.
 - Allowable moment is taken as the lowest value based on local or distortional buckling. Distortional buckling strength is based on a $k\text{-}\phi = 0$.
 - Web depth for track sections is equal to the nominal height plus two times the design thickness plus the bend radius. Hems on nonstructural track sections are ignored.
- 1 Web-height to thickness ratio exceeds 200.
2 Web-height to thickness ratio exceeds 260.

Complies with IBC 2024 • AISI S100 • AISI S220

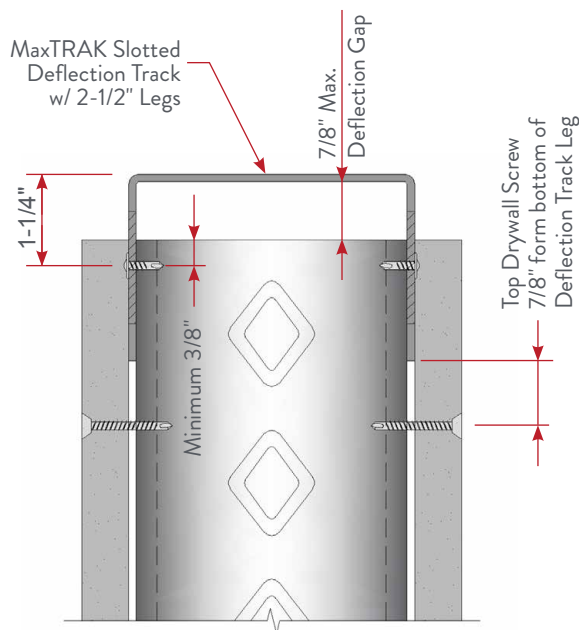
ProSTUD® 20 / 18mil Head-of-Wall (HOW) Composite Limiting Heights
 w/ 30mil 2-1/2" Leg MaxTRAK®

5/8" Type X Gypsum Board

Width	Stud Member	Yield Strength	Spacing (in) o.c.	5psf			7.5psf			10psf		
				L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
2-1/2"	ProSTUD 20 / 18 mil 250PDS125-18	70 ksi	12	17'-5"	14'-8"	12'-10"	15'-3"	12'-10"	11'-2"	13'-10"	11'-8"	10'-2"
			16	16'-8"	14'-0"	12'-3"	14'-6"	12'-3"	10'-8"	13'-2"	11'-2" f	9'-6"
			24	15'-2"	12'-10"	11'-1"	13'-2" f	11'-2"	9'-6"	11'-5" f	10'-2"	8'-2"
3-5/8"	ProSTUD 20 / 18 mil 362PDS125-18	70 ksi	12	21'-2"	17'-8"	15'-5"	18'-6"	15'-6"	13'-5"	16'-10"	14'-1"	12'-3"
			16	19'-11"	16'-8"	14'-6"	17'-5"	14'-7"	12'-8"	15'-10"	13'-3"	11'-3"
			24	18'-0"	15'-0"	13'-0"	15'-9" f	13'-2"	11'-2"	13'-7" f	11'-11"	9'-9"
4"	ProSTUD 20 / 18 mil 400PDS125-18	70 ksi	12	22'-5"	18'-8"	16'-4"	19'-7"	16'-4"	14'-3"	17'-10"	14'-10"	13'-0"
			16	21'-0"	17'-7"	15'-4"	18'-4"	15'-4"	13'-5"	16'-8"	13'-11"	12'-2"
			24	18'-11"	15'-10"	13'-10"	16'-6"	13'-10"	12'-1"	14'-4" f	12'-6"	10'-6"
6"	ProSTUD 20 / 18 mil 600PDS125-18	70 ksi	12	30'-1"	25'-1"	21'-11"	26'-4"	21'-11"	19'-1"	23'-11"	19'-11"	17'-4"
			16	28'-1"	23'-4"	20'-5"	24'-6"	20'-5"	17'-10"	21'-6" f	18'-7"	16'-2"
			24	25'-1"	20'-11"	18'-3"	20'-9" f	18'-3"	15'-11"	18'-0" f	16'-7"	13'-8"

Notes:

- Allowable HOW composite limiting heights were tested in accordance with AISI S916 and ICC-ES AC86.
- The tests were modified from the standards with the tracks fastened to the test fixture such that the wall stiffness included the track deformation.
- In accordance with current building codes and AISI design standards, the 1/3 Stress Increase for strength was not used.
- The composite limiting heights provided in the tables are based on a single layer of 5/8" Type X Gypsum Board from the following manufacturers: American, CertainTeed, Georgia Pacific, Continental, National, PABCO, and USG.
- The gypsum board must be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754 using minimum No. 6 Type S Drywall screws spaced as listed below:
 - Sheathing screws spaced a maximum of 16 in on-center to framing members (including bottom track) when studs spaced at 16 in or 12 in on-center.
 - Sheathing screws spaced a maximum of 12 in on-center to framing members (including bottom track) when studs spaced at 24 in on-center.
- #8 wafer head screws shall be used for attaching the stud to 30mil 2-1/2" Leg MaxTRAK (as top track) adhering to details below:
 - Stud to track connection must be installed as depicted in figure with a maximum gap of 7/8" between the web of the MaxTRAK and end of stud.
 - Slots in the MaxTRAK Legs allows for a total vertical movement of 1-1/2" (± 3/4") with screw centered in slots
 - Screws shall be placed in each flange of the stud at a minimum of 3/8" from the end of the stud
 - To permit head of wall deflection, gypsum board must not be fastened directly to the MaxTRAK
- No fasteners are required for attaching the stud to the bottom track except as detailed in ASTM C754.
- f Adjacent to the height value indicates that flexural stress controls the allowable wall height.



Complies with IBC 2024 • AISI S100 • AISI S220

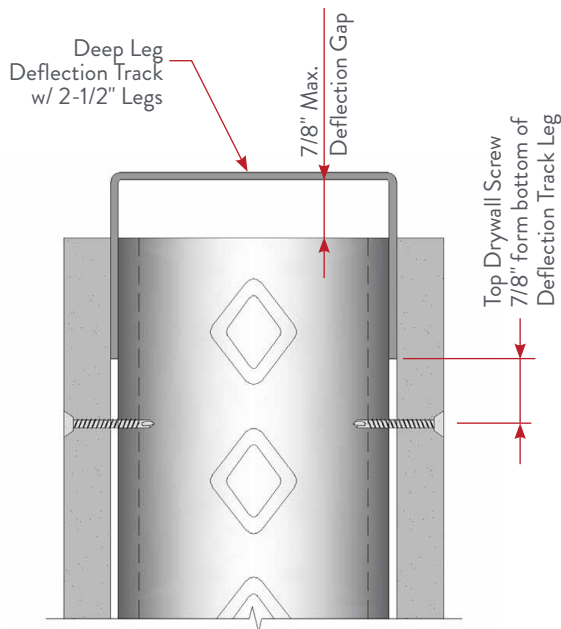
ProSTUD® 20 / 18mil Head-of-Wall (HOW) Composite Limiting Heights
 w/ 30mil 2-1/2" Leg Deflection Track

5/8" Type X Gypsum Board

Width	Stud Member	Yield Strength	Spacing (in) o.c.	5psf			7.5psf			10psf		
				L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
2-1/2"	ProSTUD 20 / 18 mil 250PDS125-18	70 ksi	12	16'-6"	14'-1"	12'-4"	14'-6"	12'-4"	10'-9"	13'-3"	11'-2"	9'-9"
			16	15'-11"	13'-5"	11'-8"	13'-11"	11'-8"	10'-3"	12'-8"	10'-8"	9'-0"
			24	14'-5"	12'-2"	10'-7"	12'-6" f	10'-7"	8'-11"	10'-10" f	9'-6"	—
3-5/8"	ProSTUD 20 / 18 mil 362PDS125-18	70 ksi	12	21'-2"	17'-8"	15'-5"	18'-6"	15'-6"	13'-5"	16'-10"	14'-1"	12'-3"
			16	19'-11"	16'-8"	14'-6"	17'-5"	14'-7"	12'-8"	15'-10"	13'-3"	11'-3"
			24	18'-0"	14'-11"	13'-0"	15'-9"	13'-1"	11'-1"	13'-7" f	11'-10"	9'-9"
4"	ProSTUD 20 / 18 mil 400PDS125-18	70 ksi	12	22'-5"	18'-7"	16'-4"	19'-7"	16'-3"	14'-3"	17'-10"	14'-9"	12'-11"
			16	20'-10"	17'-3"	15'-2"	18'-3"	15'-1"	13'-3"	16'-7"	13'-9"	12'-1"
			24	18'-7"	15'-5"	13'-6"	16'-3"	13'-6"	11'-9"	14'-2" f	12'-3"	10'-2"
6"	ProSTUD 20 / 18 mil 600PDS125-18	70 ksi	12	29'-6"	24'-8"	21'-9"	25'-9"	21'-6"	19'-0"	22'-5" f	19'-7"	17'-3"
			16	27'-9"	23'-2"	20'-5"	23'-4" f	20'-3"	17'-10"	20'-3" f	18'-5"	16'-2"
			24	24'-3" f	20'-11"	18'-3"	19'-10" f	18'-3"	15'-11"	17'-2" f	16'-7"	13'-8"

Notes:

- Allowable HOW composite limiting heights were tested in accordance with AISI S916 and ICC-ES AC86.
 - The tests were modified from the standards with the tracks fastened to the test fixture such that the wall stiffness included the track deformation.
 - In accordance with current building codes and AISI design standards, the 1/3 Stress Increase for strength was not used.
 - The composite limiting heights provided in the tables are based on a single layer of 5/8" Type X Gypsum Board from the following manufacturers: American, CertainTeed, Georgia Pacific, Continental, National, PABCO, and USG.
 - The gypsum board must be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754 using minimum No. 6 Type S Drywall screws spaced as listed below:
 - Sheathing screws spaced a maximum of 16 in on-center to framing members (including bottom track) when studs spaced at 16 in or 12 in on-center.
 - Sheathing screws spaced a maximum of 12 in on-center to framing members (including bottom track) when studs spaced at 24 in on-center.
 - No fasteners are required for attaching the stud to the Deflection track at the top except as detailed in ASTM C754.:
 - Stud to track connection must be installed as depicted in figure with a maximum gap of 7/8" between the web of the Deflection track and end of stud.
 - The maximum amount of total vertical movement (compression + extension) cannot exceed 1-1/2".
 - To permit head of wall deflection, gypsum board must not be fastened directly to the Deflection track.
 - No fasteners are required for attaching the stud to the bottom track except as detailed in ASTM C754.
 - A spazzer spacing bar shall be installed in the punchouts immediately adjacent to the top track (Deflection Track) to hold studs in place.
- f** Adjacent to the height value indicates that flexural stress controls the allowable wall height.



Complies with IBC 2024 • AISI S100 • AISI S220

ProSTUD® Full Composite Limiting Heights

5/8" Type X Gypsum Board

Width (in)	Stud member	Design thickness (in)	Yield strength (ksi)	Spacing (inches)	Lateral Load (psf)								
					5psf			7.5psf			10psf		
					L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
1-5/8	ProSTUD 25 162PDS125-15	0.0158	50	12	14'-1"	11'-7"	10'-1"	12'-3"	10'-1"	8'-7"	11'-2"	9'-1"	—
				16	12'-9"	10'-6"	9'-0"	11'-2"	9'-1"	—	10'-2"	8'-1"	—
				24	11'-2"	9'-1"	—	9'-9"	—	—	8'-5"	—	—
	ProSTUD 20 162PDS125-18	0.0190	70	12	13'-2"	11'-5"	10'-0"	11'-6"	10'-0"	8'-5"	10'-6"	8'-9"	—
				16	12'-10"	11'-1"	9'-9"	11'-2"	9'-8"	7'-11"	10'-2"	8'-4"	—
				24	11'-10"	10'-3"	8'-6"	10'-4"	8'-5"	—	9'-2"	—	—
	ProSTUD 30 162PDS125-30	0.0312	33	12	16'-3"	12'-11"	11'-3"	14'-3"	11'-3"	9'-10"	12'-11"	10'-3"	8'-8"
				16	14'-9"	11'-9"	10'-3"	12'-11"	10'-3"	8'-8"	11'-9"	9'-2"	—
				24	12'-11"	10'-3"	8'-8"	11'-3"	8'-8"	—	10'-3"	—	—
	ProSTUD 33 162PDS125-33	0.0346	33	12	17'-0"	13'-6"	11'-10"	14'-10"	11'-10"	10'-4"	13'-6"	10'-9"	9'-3"
				16	15'-6"	12'-3"	10'-9"	13'-6"	10'-9"	9'-3"	12'-3"	9'-9"	—
				24	13'-6"	10'-9"	9'-3"	11'-10"	9'-3"	—	10'-9"	—	—
2-1/2	ProSTUD 25 250PDS125-15	0.0158	50	12	17'-2"	14'-8"	13'-0"	15'-0"	12'-10"	11'-4"	13'-3" f	11'-8"	10'-4"
				16	15'-7"	13'-4"	11'-3"	13'-3" f	11'-8"	10'-4"	11'-5" f	10'-7"	9'-1"
				24	13'-3" f	11'-8"	10'-4"	10'-10" f	10'-2"	8'-6"	9'-4" f	8'-11"	—
	ProSTUD 20 250PDS125-18	0.0190	70	12	17'-5"	14'-8"	12'-11"	15'-3"	12'-10"	11'-3"	13'-10"	11'-8"	10'-3"
				16	16'-8"	14'-0"	12'-4"	14'-6"	12'-3"	10'-9"	13'-2"	11'-2" f	9'-9"
				24	15'-2"	12'-10"	11'-3"	13'-2" f	11'-2"	9'-10"	11'-5" f	10'-2"	8'-5"
	ProSTUD 30 250PDS125-30	0.0312	33	12	19'-9"	16'-3"	14'-4"	17'-3"	14'-2"	12'-6"	15'-8"	12'-11"	11'-4"
				16	17'-11"	14'-9"	13'-0"	15'-8"	12'-11"	11'-4"	14'-3"	11'-9"	10'-4"
				24	15'-8"	12'-11"	11'-4"	13'-8" f	11'-3"	9'-11"	12'-5"	10'-3"	8'-8"
	ProSTUD 33 250PDS125-33	0.0346	33	12	20'-4"	16'-9"	14'-9"	17'-9"	14'-7"	12'-10"	16'-2"	13'-3"	11'-8"
				16	18'-6"	15'-2"	13'-5"	16'-2"	13'-3"	11'-8"	14'-8"	12'-1"	10'-7"
				24	16'-2"	13'-3"	11'-8"	14'-1"	11'-7"	10'-3"	12'-10"	10'-7"	9'-1"
3-5/8	ProSTUD 25 362PDS125-15	0.0158	50	12	21'-6"	17'-1"	14'-11"	18'-4" f	14'-11"	13'-0"	15'-10" f	13'-7"	11'-10"
				16	19'-5" f	15'-6"	13'-7"	15'-10" f	13'-7"	11'-10"	13'-9" f	12'-4"	10'-7"
				24	15'-10" f	13'-7"	11'-10"	12'-11" f	11'-10"	10'-1"	11'-2" f	10'-7"	9'-0"
	ProSTUD 20 362PDS125-18	0.0190	70	12	22'-0"	18'-2"	15'-8"	19'-3"	15'-10"	13'-8"	17'-6"	14'-5"	12'-5"
				16	20'-6"	16'-10"	14'-7"	17'-11"	14'-9"	12'-9"	16'-3"	13'-5"	11'-6"
				24	18'-4"	15'-1"	13'-0"	15'-11" f	13'-2"	11'-4"	13'-9" f	12'-0"	10'-1"
	ProSTUD 30 362PDS125-30	0.0312	33	12	25'-8"	20'-5"	17'-10"	22'-5"	17'-10"	15'-7"	20'-5"	16'-2"	14'-2"
				16	23'-4"	18'-6"	16'-2"	20'-5"	16'-2"	14'-2"	18'-6"	14'-8"	12'-10"
				24	20'-5"	16'-2"	14'-2"	17'-10"	14'-2"	12'-3"	16'-2"	12'-10"	11'-0"
	ProSTUD 33 362PDS125-33	0.0346	33	12	26'-7"	21'-2"	18'-5"	23'-3"	18'-5"	16'-1"	21'-2"	16'-9"	14'-8"
				16	24'-2"	19'-2"	16'-9"	21'-2"	16'-9"	14'-8"	19'-2"	15'-3"	13'-4"
				24	21'-2"	16'-9"	14'-8"	18'-5"	14'-8"	12'-10"	16'-9"	13'-4"	11'-6"

Notes:

- Allowable composite limiting heights were tested in accordance with AISI S916 and ICC-ES AC86.
- Additional composite wall testing and analysis requirements of the SFIA Code Compliance Certification Program were also observed.
- In accordance with current building codes and AISI design standards, the 1/3 stress increase for strength was not used.
- The composite limiting heights provided in the tables are based on a single layer of 5/8" Type X Gypsum Board from the following manufacturers: American, CertainTeed, Georgia Pacific, Continental, National, PABCO, and USG.
- The gypsum board must be applied full height in the vertical orientation to each stud flange and installed in accordance with ASTM C754 using minimum No. 6 Type S drywall screws spaced as listed below:
 - Screws spaced a maximum of 16 in. o.c. to framing members (including top and bottom tracks) spaced at 16 in. or 12 in. o.c.
 - Screws spaced a maximum of 12 in. o.c. to framing members (including top and bottom tracks) spaced at 24 in. o.c.
- No fasteners are required for attaching the stud to the track except as detailed in ASTM C754.
- Stud end bearing must be a minimum of 1 inch.

f Adjacent to the height value indicates that flexural stress controls the allowable wall height.

s Adjacent to the height value indicates that shear/end reaction controls the allowable wall height.

ProSTUD® Non-Composite Limiting Heights					ClarkDietrich ProSTUD Non-Composite Limiting Heights—FULLY BRACED								
Depth (in)	Stud member	Design thickness (in)	Yield strength (ksi)	Spacing o.c. (in)	Lateral Load (psf)								
					5psf			7.5psf			10psf		
					L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
1-5/8	ProSTUD 25 162PDS125-15	0.0158	50	12	9'-2"	7'-4"	6'-4"	8'-0"	6'-4"	5'-7"	6'-11"	5'-9"	5'-1"
		0.0158	50	16	8'-4"	6'-8"	5'-9"	6'-11"	5'-9"	5'-1"	6'-0"	5'-3"	4'-7"
		0.0158	50	24	6'-11"	5'-9"	5'-1"	5'-8"	5'-1"	4'-5"	4'-11"	4'-7"	4'-0"
	ProSTUD 20 162PDS125-18	0.0190	70	12	9'-9"	7'-9"	6'-9"	8'-6"	6'-9"	5'-11"	7'-9"	6'-2"	5'-4"
		0.0190	70	16	8'-10"	7'-0"	6'-2"	7'-9"	6'-2"	5'-4"	7'-0"	5'-7"	4'-10"
		0.0190	70	24	7'-9"	6'-2"	5'-4"	6'-9"	5'-4"	4'-8"	6'-2"	4'-10"	4'-3"
	ProSTUD 30MIL 162PDS125-30	0.0312	33	12	11'-10"	9'-5"	8'-3"	10'-4"	8'-3"	7'-2"	9'-5"	7'-6"	6'-6"
		0.0312	33	16	10'-9"	8'-7"	7'-6"	9'-5"	7'-6"	6'-6"	8'-2"	6'-9"	5'-11"
		0.0312	33	24	9'-5"	7'-6"	6'-6"	7'-8"	6'-6"	5'-8"	6'-8"	5'-11"	5'-2"
	ProSTUD 33MIL 162PDS125-33	0.0346	33	12	12'-3"	9'-9"	8'-6"	10'-8"	8'-6"	7'-5"	9'-9"	7'-9"	6'-9"
		0.0346	33	16	11'-2"	8'-10"	7'-9"	9'-9"	7'-9"	6'-9"	8'-9"	7'-0"	6'-1"
		0.0346	33	24	9'-9"	7'-9"	6'-9"	8'-3"	6'-9"	5'-11"	7'-2"	6'-1"	5'-4"
2-1/2	ProSTUD 25 250PDS125-15	0.0158	50	12	12'-8"	10'-2"	8'-11"	10'-4"	8'-11"	7'-9"	8'-11"	8'-1"	7'-1"
		0.0158	50	16	10'-11"	9'-3"	8'-1"	8'-11"	8'-1"	7'-1"	7'-9"	7'-4"	6'-5"
		0.0158	50	24	8'-11"	8'-1"	7'-1"	7'-4"	7'-1"	6'-2"	6'-4"	6'-4"	5'-7"
	ProSTUD 20 250PDS125-18	0.0190	70	12	13'-9"	10'-11"	9'-6"	12'-0"	9'-6"	8'-4"	10'-11"	8'-8"	7'-7"
		0.0190	70	16	12'-6"	9'-11"	8'-8"	10'-11"	8'-8"	7'-7"	9'-11"	7'-10"	6'-10"
		0.0190	70	24	10'-11"	8'-8"	7'-7"	9'-6"	7'-7"	6'-7"	8'-4"	6'-10"	6'-0"
	ProSTUD 30MIL 250PDS125-30	0.0312	33	12	16'-5"	13'-0"	11'-4"	14'-4"	11'-4"	9'-11"	12'-6"	10'-4"	9'-0"
		0.0312	33	16	14'-11"	11'-10"	10'-4"	12'-6"	10'-4"	9'-0"	10'-10"	9'-5"	8'-2"
		0.0312	33	24	12'-6"	10'-4"	9'-0"	10'-3"	9'-0"	7'-11"	8'-10"	8'-2"	7'-2"
	ProSTUD 33MIL 250PDS125-33	0.0346	33	12	16'-11"	13'-5"	11'-9"	14'-10"	11'-9"	10'-3"	13'-5"	10'-8"	9'-4"
		0.0346	33	16	15'-5"	12'-3"	10'-8"	13'-5"	10'-8"	9'-4"	11'-7"	9'-8"	8'-6"
		0.0346	33	24	13'-5"	10'-8"	9'-4"	10'-11"	9'-4"	8'-2"	9'-6"	8'-6"	7'-5"
3-5/8	ProSTUD 25* 362PDS125-15	0.0158	50	12	15'-0"	13'-7"	11'-10"	12'-3"	11'-10"	10'-4"	10'-7"	10'-7"	9'-5"
		0.0158	50	16	13'-0"	12'-4"	10'-9"	10'-7"	10'-7"	9'-5"	9'-2"	9'-2"	8'-6"
		0.0158	50	24	10'-7"	10'-7"	9'-5"	8'-8"	8'-8"	8'-3"	7'-6"	7'-6"	7'-5"
	ProSTUD 20 362PDS125-18	0.0190	70	12	18'-4"	14'-6"	12'-8"	16'-0"	12'-8"	11'-1"	14'-5"	11'-6"	10'-1"
		0.0190	70	16	16'-8"	13'-2"	11'-6"	14'-5"	11'-6"	10'-1"	12'-5"	10'-6"	9'-2"
		0.0190	70	24	14'-5"	11'-6"	10'-1"	11'-9"	10'-1"	8'-10"	10'-2"	9'-2"	8'-0"
	ProSTUD 30MIL 362PDS125-30	0.0312	33	12	21'-2"	17'-4"	15'-2"	17'-3"	15'-2"	13'-3"	15'-0"	13'-9"	12'-0"
		0.0312	33	16	18'-4"	15'-9"	13'-9"	15'-0"	13'-9"	12'-0"	12'-11"	12'-6"	10'-11"
		0.0312	33	24	15'-0"	13'-9"	12'-0"	12'-3"	12'-0"	10'-6"	10'-7"	10'-7"	9'-6"
	ProSTUD 33MIL 362PDS125-33	0.0346	33	12	22'-7"	17'-11"	15'-8"	18'-9"	15'-8"	13'-8"	16'-3"	14'-3"	12'-5"
		0.0346	33	16	19'-10"	16'-3"	14'-3"	16'-3"	14'-3"	12'-5"	14'-0"	12'-11"	11'-3"
		0.0346	33	24	16'-3"	14'-3"	12'-5"	13'-3"	12'-5"	10'-10"	11'-6"	11'-3"	9'-10"
4	ProSTUD 25* 400PDS125-15	0.0158	50	12	15'-9"	14'-6"	12'-8"	12'-11"	12'-8"	11'-1"	11'-2"	11'-2"	10'-1"
		0.0158	50	16	13'-8"	13'-2"	11'-6"	11'-2"	11'-2"	10'-1"	9'-8"	9'-8"	9'-2"
		0.0158	50	24	11'-2"	11'-2"	10'-1"	9'-1"	9'-1"	8'-9"	7'-11"	7'-11"	7'-11"
	ProSTUD 20* 400PDS125-18	0.0190	70	12	19'-7"	15'-6"	13'-7"	17'-1"	13'-7"	11'-10"	15'-4"	12'-4"	10'-9"
		0.0190	70	16	17'-9"	14'-1"	12'-4"	15'-4"	12'-4"	10'-9"	13'-3"	11'-2"	9'-9"
		0.0190	70	24	15'-4"	12'-4"	10'-9"	12'-6"	10'-9"	9'-5"	10'-10"	9'-9"	8'-7"
	ProSTUD 30MIL 400PDS125-30	0.0312	33	12	22'-4"	18'-8"	16'-4"	18'-3"	16'-4"	14'-3"	15'-9"	14'-10"	13'-0"
		0.0312	33	16	19'-4"	17'-0"	14'-10"	15'-9"	14'-10"	13'-0"	13'-8"	13'-6"	11'-9"
		0.0312	33	24	15'-9"	14'-10"	13'-0"	12'-11"	12'-11"	11'-4"	11'-2"	11'-2"	10'-3"
	ProSTUD 33MIL 400PDS125-33	0.0346	33	12	24'-2"	19'-4"	16'-11"	19'-9"	16'-11"	14'-9"	17'-1"	15'-4"	13'-5"
		0.0346	33	16	21'-0"	17'-7"	15'-4"	17'-1"	15'-4"	13'-5"	14'-10"	13'-11"	12'-2"
		0.0346	33	24	17'-1"	15'-4"	13'-5"	14'-0"	13'-5"	11'-9"	12'-1"	12'-1"	10'-8"
6	ProSTUD 25* 600PDS125-15	0.0158	50	12	19'-3"	19'-2"	16'-9"	15'-9"	15'-9"	14'-8"	11'-11"	11'-11"	11'-11"
		0.0158	50	16	16'-8"	16'-8"	15'-3"	11'-11"	11'-11"	11'-11"	8'-11"	8'-11"	8'-11"
		0.0158	50	24	11'-11"	11'-11"	11'-11"	7'-11"	7'-11"	7'-11"	6'-0"	6'-0"	6'-0"
	ProSTUD 20* 600PDS125-18	0.0190	70	12	26'-0"	20'-8"	18'-0"	21'-11"	18'-0"	15'-9"	19'-0"	16'-4"	14'-4"
		0.0190	70	16	23'-3"	18'-9"	16'-4"	19'-0"	16'-4"	14'-4"	15'-7"	14'-11"	13'-0"
		0.0190	70	24	19'-0"	16'-4"	14'-4"	13'-10"	13'-10"	12'-6"	10'-5"	10'-5"	10'-5"
	ProSTUD 30MIL 600PDS125-30	0.0312	33	12	28'-4"	25'-7"	22'-4"	23'-2"	22'-4"	19'-7"	20'-1"	20'-1"	17'-9"
		0.0312	33	16	24'-7"	23'-3"	20'-4"	20'-1"	20'-1"	17'-9"	17'-4"	17'-4"	16'-2"
		0.0312	33	24	20'-1"	20'-1"	17'-9"	16'-4"	16'-4"	15'-6"	14'-2"	14'-2"	14'-1"
	ProSTUD 33MIL 600PDS125-33	0.0346	33	12	30'-7"	26'-7"	23'-2"	25'-0"	23'-2"	20'-3"	21'-8"	21'-1"	18'-5"
		0.0346	33	16	26'-6"	24'-1"	21'-1"	21'-8"	21'-1"	18'-5"	18'-9"	18'-9"	16'-9"
		0.0346	33	24	21'-8"	21'-1"	18'-5"	17'-8"	17'-8"	16'-1"	15'-4"	15'-4"	14'-7"

Notes:

- Calculated properties are based on AISI S100-16 (2020) w/S2-20 North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-20 North American Standard for Cold-Formed Steel Framing—Nonstructural Members, using steel properties alone.
- Above listed Non-Composite Limiting Heights are applicable when the unbraced length is less than or equal to Lu.
- Heights are limited by moment, deflection, shear, and web crippling (assuming 1" end reaction bearing).
- * Web stiffeners are required at bearing points.

Complies with IBC 2024 • AISI S100 • AISI S220

ProSTUD® Non-Composite Limiting Heights

ClarkDietrich ProSTUD Non-Composite
Limiting Heights—BRACED AT 48" o.c.

Depth (in)	Stud member	Design thickness (in)	Yield strength (ksi)	Spacing o.c. (in)	Lateral Load (psf)								
					5psf			7.5psf			10psf		
					L/120	L/240	L/360	L/120	L/240	L/360	L/120	L/240	L/360
1-5/8	ProSTUD 25 162PDS125-15	0.0158	50	12	8'-1"	7'-4"	6'-4"	6'-7"	6'-4"	5'-7"	5'-9"	5'-9"	5'-1"
		0.0158	50	16	7'-0"	6'-8"	5'-9"	5'-9"	5'-9"	5'-1"	4'-11"	4'-11"	4'-7"
		0.0158	50	24	5'-9"	5'-9"	5'-1"	4'-8"	4'-8"	4'-5"	4'-0"	4'-0"	4'-0"
	ProSTUD 20 162PDS125-18	0.0190	70	12	9'-6"	7'-9"	6'-9"	7'-9"	6'-9"	5'-11"	6'-9"	6'-2"	5'-4"
		0.0190	70	16	8'-3"	7'-0"	6'-2"	6'-9"	6'-2"	5'-4"	5'-10"	5'-7"	4'-10"
		0.0190	70	24	6'-9"	6'-2"	5'-4"	5'-6"	5'-4"	4'-8"	4'-9"	4'-9"	4'-3"
	ProSTUD 30MIL 162PDS125-30	0.0312	33	12	11'-10"	9'-5"	8'-3"	10'-3"	8'-3"	7'-2"	8'-11"	7'-6"	6'-6"
		0.0312	33	16	10'-9"	8'-7"	7'-6"	8'-11"	7'-6"	6'-6"	7'-8"	6'-9"	5'-11"
		0.0312	33	24	8'-11"	7'-6"	6'-6"	7'-3"	6'-6"	5'-8"	6'-3"	5'-11"	5'-2"
	ProSTUD 33MIL 162PDS125-33	0.0346	33	12	12'-3"	9'-9"	8'-6"	10'-8"	8'-6"	7'-5"	9'-5"	7'-9"	6'-9"
		0.0346	33	16	11'-2"	8'-10"	7'-9"	9'-5"	7'-9"	6'-9"	8'-2"	7'-9"	6'-1"
		0.0346	33	24	9'-5"	7'-9"	6'-9"	7'-8"	6'-9"	5'-11"	6'-8"	6'-1"	5'-4"
2-1/2	ProSTUD 25 250PDS125-15	0.0158	50	12	10'-5"	10'-2"	8'-11"	8'-6"	8'-6"	7'-9"	7'-4"	7'-4"	7'-1"
		0.0158	50	16	9'-0"	9'-0"	8'-1"	7'-4"	7'-4"	7'-1"	6'-5"	6'-5"	6'-5"
		0.0158	50	24	7'-4"	7'-4"	7'-1"	6'-0"	6'-0"	6'-0"	5'-3"	5'-3"	5'-3"
	ProSTUD 20 250PDS125-18	0.0190	70	12	13'-5"	10'-11"	9'-6"	10'-11"	9'-6"	8'-4"	9'-6"	8'-8"	7'-7"
		0.0190	70	16	11'-7"	9'-11"	8'-8"	9'-6"	8'-8"	7'-7"	8'-3"	7'-10"	6'-10"
		0.0190	70	24	9'-6"	8'-8"	7'-7"	7'-9"	7'-7"	6'-7"	6'-8"	6'-8"	6'-0"
	ProSTUD 30MIL 250PDS125-30	0.0312	33	12	16'-5"	13'-0"	11'-4"	13'-8"	11'-4"	9'-11"	11'-10"	10'-4"	9'-0"
		0.0312	33	16	14'-6"	11'-10"	10'-4"	11'-10"	10'-4"	9'-0"	10'-3"	9'-5"	8'-2"
		0.0312	33	24	11'-10"	10'-4"	9'-0"	9'-8"	9'-0"	7'-11"	8'-4"	8'-2"	7'-2"
	ProSTUD 33MIL 250PDS125-33	0.0346	33	12	16'-11"	13'-5"	11'-9"	14'-4"	11'-9"	10'-3"	12'-5"	10'-8"	9'-4"
		0.0346	33	16	15'-3"	12'-3"	10'-8"	12'-5"	10'-8"	9'-4"	10'-9"	9'-8"	8'-6"
		0.0346	33	24	12'-5"	10'-8"	9'-4"	10'-2"	9'-4"	8'-2"	8'-10"	8'-6"	7'-5"
3-5/8	ProSTUD 25* 362PDS125-15	0.0158	50	12	12'-5"	12'-5"	11'-10"	10'-1"	10'-1"	10'-1"	8'-9"	8'-9"	8'-9"
		0.0158	50	16	10'-9"	10'-9"	10'-9"	8'-9"	8'-9"	8'-9"	7'-7"	7'-7"	7'-7"
		0.0158	50	24	8'-9"	8'-9"	8'-9"	7'-2"	7'-2"	7'-2"	6'-2"	6'-2"	6'-2"
	ProSTUD 20 362PDS125-18	0.0190	70	12	15'-2"	14'-6"	12'-8"	12'-5"	12'-5"	11'-1"	10'-9"	10'-9"	10'-1"
		0.0190	70	16	13'-2"	13'-2"	11'-6"	10'-9"	10'-9"	10'-1"	9'-4"	9'-4"	9'-2"
		0.0190	70	24	10'-9"	10'-9"	10'-1"	8'-9"	8'-9"	8'-9"	7'-7"	7'-7"	7'-7"
	ProSTUD 30MIL 362PDS125-30	0.0312	33	12	20'-0"	17'-4"	15'-2"	16'-4"	15'-2"	13'-3"	14'-1"	13'-9"	12'-0"
		0.0312	33	16	17'-3"	15'-9"	13'-9"	14'-1"	13'-9"	12'-0"	12'-3"	12'-3"	10'-11"
		0.0312	33	24	14'-1"	13'-9"	12'-0"	11'-6"	11'-6"	10'-6"	10'-0"	10'-0"	9'-6"
	ProSTUD 33MIL 362PDS125-33	0.0346	33	12	21'-3"	17'-11"	15'-8"	17'-4"	15'-8"	13'-8"	15'-0"	14'-3"	12'-5"
		0.0346	33	16	18'-5"	16'-3"	14'-3"	15'-0"	14'-3"	12'-5"	13'-0"	12'-11"	11'-3"
		0.0346	33	24	15'-0"	14'-3"	12'-5"	12'-3"	12'-3"	10'-10"	10'-8"	10'-8"	9'-10"
4	ProSTUD 25* 400PDS125-15	0.0158	50	12	13'-0"	13'-0"	12'-8"	10'-8"	10'-8"	10'-8"	9'-2"	9'-2"	9'-2"
		0.0158	50	16	11'-3"	11'-3"	11'-3"	9'-2"	9'-2"	9'-2"	8'-0"	8'-0"	8'-0"
		0.0158	50	24	9'-2"	9'-2"	9'-2"	7'-6"	7'-6"	7'-6"	6'-6"	6'-6"	6'-6"
	ProSTUD 20* 400PDS125-18	0.0190	70	12	16'-3"	15'-6"	13'-7"	13'-3"	13'-3"	11'-10"	11'-6"	11'-6"	10'-9"
		0.0190	70	16	14'-1"	14'-1"	12'-4"	11'-6"	11'-6"	10'-9"	9'-11"	9'-11"	9'-9"
		0.0190	70	24	11'-6"	11'-6"	10'-9"	9'-4"	9'-4"	9'-4"	8'-1"	8'-1"	8'-1"
	ProSTUD 30MIL 400PDS125-30	0.0312	33	12	21'-1"	18'-8"	16'-4"	17'-2"	16'-4"	14'-3"	14'-11"	14'-10"	13'-0"
		0.0312	33	16	18'-3"	17'-0"	14'-10"	14'-11"	14'-10"	13'-0"	12'-11"	12'-11"	11'-9"
		0.0312	33	24	14'-11"	14'-10"	13'-0"	12'-2"	12'-2"	11'-4"	10'-6"	10'-6"	10'-3"
	ProSTUD 33MIL 400PDS125-33	0.0346	33	12	22'-5"	19'-4"	16'-11"	18'-4"	16'-11"	14'-9"	15'-10"	15'-4"	13'-5"
		0.0346	33	16	19'-5"	17'-7"	15'-4"	15'-10"	15'-4"	13'-5"	13'-9"	13'-9"	12'-2"
		0.0346	33	24	15'-10"	15'-4"	13'-5"	13'-0"	13'-0"	11'-9"	11'-3"	11'-3"	10'-8"
6	ProSTUD 25* 600PDS125-15	0.0158	50	12	15'-11"	15'-11"	15'-11"	13'-0"	13'-0"	13'-0"	11'-3"	11'-3"	11'-3"
		0.0158	50	16	13'-9"	13'-9"	13'-9"	11'-3"	11'-3"	11'-3"	8'-11"	8'-11"	8'-11"
		0.0158	50	24	11'-3"	11'-3"	11'-3"	7'-11"	7'-11"	7'-11"	6'-0"	6'-0"	6'-0"
	ProSTUD 20* 600PDS125-18	0.0190	70	12	20'-10"	20'-8"	18'-0"	17'-0"	17'-0"	15'-9"	14'-8"	14'-8"	14'-4"
		0.0190	70	16	18'-0"	18'-0"	16'-4"	14'-8"	14'-8"	14'-4"	12'-9"	12'-9"	12'-9"
		0.0190	70	24	14'-8"	14'-8"	14'-4"	12'-0"	12'-0"	12'-0"	10'-5"	10'-5"	10'-5"
	ProSTUD 30MIL 600PDS125-30	0.0312	33	12	26'-9"	25'-7"	22'-4"	21'-10"	21'-10"	19'-7"	18'-11"	18'-11"	17'-9"
		0.0312	33	16	23'-2"	23'-2"	20'-4"	18'-11"	18'-11"	17'-9"	16'-5"	16'-5"	16'-2"
		0.0312	33	24	18'-11"	18'-11"	17'-9"	15'-5"	15'-5"	15'-5"	13'-5"	13'-5"	13'-5"
	ProSTUD 33MIL 600PDS125-33	0.0346	33	12	28'-4"	26'-7"	23'-2"	23'-2"	23'-2"	20'-3"	20'-1"	20'-1"	18'-5"
		0.0346	33	16	24'-7"	24'-1"	21'-1"	20'-1"	20'-1"	18'-5"	17'-5"	17'-5"	16'-9"
		0.0346	33	24	20'-1"	20'-1"	18'-5"	16'-5"	16'-5"	16'-1"	14'-2"	14'-2"	14'-2"

Notes:

- Calculated properties are based on AISI S100-16 (2020) w/S2-20 North American Specification for Design of Cold-Formed Steel Structural Members and AISI S220-20 North American Standard for Cold-Formed Steel Framing—Nonstructural Members, using steel properties alone.
- Above moment capacities are based on discrete stud bracing at 4 ft. o.c.
- Heights are limited by moment, deflection, shear, and web crippling (assuming 1" end reaction bearing).
- * Web stiffeners are required at bearing points.

Complies with IBC 2024 • AISI S100 • AISI S220

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The technical content of this literature is effective 1/3/24 and supersedes all previous information.

Pub. No. CD-ProSTUD 1/24

ProSTUD® Allowable Ceiling Spans								Deflection Limit L/240					
Section	Fy (ksi)	4psf Lateral Support of Compression Flange						6psf Lateral Support of Compression Flange					
		Unsupported joist spacing (in) o.c.			Mid-span joist spacing (in) o.c.			Unsupported joist spacing (in) o.c.			Mid-span joist spacing (in) o.c.		
		12	16	24	12	16	24	12	16	24	12	16	24
		12	16	24	12	16	24	12	16	24	12	16	24
162PDS125-15	50	7'-3"	6'-8"	5'-11"	7'-10"	7'-2"	6'-3"	6'-5"	5'-11"	5'-3"	6'-10"	6'-3"	5'-5"
250PDS125-15	50	8'-4"	7'-8"	6'-11"	10'-11"	9'-11"	8'-8"	7'-5"	6'-11"	6'-2"	9'-7"	8'-8"	7'-7"
362PDS125-15	50	9'-2"	8'-6"	7'-7"	12'-9"	11'-8"	10'-3"	8'-3"	7'-7"	6'-9"	11'-3"	10'-3"	8'-11" e
400PDS125-15	50	9'-5"	8'-9"	7'-10"	13'-1"	12'-0"	10'-7" e	8'-6"	7'-10"	6'-11" e	11'-7" e	10'-7" e	9'-3" e
600PDS125-15	50	10'-8"	9'-10"	8'-10"	15'-0"	13'-9"	12'-2"	9'-6"	8'-10"	7'-11"	13'-3"	12'-2"	9'-11" e
162PDS125-18	70	7'-10"	7'-3"	6'-6"	8'-4"	7'-7"	6'-8"	7'-1"	6'-6"	5'-9"	7'-4"	6'-8"	5'-10"
250PDS125-18	70	9'-0"	8'-5"	7'-7"	11'-9"	10'-8"	9'-4"	8'-2"	7'-7"	6'-9"	10'-3"	9'-4"	8'-2"
362PDS125-18	70	9'-11"	9'-2"	8'-3"	14'-1"	12'-11"	11'-6"	8'-11"	8'-3"	7'-5"	12'-6"	11'-6"	10'-2"
400PDS125-18	70	10'-2"	9'-5"	8'-6"	14'-6"	13'-4"	11'-10"	9'-2"	8'-6"	7'-8"	12'-11"	11'-10"	10'-6"
600PDS125-18	70	11'-10"	10'-11"	9'-10"	16'-10"	15'-6"	13'-10"	10'-7"	9'-10"	8'-10"	15'-0"	13'-10"	12'-3"
162PDS125-30	33	9'-4"	8'-7"	7'-8"	9'-10"	9'-0"	7'-10"	8'-3"	7'-8"	6'-10"	8'-7"	7'-10"	6'-10"
250PDS125-30	33	10'-4"	9'-7"	8'-6"	13'-8"	12'-5"	10'-10"	9'-3"	8'-6"	7'-8"	11'-11"	10'-10"	9'-6"
362PDS125-30	33	11'-3"	10'-5"	9'-4"	16'-2"	15'-0"	13'-6"	10'-1"	9'-4"	8'-5"	14'-7"	13'-6"	12'-0"
400PDS125-30	33	11'-7"	10'-9"	9'-8"	16'-8"	15'-6"	13'-11"	10'-5"	9'-8"	8'-8"	15'-0"	13'-11"	12'-5"
600PDS125-30	33	13'-1"	12'-2"	10'-11"	18'-11"	17'-6"	15'-8"	11'-9"	10'-11"	9'-10"	17'-0"	15'-8"	14'-1"
162PDS125-33	33	9'-9"	9'-0"	8'-0"	10'-4"	9'-4"	8'-2"	8'-8"	8'-0"	7'-1"	9'-0"	8'-2"	7'-2"
250PDS125-33	33	10'-9"	9'-11"	8'-10"	14'-3"	12'-11"	11'-3"	9'-7"	8'-10"	7'-11"	12'-5"	11'-3"	9'-10"
362PDS125-33	33	11'-8"	10'-9"	9'-8"	16'-8"	15'-5"	13'-11"	10'-5"	9'-8"	8'-8"	15'-0"	13'-11"	12'-6"
400PDS125-33	33	12'-0"	11'-1"	9'-11"	17'-2"	15'-11"	14'-4"	10'-9"	9'-11"	8'-11"	15'-5"	14'-4"	12'-10"
600PDS125-33	33	13'-6"	12'-6"	11'-3"	19'-6"	18'-1"	16'-3"	12'-2"	11'-3"	10'-1"	17'-6"	16'-3"	14'-7"

ProSTUD Allowable Ceiling Spans								Deflection Limit L/360					
Section	Fy (ksi)	4psf Lateral Support of Compression Flange						6psf Lateral Support of Compression Flange					
		Unsupported joist spacing (in) o.c.			Mid-span joist spacing (in) o.c.			Unsupported joist spacing (in) o.c.			Mid-span joist spacing (in) o.c.		
		12	16	24	12	16	24	12	16	24	12	16	24
		12	16	24	12	16	24	12	16	24	12	16	24
162PDS125-15	50	6'-10"	6'-3"	5'-5"	6'-10"	6'-3"	5'-5"	6'-0"	5'-5"	4'-9"	6'-0"	5'-5"	4'-9"
250PDS125-15	50	8'-4"	7'-8"	6'-11"	9'-7"	8'-8"	7'-7"	7'-5"	6'-11"	6'-2"	8'-4"	7'-7"	6'-8"
362PDS125-15	50	9'-2"	8'-6"	7'-7"	12'-9"	11'-7"	10'-1"	8'-3"	7'-7"	6'-9"	11'-2"	10'-1"	8'-10" e
400PDS125-15	50	9'-5"	8'-9"	7'-10"	13'-1"	12'-0"	10'-7" e	8'-6"	7'-10"	6'-11" e	11'-7" e	10'-7" e	9'-3" e
600PDS125-15	50	10'-8"	9'-10"	8'-10"	15'-0"	13'-9"	12'-2"	9'-6"	8'-10"	7'-11"	13'-3"	12'-2"	9'-11" e
162PDS125-18	70	7'-4"	6'-8"	5'-10"	7'-4"	6'-8"	5'-10"	6'-5"	5'-10"	5'-1"	6'-5"	5'-10"	5'-1"
250PDS125-18	70	9'-0"	8'-5"	7'-7"	10'-3"	9'-4"	8'-2"	8'-2"	7'-7"	6'-9"	9'-0"	8'-2"	7'-2"
362PDS125-18	70	9'-11"	9'-2"	8'-3"	13'-9"	12'-6"	10'-11"	8'-11"	8'-3"	7'-5"	12'-0"	10'-11"	9'-6"
400PDS125-18	70	10'-2"	9'-5"	8'-6"	14'-6"	13'-4"	11'-8"	9'-2"	8'-6"	7'-8"	12'-10"	11'-8"	10'-2"
600PDS125-18	70	11'-10"	10'-11"	9'-10"	16'-10"	15'-6"	13'-10"	10'-7"	9'-10"	8'-10"	15'-0"	13'-10"	12'-3"
162PDS125-30	33	8'-7"	7'-10"	6'-10"	8'-7"	7'-10"	6'-10"	7'-6"	6'-10"	6'-0"	7'-6"	6'-10"	6'-0"
250PDS125-30	33	10'-4"	9'-7"	8'-6"	11'-11"	10'-10"	9'-6"	9'-3"	8'-6"	7'-8"	10'-5"	9'-6"	8'-3"
362PDS125-30	33	11'-3"	10'-5"	9'-4"	15'-11"	14'-6"	12'-8"	10'-1"	9'-4"	8'-5"	13'-11"	12'-8"	11'-1"
400PDS125-30	33	11'-7"	10'-9"	9'-8"	16'-8"	15'-6"	13'-9"	10'-5"	9'-8"	8'-8"	15'-0"	13'-9"	12'-0"
600PDS125-30	33	13'-1"	12'-2"	10'-11"	18'-11"	17'-6"	15'-8"	11'-9"	10'-11"	9'-10"	17'-0"	15'-8"	14'-1"
162PDS125-33	33	9'-0"	8'-2"	7'-2"	9'-0"	8'-2"	7'-2"	7'-10"	7'-2"	6'-3"	7'-10"	7'-2"	6'-3"
250PDS125-33	33	10'-9"	9'-11"	8'-10"	12'-5"	11'-3"	9'-10"	9'-7"	8'-10"	7'-11"	10'-10"	9'-10"	8'-7"
362PDS125-33	33	11'-8"	10'-9"	9'-8"	16'-6"	15'-0"	13'-2"	10'-5"	9'-8"	8'-8"	14'-5"	13'-2"	11'-6"
400PDS125-33	33	12'-0"	11'-1"	9'-11"	17'-2"	15'-11"	14'-3"	10'-9"	9'-11"	8'-11"	15'-5"	14'-3"	12'-5"
600PDS125-33	33	13'-6"	12'-6"	11'-3"	19'-6"	18'-1"	16'-3"	12'-2"	11'-3"	10'-1"	17'-6"	16'-3"	14'-7"

- Notes:**
- For unbraced sections, allowable moment is based on AISI S100-16 (2020) w/S2-20 Specification Section F2 & F3 with weak axis and torsional unbraced length assumed to be the listed span (completely unbraced). For mid-span braced sections, allowable moment based on Section F2 & F3 with weak axis and torsional unbraced length assumed to be one-half of the listed span (bracing at mid-span).
 - Web crippling calculation based on bearing length = 1 inch.
 - Web crippling and shear capacity have not been reduced for punchouts. If web punchouts occur near support members must be checked for reduced shear and web crippling in accordance with the AISI S100 Specification.
 - Values are for simple span conditions.
 - Web stiffeners required at support.

An enhancement for producing easier-to-handle steel that reduces the risk of cuts and scrapes.

01 | WHAT IS SMART EDGE?

Smart Edge is a proprietary safety feature now standard with ClarkDietrich's industry-leading ProSTUD® Drywall Framing System. We have reworked the edge of the return lips of the studs, and the edge of the leg of the runner tracks, making them smoother and more rounded. The result is an easier-to-handle product that reduces the risk of cuts and scrapes for installers, as well as for other trades who may come in contact with the framing.

02 | WHY WAS SMART EDGE DEVELOPED?

SAFETY

ClarkDietrich is committed to workers' health and well-being, so we develop products that minimize the risks and potential costs of injuries. When it comes to features like Smart Edge, the need is clear.

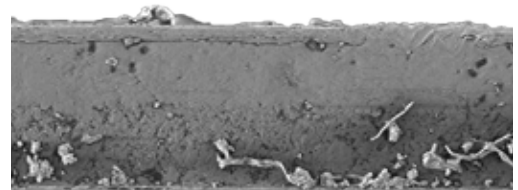
INNOVATION

ClarkDietrich consistently brings increased value to our product lines through more sophisticated manufacturing. Smart Edge coincides with an increase to the yield strength of our 20 EQ steel framing. Our new 19 mil thickness (18 mil minimum thickness) product continues to provide the industry's most extensive suite of fire, sound and limiting heights.

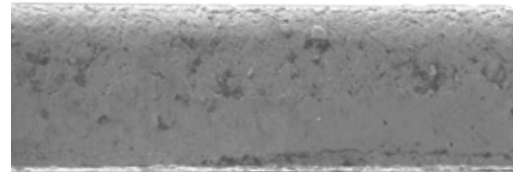
03 | WHERE SMART EDGE WILL BE AVAILABLE:

Smart Edge is now available nationwide. For questions or more details, please contact your ClarkDietrich representative or call our technical services team at (888) 437-3244.

Smart Edge does not eliminate all risks of cuts and scrapes. ClarkDietrich always recommends the use of appropriate Personal Protective Equipment (PPE), including but not limited to gloves and arm guards, for all trade personnel who come in contact with cold-formed steel framing.



Before: Slit-Edge Top



After: Smart Edge Top



ProSTUD Drywall Framing

Fast Top™ Clip (FTC)

ClarkDietrich

Part no.	FTC3
On this order	90 x Fast Top™ Clip (FTC) — FTC3 · 14 ga · 1-1/2 x 4 x 3-1/4
Documents	FTC Catalog Page · 12 pages SDS For ASTM A1003 Steel Framing Products · in the Safety Data Sheets section at the back

Look for the highlighted code.

Fast Top™ Clip

Head-of-wall connection

Head-of-wall deflection conditions for exterior curtain wall and interior, nonload-bearing walls

ClarkDietrich Fast Top™ Clips are used in head-of-wall deflection conditions for in-fill curtain wall assemblies and/or interior nonload-bearing partitions to provide for vertical movement. These clips are used in place of, or in combination with, deflection track. They also make a positive attachment and eliminate the need to install bridging continuously throughout the upper-most punchouts. The Fast Top clip connectors can be attached to the underside of structural members, concrete decks or floor assemblies. Studs must be cut less than full height to enable vertical movement up to 2-1/2" (1-1/4" up and down). Fast Top clips install quickly with welds, drill-in concrete anchors, screws or powder-actuated fasteners. Proprietary Deflection Screws are used to attach the clip to the cold-formed framing and to ensure frictionless deflection. These clips are also embossed with fastening patterns to ensure accurate placement of fasteners.

MATERIAL SPECIFICATIONS

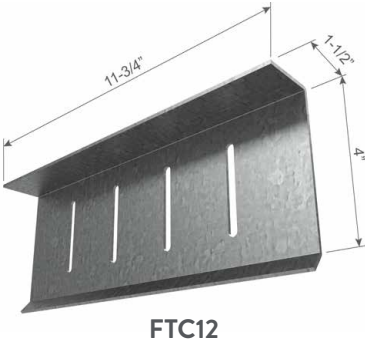
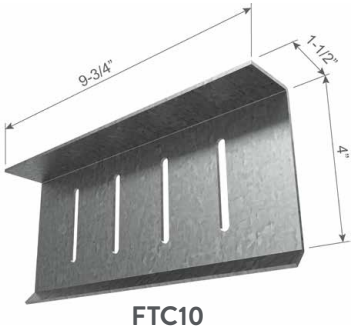
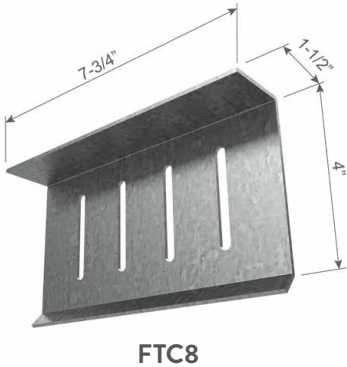
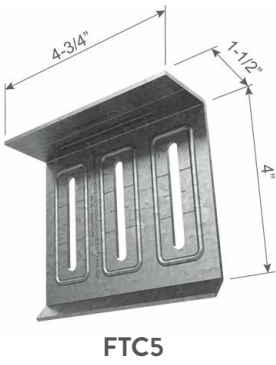
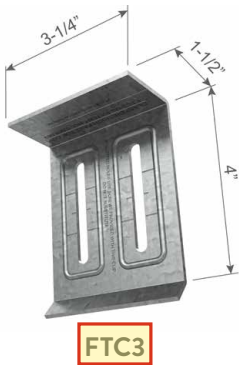
- Gauge: 14 gauge (68mils)
- Design Thickness: 0.0713 inches
- Coating: G90
- Yield Strength: 50ksi

CODE APPROVALS AND PERFORMANCE STANDARDS

- IAPMO ER-729
- AISI S100

ALTERNATIVE PRODUCTS

MaxTrak® Slotted Deflection Track



Fast Top™ Clip (FTC)				
Clip Designation	Product Thickness		Size (in)	Packaging Pcs./Bucket
	mils (ga)	Design Thickness (in)		
FTC3	68 (14)	0.0713	1-1/2 x 4 x 3-1/4	25
FTC5	68 (14)	0.0713	1-1/2 x 4 x 4-3/4	30
FTC8	68 (14)	0.0713	1-1/2 x 4 x 7-3/4	25
FTC10	68 (14)	0.0713	1-1/2 x 4 x 9-3/4	25
FTC12	68 (14)	0.0713	1-1/2 x 4 x 11-3/4	25

FTC3 includes 55 Proprietary Deflection Screws per carton.
FTC5 includes 110 Proprietary Deflection Screws per carton.
FTC8 includes 110 Proprietary Deflection Screws per carton.
FTC10 includes 110 Proprietary Deflection Screws per carton.
FTC12 includes 110 Proprietary Deflection Screws per carton.

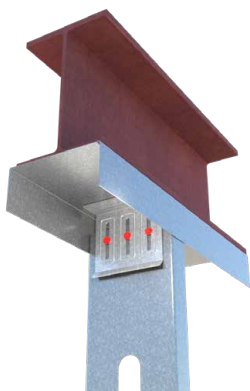
U.S. Patent No. 6,688,069



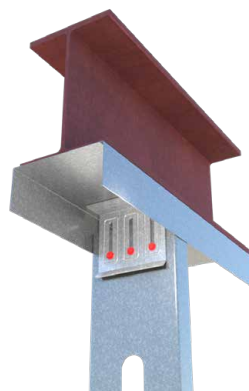
Proprietary Deflection Screw

INSTALLATION

Connections to the building can be made with screws, powder-actuated fasteners, drill-in concrete anchors or welding. Mechanical fasteners shall be equally spaced along the center of the 1-1/2" flange. When using the tabulated allowable loads in the tables on the opposite page, connections to the building structure must be made according to the notes. Proprietary Deflection Screws are used to attach the clip to the cold-formed steel framing. Screws shall be driven through the slotted holes and positioned to allow for the appropriate building deflection. Two deflection screws are required with the FTC3, three deflection screws are required with the FTC5, and four deflection screws are required with the FTC8, FTC10, FTC12.

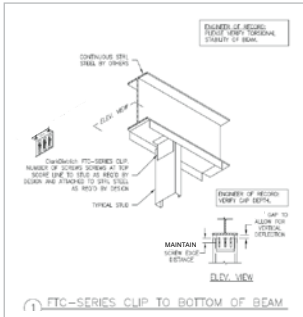
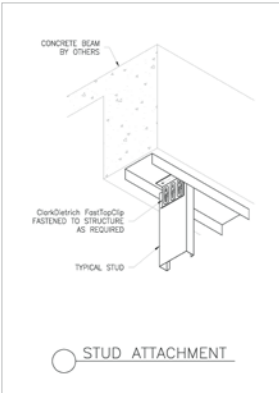


FRAMING CENTERED
CONNECTION



FRAMING OFFSET
CONNECTION

TYPICAL CONSTRUCTION DETAILS



Visit our CAD Library at cad.clarkdietrich.com to view or download construction details in .dwg, .dxf, and .pdf formats.

Fast Top™ Clip

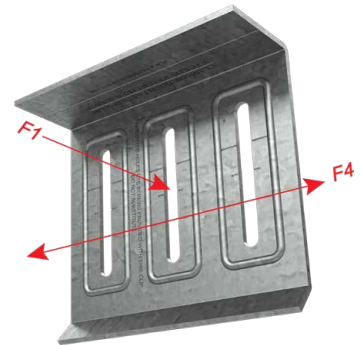
Head-of-wall connection

ATTACHMENT TO STRUCTURE: DESIGNED BY OTHERS

Clip Designation	Framing Member Details			Load Capacities (lbs)						
	Stud Depth (in)	Stud Thickness mils (ga)	Yield Strength F _y (ksi)	In-Plane (F1) - Center			Shear (F4) - Center			
				Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
FTC3	3-5/8	33 (20)	33	160	80	130	645	905	405	610
		43 (18)	33	220	115	180	720	1230	605	905
		54 (16)	50	270	140	225	740	1560	800	1285
		68 (14)	50	290	150	235	740	1565	805	1285
		97 (12)	50	325	165	265	740	1695	870	1395
FTC5	6	33 (20)	33	180	90	150	1355	1245	610	910
		43 (18)	33	240	125	200	1735	1820	905	1360
		54 (16)	50	350	180	290	1735	2700	1390	2220
		68 (14)	50	390	200	320	1735	2745	1410	2260
		97 (12)	50	420	215	345	1735	3235	1660	2660
FTC8	6	33 (20)	33	220	115	180	1640	1740	810	1215
		43 (18)	33	300	155	245	2940	2415	1205	1810
		54 (16)	50	470	240	385	3495	3510	1805	2885
		68 (14)	50	575	295	475	4340	4475	2300	3675
		97 (12)	50	700	360	575	4635	6250	3210	4815
FTC10	6	43 (18)	33	405	210	330	3475	2865	1205	1810
		54 (16)	50	525	270	430	4880	4435	2280	3645
		68 (14)	50	675	345	555	5610	5255	2700	4320
		97 (12)	50	920	470	755	5985	8205	2825	4520
FTC12	6	54 (16)	50	595	305	490	5315	4455	2285	3660
		68 (14)	50	785	400	645	6035	5320	2735	4375
		97 (12)	50	1090	560	895	7110	8925	3070	4815

Notes:

- Listed capacities are in accordance with provisions of AISI S100-16 (R2020)/S2-20 and ICC-ES AC261.
- Fast Top Clip attachment to structure designed by others. Listed capacities are applicable for Fast Top Clip to stud only (framing connection).
- ClarkDietrich Proprietary Deflection Screws (0.25" dia) are designed to secure clips to framing members via the slotted holes provided.
- The listed load capacities assume that the framing screws are positioned at the center of the slots.
- A maximum deflection gap of 1-1/4" shall be maintained between the clip structural attachment and end/edge of framing member.
- The safety factor for ASD loads and resistance factor for LRFD loads are in accordance with Chapter K of AISI-S100.
- The ClarkDietrich Proprietary Deflection screws (0.25" dia) provide nominal shear capacity of 2400lbs and a nominal tension capacity of 4060lbs. Designer shall use governing loads based on 1/8" service and strength.
- ASD and LRFD loads are based on nominal capacities only. 1/8" service loads are listed in a separate column.
- It is the responsibility of the design professional to detail the project drawings for proper Fast Top Clip installation.
- Other framing members may be used with these clips; however, it is the responsibility of the design professional to verify the framing members' capacities and potential failure modes.

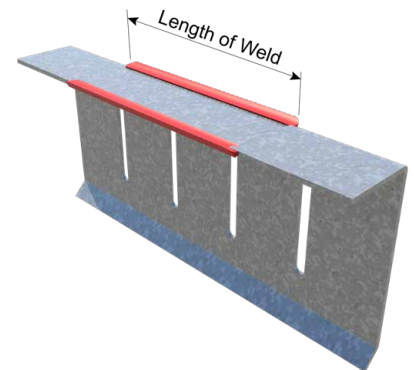
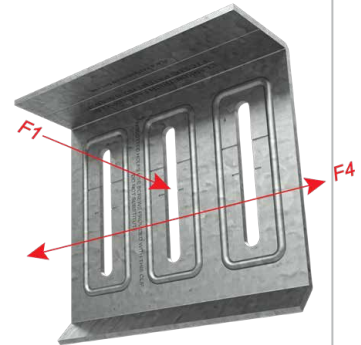


ATTACHMENT TO STRUCTURE: WELD TO 3/16" STEEL

Clip Designation	Framing Member Details		Mechanically Anchored to Structure	Load Capacities (lbs) / Clip										
				In-Plane (F1)			Shear (F4) - Center				Shear (F4) - Offset			
	Thickness mils (ga)	Yield Strength (ksi)		Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load
FTC3	33 (20)	33	(2) 3" Welds - along each edge of the short leg (each weld equally distanced from center of clip)	160	80	130	645	905	405	610	645	905	405	610
	43 (18)	33		220	115	180	720	1230	605	905	720	1230	605	905
	54 (16)	50		270	140	225	740	1560	800	1285	740	1560	800	1285
	68 (14)	50		290	150	235	740	1565	805	1285	740	1565	805	1285
	97 (12)	50		325	165	265	740	1695	870	1395	740	1695	870	1395
FTC5	33 (20)	33	(2) 4" Welds - along each edge of the short leg (each weld equally distanced from center of clip)	180	90	150	1245	1245	610	910	1245	1245	610	910
	43 (18)	33		240	125	200	1735	1820	905	1360	1735	1820	905	1360
	54 (16)	50		350	180	290	1735	2700	1390	2220	1735	2700	1390	2220
	68 (14)	50		390	200	320	1735	2745	1410	2260	1735	2745	1410	2260
	97 (12)	50		420	215	345	1735	3235	1660	2660	1735	3235	1660	2660
FTC8	33 (20)	33	(2) 5" Welds - along each edge of the short leg (each weld equally distanced from center of clip)	220	115	180	1640	1740	810	1215	1640	1740	810	1215
	43 (18)	33		300	155	245	2415	2415	1205	1810	2415	2415	1205	1810
	54 (16)	50		470	240	385	3495	3510	1805	2885	3495	3510	1805	2885
	68 (14)	50		575	295	475	4340	4475	2300	3675	4340	4475	2300	3675
	97 (12)	50		700	360	575	4635	6250	3210	5135	4635	5480	2740	4110
FTC10	43 (18)	33		405	210	330	2865	2865	1205	1810	2865	2865	1205	1810
	54 (16)	50		525	270	430	4435	4435	2280	3645	4435	4435	2280	3645
	68 (14)	50		675	345	555	5255	5255	2700	4320	5255	5255	2700	4110
	97 (12)	50		920	470	755	5985	7610	2825	4520	5480	5480	2740	4110
FTC12	54 (16)	50		595	305	490	4455	4455	2285	3660	4455	4455	2285	3660
	68 (14)	50		785	400	645	5320	5320	2735	4375	5320	5320	2735	4110
	97 (12)	50		1090	560	895	7110	7610	3070	4915	5480	5480	2740	4110

Notes:

- Listed capacities are in accordance with provisions of AISI S100-16 (R2020)/S2-20 and ICC-ES AC261.
- Tabulated load capacities are based on the following considerations:
 - Framing Connection: ClarkDietrich Proprietary Deflection Screws (0.25" dia).
 - Connection to Structure: weld along each edge of the structural connection leg (equally spaced from center of the clip) to 3/16" thick ASTM A36 Steel. Refer to table for length of weld.
 - Listed capacities have not been increased for wind, seismic, or other factors.
 - E70XX (min) electrode weld.
- ASD and LRFD loads are based on nominal capacities only. Nominal capacities are listed for use in blast/seismic designs and they do not assume a safety factor or resistance factor.
- ClarkDietrich Proprietary Deflection Screws (0.25" dia) used to attach clips to framing members through the provided slotted holes. Listed capacities were based on framing screws installed at the center and off-center of the slots.
- The safety factor for ASD loads and resistance factor for LRFD loads are in accordance with Chapter K of AISI-S100.
- The ClarkDietrich Proprietary Deflection screws (0.25" dia) provide nominal shear capacity of 2400lbs and a nominal tension capacity of 4060lbs.
- It is the responsibility of the design professional to detail the project drawings for proper Fast Top Clip installations.

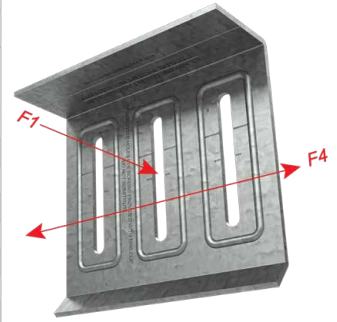


Fast Top™ Clip

Head-of-wall connection

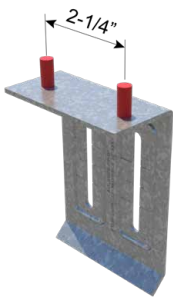
ATTACHMENT TO STRUCTURE: #12 SCREWS TO 3/16" STEEL

Clip Designation	Framing Member Details		Mechanically Anchored to Structure	Load Capacities (lbs) / Clip											
	Thickness mils (ga)	Yield Strength (ksi)		In-Plane (F1)			Shear (F4) - Center				Shear (F4) - Offset				
				Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	
FTC3	33 (20)	33	2	160	80	130	645	905	405	610	645	905	405	610	
			3	160	80	130	645	905	405	610	645	905	405	610	
	43 (18)	33	2	220	115	180	720	1230	605	905	720	1230	605	905	
			3	220	115	180	720	1230	605	905	720	1230	605	905	
	54 (16)	50	2	270	140	225	740	1560	690	1040	740	1385	460	690	
			3	270	140	225	740	1560	800	1285	740	1560	740	1115	
	68 (14)	50	2	290	150	235	740	1565	690	1040	740	1385	460	690	
			3	290	150	235	740	1565	805	1285	740	1565	740	1115	
	97 (12)	50	2	325	165	265	740	1695	690	1040	740	1385	460	690	
			3	325	165	265	740	1695	870	1395	740	1695	740	1115	
FTC5	33 (20)	33	2	180	90	150	1245	1245	610	910	1245	1245	540	810	
			3	180	90	150	1245	1245	610	910	1245	1245	610	910	
			4	180	90	150	1245	1245	610	910	1245	1245	610	910	
	43 (18)	33	2	240	125	200	1735	1820	810	1215	1620	1620	540	810	
			3	240	125	200	1735	1820	905	1360	1735	1820	905	1360	
			4	240	125	200	1735	1820	905	1360	1735	1820	905	1360	
	54 (16)	50	2	350	180	290	1735	2425	810	1215	1620	1620	540	810	
			3	350	180	290	1735	2700	1300	1950	1735	2550	905	1360	
			4	350	180	290	1735	2700	1390	2220	1735	2700	1280	1960	
	68 (14)	50	2	390	200	320	1735	2425	810	1215	1620	1620	540	810	
			3	390	200	320	1735	2745	1300	1950	1735	2550	905	1360	
			4	390	200	320	1735	2745	1410	2260	1735	2745	1280	1960	
	97 (12)	50	2	420	215	345	1735	2425	810	1215	1620	1620	540	810	
			3	420	215	345	1735	3235	1300	1950	1735	2550	905	1360	
			4	420	215	345	1735	3235	1590	2380	1735	3010	1280	1960	
	FTC8	33 (20)	33	3	220	115	180	1640	1740	810	1215	1640	1740	810	1215
4				220	115	180	1640	1740	810	1215	1640	1740	810	1215	
5				220	115	180	1640	1740	810	1215	1640	1740	810	1215	
43 (18)		33	3	300	155	245	2415	2415	1205	1810	2415	2415	1090	1635	
			4	300	155	245	2415	2415	1205	1810	2415	2415	1205	1810	
			5	300	155	245	2415	2415	1205	1810	2415	2415	1205	1810	
54 (16)		50	3	470	240	385	3495	3510	1610	2410	3270	3270	1090	1635	
			4	470	240	385	3495	3510	1805	2885	3495	3510	1735	2605	
			5	470	240	385	3495	3510	1805	2885	3495	3510	1805	2885	
68 (14)		50	3	575	295	475	4340	4475	1610	2410	3270	3270	1090	1635	
			4	575	295	475	4340	4475	2015	3025	4290	4290	1735	2605	
			5	575	295	475	4340	4475	2300	3570	4340	4475	2060	3090	
97 (12)	50	3	700	360	575	4635	4825	1610	2410	3270	3270	1090	1635		
		4	700	360	575	4635	5545	2015	3025	4290	4290	1735	2605		
		5	700	360	575	4635	6190	2380	3570	4635	4885	2060	3090		
FTC10	43 (18)	33	3	405	210	330	2865	2865	1205	1810	2865	2865	1205	1810	
			4	405	210	330	2865	2865	1205	1810	2865	2865	1205	1810	
			5	405	210	330	2865	2865	1205	1810	2865	2865	1205	1810	
	54 (16)	50	3	525	270	430	4435	4435	1720	2580	4110	4110	1370	2055	
			4	525	270	430	4435	4435	2165	3250	4435	4435	1905	2860	
			5	525	270	430	4435	4435	2280	3645	4435	4435	2265	3400	
	68 (14)	50	3	675	345	555	5165	5165	1720	2580	4110	4110	1370	2055	
			4	675	345	555	5255	5255	2165	3250	5030	5030	1905	2860	
			5	675	345	555	5255	5255	2560	3840	5255	5255	2265	3400	
	97 (12)	50	3	920	470	755	5165	5165	1720	2580	4110	4110	1370	2055	
4			920	470	755	5985	6345	2165	3250	5030	5030	1905	2860		
5			920	470	755	5985	7030	2560	3840	5690	5690	2265	3400		
FTC12	54 (16)	50	3	595	305	490	4455	4455	1810	2715	4455	4455	1620	2430	
			4	595	305	490	4455	4455	2285	3425	4455	4455	2045	3070	
			5	595	305	490	4455	4455	2285	3660	4455	4455	2285	3645	
	68 (14)	50	3	785	400	645	5320	5320	1810	2715	4860	4860	1620	2430	
			4	785	400	645	5320	5320	2285	3425	5320	5320	2045	3070	
			5	785	400	645	5320	5320	2665	4000	5320	5320	2430	3645	
	97 (12)	50	3	1090	555	850	5435	5435	1810	2715	4860	4860	1620	2430	
			4	1090	560	895	6855	6855	2285	3425	5705	5705	2045	3070	
			5	1090	560	895	7110	7745	2665	4000	6405	6405	2430	3645	

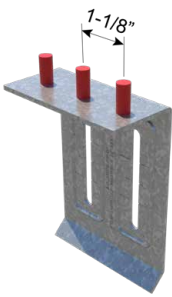


Notes:

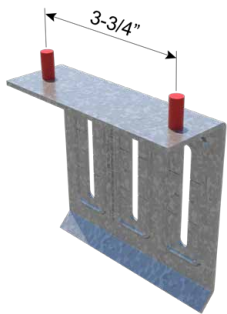
- Listed capacities are in accordance with provisions of AISI S100-16 (R2020)/S2-20 and ICC-ES AC261.
- Tabulated load capacities are based on the following considerations:
 - Framing Connection: ClarkDietrich Proprietary Deflection Screws (0.25" dia).
 - Connection to Structure: #12 HWH Fasteners connected to 3/16" thick ASTM A36 Steel (see illustrations for base fastener locations).
 - Other fasteners may be used to achieve full clip capacity but must be designed separately.
 - Listed capacities have not been increased for wind, seismic, or other factors.
- ASD and LRFD loads are based on nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service and strength.
- ClarkDietrich Deflection Screws (0.25" dia) used to attach clips to framing members through the provided slotted holes. Listed capacities were based on framing screws installed at the center and off-center of the slots.
- The safety factor for ASD loads and resistance factor for LRFD loads are in accordance with Chapter K of AISI-S100.
- The #12 HWH Fasteners shall have a minimum nominal shear capacity of 2000lbs and minimum nominal tension capacity of 2778lbs according to ESR-1976 and Manufacturer Limits.
- The ClarkDietrich Proprietary Deflection screws (0.25" dia) provide nominal shear capacity of 2400lbs and a nominal tension capacity of 4060lbs.
- Nominal capacities are listed for use in blast/seismic designs and they do not assume a safety factor or resistance factor.
- It is the responsibility of the design professional to detail the project drawings for proper Fast Top Clip installation.



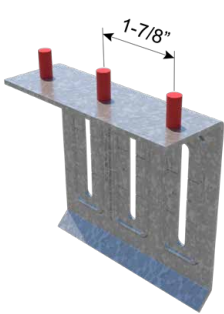
FTC3
(2) Anchor Condition



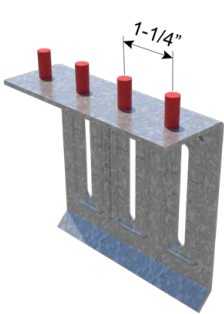
FTC3
(3) Anchor Condition



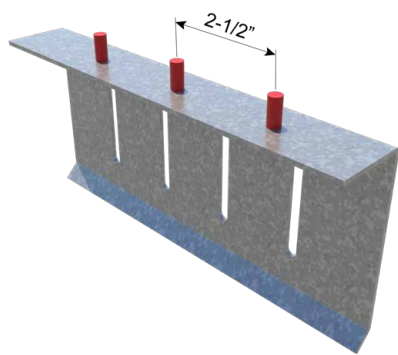
FTC5
(2) Anchor Condition



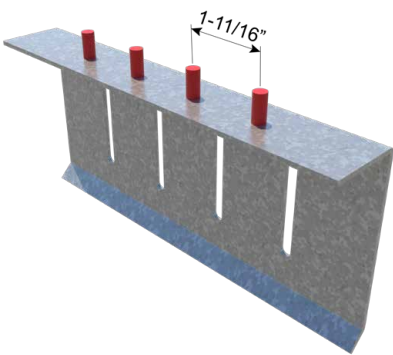
FTC5
(3) Anchor Condition



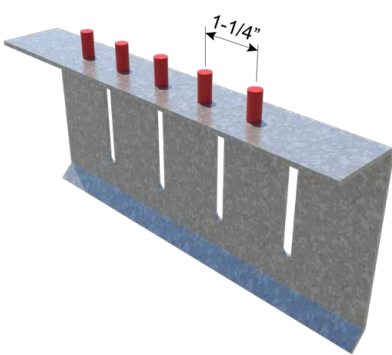
FTC5
(4) Anchor Condition



FTC8, FTC10, FTC12
(3) Anchor Condition



FTC8, FTC10, FTC12
(4) Anchor Condition



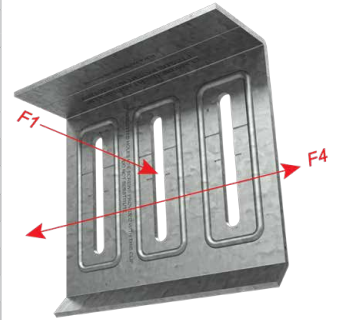
FTC8, FTC10, FTC12
(5) Anchor Condition

Fast Top™ Clip

Head-of-wall connection

ATTACHMENT TO STRUCTURE: 0.157" HILTI X-U PINS TO 3/16" STEEL (FS = 5)

Clip Designation	Framing Member Details		Mechanically Anchored to Structure	Load Capacities (lbs) / Clip											
	Thickness mils (ga)	Yield Strength (ksi)		In-Plane (F1) -Center (FS = 5)			Shear (F4) - Center (FS = 5)				Shear (F4) - Offset (FS = 5)				
				Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	
FTC3	33 (20)	33	2	160	80	130	645	1085	355	565	645	795	260	420	
			3	160	80	130	645	1215	405	610	645	1030	340	540	
	43 (18)	33	2	220	115	180	720	1085	355	565	720	795	260	420	
			3	220	115	180	720	1400	455	730	720	1030	340	540	
	54 (16)	50	2	270	140	225	740	1085	355	565	740	795	260	420	
			3	270	140	225	740	1400	455	730	740	1030	340	540	
	68 (14)	50	2	290	150	235	740	1085	355	565	740	795	260	420	
			3	290	150	235	740	1400	455	730	740	1030	340	540	
	97 (12)	50	2	325	165	265	740	1085	355	565	740	795	260	420	
			3	325	165	265	740	1400	455	730	740	1030	340	540	
FTC5	33 (20)	33	2	180	90	150	1355	1510	490	785	1140	1140	370	595	
			3	180	90	150	1355	1825	610	910	1355	1480	485	775	
			4	180	90	150	1355	1825	610	910	1355	1825	600	910	
	43 (18)	33	2	240	125	200	1510	1510	490	785	1140	1140	370	595	
			3	240	125	200	1735	1980	645	1030	1480	1480	485	775	
			4	240	125	200	1735	2440	795	1270	1735	1835	600	960	
	54 (16)	50	2	350	180	290	1510	1510	490	785	1140	1140	370	595	
			3	350	180	290	1735	1980	645	1030	1480	1480	485	775	
			4	350	180	290	1735	2440	795	1270	1735	1835	600	960	
	68 (14)	50	2	390	200	320	1510	1510	490	785	1140	1140	370	595	
			3	390	200	320	1735	1980	645	1030	1480	1480	485	775	
			4	390	200	320	1735	2440	795	1270	1735	1835	600	960	
	97 (12)	50	2	420	215	345	1510	1510	490	785	1140	1140	370	595	
			3	420	215	345	1735	1980	645	1030	1480	1480	485	775	
			4	420	215	345	1735	2440	795	1270	1735	1835	600	960	
	FTC8	33 (20)	33	3	220	115	180	1640	2435	810	1215	1640	2115	685	1100
				4	220	115	180	1640	2435	810	1215	1640	2435	810	1215
				5	220	115	180	1640	2435	810	1215	1640	2435	810	1215
43 (18)		33	3	300	155	245	2720	2720	875	1405	2115	2115	685	1100	
			4	300	155	245	2940	3420	1105	1765	2660	2660	865	1385	
			5	300	155	245	2940	3620	1205	1810	2940	3195	1040	1660	
54 (16)		50	3	470	240	385	2720	2720	875	1405	2115	2115	685	1100	
			4	470	240	385	3420	3420	1105	1765	2660	2660	865	1385	
			5	470	240	385	3495	4090	1320	2110	3195	3195	1040	1660	
68 (14)		50	3	575	295	475	2720	2720	875	1405	2115	2115	685	1100	
			4	575	295	475	3420	3420	1105	1765	2660	2660	865	1385	
			5	575	295	475	4090	4090	1320	2110	3195	3195	1040	1660	
97 (12)		50	3	700	360	575	2720	2720	875	1405	2115	2115	685	1100	
			4	700	360	575	3420	3420	1105	1765	2660	2660	865	1385	
			5	700	360	575	4090	4090	1320	2110	3195	3195	1040	1660	
FTC10	43 (18)	33	3	405	210	330	3080	3080	990	1585	2450	2450	795	1270	
			4	405	210	330	3475	3620	1205	1810	3110	3110	1005	1610	
			5	405	210	330	3475	3620	1205	1810	3475	3620	1205	1810	
	54 (16)	50	3	525	270	430	3080	3080	990	1585	2450	2450	795	1270	
			4	525	270	430	3905	3905	1255	2005	3110	3110	1005	1610	
			5	525	270	430	4680	4680	1500	2400	3745	3745	1210	1935	
	68 (14)	50	3	675	345	555	3080	3080	990	1585	2450	2450	795	1270	
			4	675	345	555	3905	3905	1255	2005	3110	3110	1005	1610	
			5	675	345	555	4680	4680	1500	2400	3745	3745	1210	1935	
	97 (12)	50	3	920	385	615	3080	3080	990	1585	2450	2450	795	1270	
			4	920	470	755	3905	3905	1255	2005	3110	3110	1005	1610	
			5	920	470	755	4680	4680	1500	2400	3745	3745	1210	1935	
FTC12	54 (16)	50	3	595	305	490	3400	3400	1090	1740	2760	2760	890	1425	
			4	595	305	490	4325	4325	1385	2215	3515	3515	1135	1815	
			5	595	305	490	5175	5175	1655	2645	4235	4235	1365	2180	
	68 (14)	50	3	785	385	615	3400	3400	1090	1740	2760	2760	890	1425	
			4	785	400	645	4325	4325	1385	2215	3515	3515	1135	1815	
			5	785	400	645	5175	5175	1655	2645	4235	4235	1365	2180	
	97 (12)	50	3	1090	385	615	3400	3400	1090	1740	2760	2760	890	1425	
			4	1090	475	760	4325	4325	1385	2215	3515	3515	1135	1815	
			5	1090	550	880	5175	5175	1655	2645	4235	4235	1365	2180	



Notes:

1 Listed capacities are in accordance with provisions of AISI S100-16 (R2020)/S2-20, ICC-ES AC261 and ESR 2269.

2 Tabulated load capacities are based on the following considerations:

a Framing Connection: ClarkDietrich Proprietary Deflection Screws (0.25" dia).

b Connection to Structure: 0.157" Hilti X-U Pins connected to 3/16" thick ASTM A36 Steel (see illustrations for base fastener locations).

c Other fasteners may be used to achieve full clip capacity but must be designed separately.

d Listed capacities have not been increased for wind, seismic, or other factors.

3 ASD and LRFD loads are based on nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service and strength.

4 ClarkDietrich Deflection Screws (0.25" dia) used to attach clips to framing members through the provided slotted holes. Listed capacities were based on framing screws installed at the center and off-center of the slots.

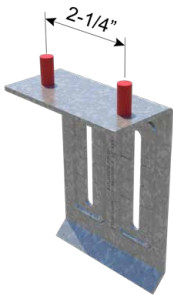
5 The safety factor for ASD loads and resistance factor for LRFD loads are in accordance with Chapter K of AISI-S100 and ESR2269.

6 The ClarkDietrich Proprietary Deflection screws (0.25" dia) provide nominal shear capacity of 2400lbs and a nominal tension capacity of 4060lbs.

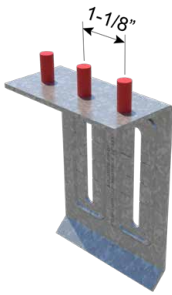
7 The Hilti X-U Pin shall have a minimum nominal shear capacity of 3939lbs and minimum nominal tension capacity of 2872lbs according to Hilti Fastening Technical Guide, Edition 2024.

8 Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.

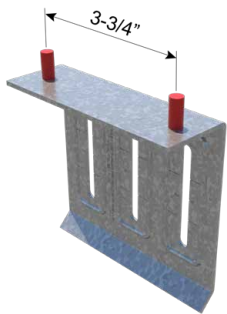
9 It is the responsibility of the design professional to detail the project drawings for proper Fast Top Clip installation.



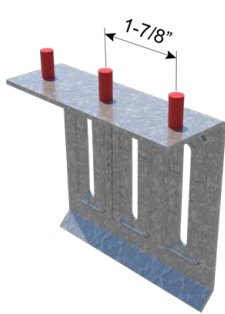
FTC3
(2) Anchor Condition



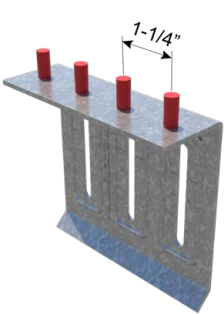
FTC3
(3) Anchor Condition



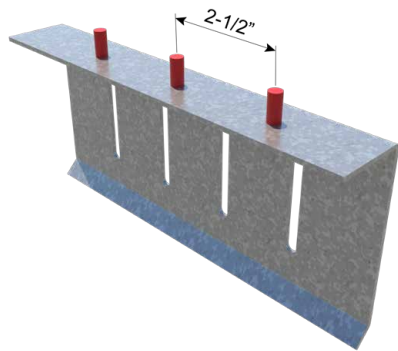
FTC5
(2) Anchor Condition



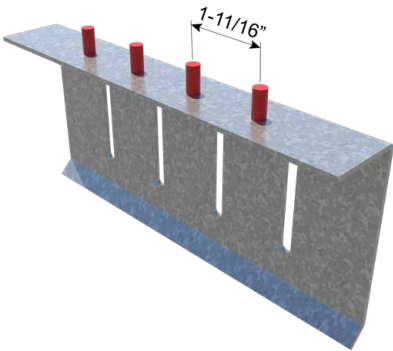
FTC5
(3) Anchor Condition



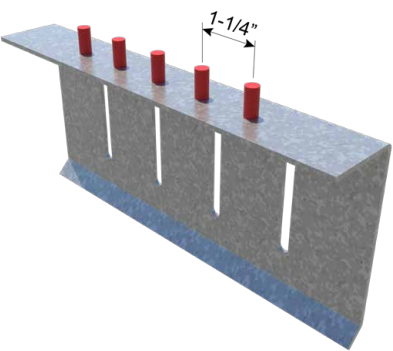
FTC5
(4) Anchor Condition



FTC8, FTC10, FTC12
(3) Anchor Condition



FTC8, FTC10, FTC12
(4) Anchor Condition



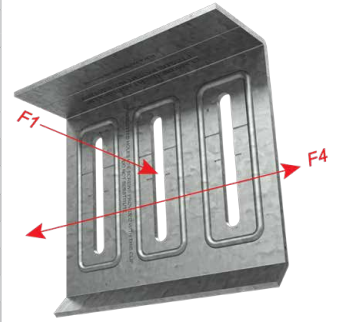
FTC8, FTC10, FTC12
(5) Anchor Condition

Fast Top™ Clip

Head-of-wall connection

ATTACHMENT TO STRUCTURE: 0.157" HILTI X-U PINS TO 3/16" STEEL (FS = 10)

Clip Designation	Framing Member Details		Mechanically Anchored to Structure	Load Capacities (lbs) / Clip											
	Thickness mils (ga)	Yield Strength (ksi)		In-Plane (F1) -Center (FS = 10)			Shear (F4) - Center (FS = 10)				Shear (F4) - Offset (FS = 10)				
				Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	
FTC3	33 (20)	33	2	160	80	130	645	1085	215	345	645	795	165	260	
			3	160	80	130	645	1215	280	445	645	1030	210	335	
	43 (18)	33	2	220	115	180	720	1085	215	345	720	795	165	260	
			3	220	115	180	720	1400	280	445	720	1030	210	335	
	54 (16)	50	2	270	140	225	740	1085	215	345	740	795	165	260	
			3	270	140	225	740	1400	280	445	740	1030	210	335	
	68 (14)	50	2	290	140	225	740	1085	215	345	740	795	165	260	
			3	290	150	235	740	1400	280	445	740	1030	210	335	
	97 (12)	50	2	325	140	225	740	1085	215	345	740	795	165	260	
			3	325	165	265	740	1400	280	445	740	1030	210	335	
FTC5	33 (20)	33	2	180	90	150	1355	1510	290	465	1140	1140	230	365	
			3	180	90	150	1355	1825	385	615	1355	1480	300	475	
			4	180	90	150	1355	1825	475	760	1355	1825	370	590	
	43 (18)	33	2	240	125	200	1510	1510	290	465	1140	1140	230	365	
			3	240	125	200	1735	1980	385	615	1480	1480	300	475	
			4	240	125	200	1735	2440	475	760	1735	1835	370	590	
	54 (16)	50	2	350	140	225	1510	1510	290	465	1140	1140	230	365	
			3	350	180	290	1735	1980	385	615	1480	1480	300	475	
			4	350	180	290	1735	2440	475	760	1735	1835	370	590	
	68 (14)	50	2	390	140	225	1510	1510	290	465	1140	1140	230	365	
			3	390	190	305	1735	1980	385	615	1480	1480	300	475	
			4	390	200	320	1735	2440	475	760	1735	1835	370	590	
	97 (12)	50	2	420	140	225	1510	1510	290	465	1140	1140	230	365	
			3	420	190	305	1735	1980	385	615	1480	1480	300	475	
			4	420	215	345	1735	2440	475	760	1735	1835	370	590	
	FTC8	33 (20)	33	3	220	115	180	1640	2435	510	815	1640	2115	410	660
4				220	115	180	1640	2435	640	1025	1640	2435	520	830	
5				220	115	180	1640	2435	765	1215	1640	2435	620	990	
43 (18)		33	3	300	155	245	2720	2720	510	815	2115	2115	410	660	
			4	300	155	245	2940	3420	640	1025	2660	2660	520	830	
			5	300	155	245	2940	3620	765	1215	2940	3195	620	990	
54 (16)		50	3	470	190	305	2720	2720	510	815	2115	2115	410	660	
			4	470	235	380	3420	3420	640	1025	2660	2660	520	830	
			5	470	240	385	3495	4090	765	1215	3195	3195	620	990	
68 (14)		50	3	575	190	305	2720	2720	510	815	2115	2115	410	660	
			4	575	235	380	3420	3420	640	1025	2660	2660	520	830	
			5	575	275	440	4090	4090	765	1215	3195	3195	620	990	
97 (12)	50	3	700	190	305	2720	2720	510	815	2115	2115	410	660		
		4	700	235	380	3420	3420	640	1025	2660	2660	520	830		
		5	700	275	440	4090	4090	765	1215	3195	3195	620	990		
FTC10	43 (18)	33	3	405	190	305	3080	3080	565	905	2450	2450	465	750	
			4	405	210	330	3475	3620	715	1145	3110	3110	590	945	
			5	405	210	330	3475	3620	855	1365	3475	3620	710	1135	
	54 (16)	50	3	525	190	305	3080	3080	565	905	2450	2450	465	750	
			4	525	235	380	3905	3905	715	1145	3110	3110	590	945	
			5	525	270	430	4680	4680	855	1365	3745	3745	710	1135	
	68 (14)	50	3	675	190	305	3080	3080	565	905	2450	2450	465	750	
			4	675	235	380	3905	3905	715	1145	3110	3110	590	945	
			5	675	275	440	4680	4680	855	1365	3745	3745	710	1135	
	97 (12)	50	3	920	190	305	3080	3080	565	905	2450	2450	465	750	
4			920	235	380	3905	3905	715	1145	3110	3110	590	945		
5			920	275	440	4680	4680	855	1365	3745	3745	710	1135		
FTC12	54 (16)	50	3	595	190	305	3400	3400	615	980	2760	2760	515	825	
			4	595	235	380	4325	4325	780	1245	3515	3515	655	1050	
			5	595	275	440	5175	5175	925	1485	4235	4235	785	1260	
	68 (14)	50	3	785	190	305	3400	3400	615	980	2760	2760	515	825	
			4	785	235	380	4325	4325	780	1245	3515	3515	655	1050	
			5	785	275	440	5175	5175	925	1485	4235	4235	785	1260	
	97 (12)	50	3	1090	190	305	3400	3400	615	980	2760	2760	515	825	
			4	1090	235	380	4325	4325	780	1245	3515	3515	655	1050	
			5	1090	275	440	5175	5175	925	1485	4235	4235	785	1260	



Notes:

1 Listed capacities are in accordance with provisions of AISI S100-16 (R2020)/S2-20, ICC-ES AC261 and ESR 2269.

2 Tabulated load capacities are based on the following considerations:

a Framing Connection: ClarkDietrich Deflection Screws (0.25" dia)

b Connection to Structure: 0.157" Hilti X-U Pins connected to 3/16" thick ASTM A36 Steel (see illustrations for base fastener locations).

c Other fasteners may be used to achieve full clip capacity but must be designed separately.

d Listed capacities have not been increased for wind, seismic, or other factors.

3 ASD and LRFD loads are based on nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service and strength.

4 ClarkDietrich Deflection Screws (0.25" dia) used to attach clips to framing members through the provided slotted holes. Listed capacities were based on framing screws installed at the center and off-center of the slots.

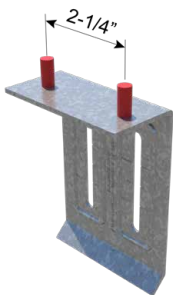
5 The safety factor for ASD loads and resistance factor for LRFD loads are in accordance with Chapter K of AISI-S100 and ESR2269.

6 The ClarkDietrich Deflection screws (0.25" dia) provide nominal shear capacity of 2400lbs and a nominal tension capacity of 4060lbs.

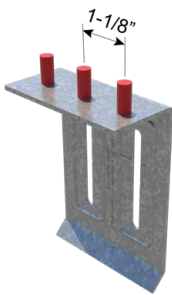
7 The Hilti X-U Pin shall have a minimum nominal shear capacity of 3939lbs and minimum nominal tension capacity of 2872lbs according to Hilti Fastening Technical Guide, Edition 2024.

8 Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.

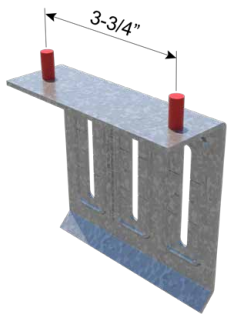
9 It is the responsibility of the design professional to detail the project drawings for proper Fast Top Clip installation.



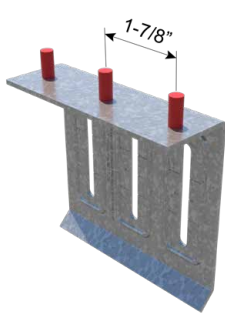
FTC3
(2) Anchor Condition



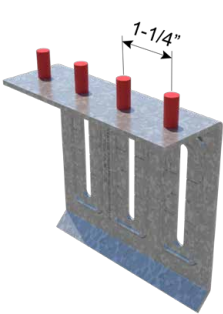
FTC3
(3) Anchor Condition



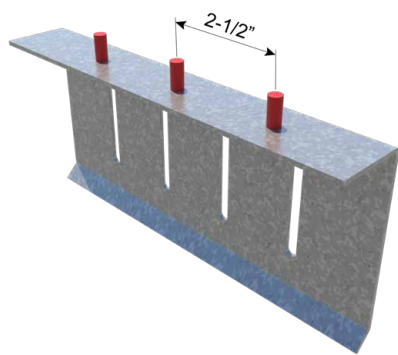
FTC5
(2) Anchor Condition



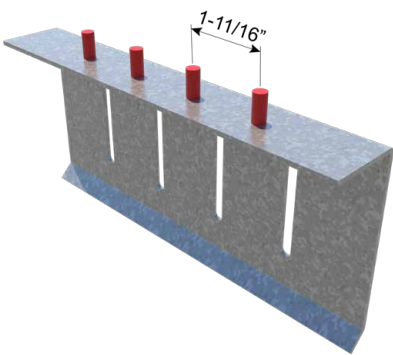
FTC5
(3) Anchor Condition



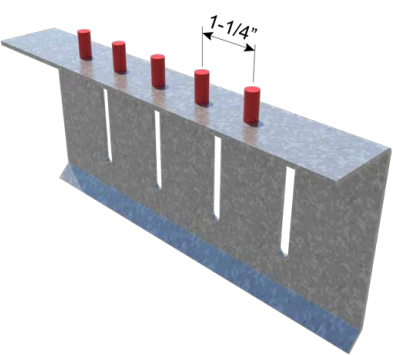
FTC5
(4) Anchor Condition



FTC8, FTC10, FTC12
(3) Anchor Condition



FTC8, FTC10, FTC12
(4) Anchor Condition



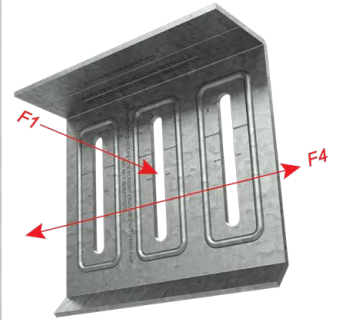
FTC8, FTC10, FTC12
(5) Anchor Condition

Fast Top™ Clip

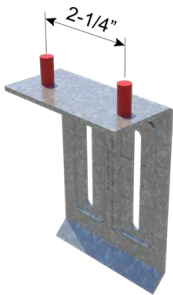
Head-of-wall connection

ATTACHMENT TO STRUCTURE: 1/4" HILTI KH-EZ IN 3000PSI CRACKED CONCRETE

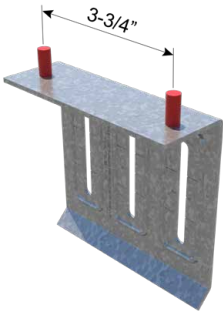
Clip Designation	Framing Member Details		Mechanically Anchored to Structure	Load Capacities (lbs) / Clip											
	Thickness mils (ga)	Yield Strength (ksi)		In-Plane (F1) -Center			Shear (F4) - Center				Shear (F4) - Offset				
				Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	1/8" Service Load	Nominal Load	ASD Load	LRFD Load	
FTC3	33 (20)	33	2	160	80	130	645	930	390	610	645	755	315	530	
	43 (18)	33	2	220	115	180	720	930	390	650	720	755	315	530	
	54 (16)	50	2	270	140	225	740	930	390	650	740	755	315	530	
	68 (14)	50	2	290	150	235	740	930	390	650	740	755	315	530	
	97 (12)	50	2	325	165	265	740	930	390	650	740	755	315	530	
FTC5	33 (20)	33	2	180	90	150	930	930	390	650	755	755	315	530	
			3	180	90	150	1210	1210	510	850	1135	1135	475	795	
	43 (18)	33	2	240	125	200	930	930	390	650	755	755	315	530	
			3	240	125	200	1210	1210	510	850	1135	1135	475	795	
	54 (16)	50	2	350	180	290	930	930	390	650	755	755	315	530	
			3	350	180	290	1210	1210	510	850	1135	1135	475	795	
	68 (14)	50	2	390	200	320	930	930	390	650	755	755	315	530	
			3	390	200	320	1210	1210	510	850	1135	1135	475	795	
	97 (12)	50	2	420	215	345	930	930	390	650	755	755	315	530	
			3	420	215	345	1210	1210	510	850	1135	1135	475	795	
	FTC8	33 (20)	33	2	220	115	180	930	930	390	650	755	755	315	530
				3	220	115	180	1210	1210	510	850	1135	1135	475	795
43 (18)		33	2	300	155	245	930	930	390	650	755	755	315	530	
			3	300	155	245	1210	1210	510	850	1135	1135	475	795	
54 (16)		50	2	470	240	385	930	930	390	650	755	755	315	530	
			3	470	240	385	1210	1210	510	850	1135	1135	475	795	
68 (14)		50	2	575	285	475	930	930	390	650	755	755	315	530	
			3	575	295	475	1210	1210	510	850	1135	1135	475	795	
97 (12)		50	2	680	285	475	930	930	390	650	755	755	315	530	
			3	700	360	575	1210	1210	510	850	1135	1135	475	795	
FTC10	43 (18)	33	2	405	210	330	930	930	390	650	755	755	315	530	
			3	405	210	330	1210	1210	510	850	1135	1135	475	795	
	54 (16)	50	2	525	270	430	930	930	390	650	755	755	315	530	
			3	525	270	430	1210	1210	510	850	1135	1135	475	795	
	68 (14)	50	2	675	285	475	930	930	390	650	755	755	315	530	
			3	675	345	555	1210	1210	510	850	1135	1135	475	795	
	97 (12)	50	2	680	285	475	930	930	390	650	755	755	315	530	
			3	920	420	700	1210	1210	510	850	1135	1135	475	795	
FTC12	54 (16)	50	2	595	285	475	930	930	390	650	755	755	315	530	
			3	595	305	490	1210	1210	510	850	1135	1135	475	795	
	68 (14)	50	2	680	285	475	930	930	390	650	755	755	315	530	
			3	785	400	645	1210	1210	510	850	1135	1135	475	795	
	97 (12)	50	2	680	285	475	930	930	390	650	755	755	315	530	
			3	1000	420	700	1210	1210	510	850	1135	1135	475	795	

**Notes:**

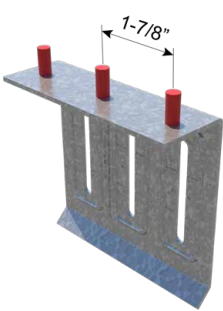
- Listed capacities are in accordance with provisions of AISI S100-16 (R2020)/S2-20, ICC-ES AC261 and ACI 318-19.
- Tabulated load capacities are based on the following considerations:
 - Framing Connection: ClarkDietrich Deflection Screws (0.25" dia).
 - Connection to Structure: 1/4" Hilti KH-EZ Anchors to 3000psi Cracked Concrete (see illustrations for base fastener locations).
 - Minimum concrete thickness shall be 4-1/8", edge distance shall be 2.75".
 - Embedment to Concrete: Nominal embedment depth = 2-1/2" for 1/4" KH-EZ anchors.
 - Other fasteners may be used to achieve full clip capacity but must be designed separately.
 - Listed capacities have not been increased for wind, seismic, or other factors.
- ASD and LRFD loads are based on nominal capacities only. 1/8" service loads are listed in a separate column. Designer shall use governing loads based on 1/8" service loads and ASD/LRFD loads.
- ClarkDietrich Proprietary Deflection Screws (0.25" dia) used to attach clips to framing members through the provided slotted holes. Listed capacities were based on framing screws installed at the center and off-center of the slots.
- The safety factor for ASD loads and resistance factor for LRFD loads are in accordance with Chapter K of AISI-S100 and ESR3027.
- The ClarkDietrich Proprietary Deflection screws (0.25" dia) provide nominal shear capacity of 2400lbs and a nominal tension capacity of 4060lbs.
- The Hilti 1/4" Φ KH-EZ Anchors shall have a LRFD shear capacity of 1735lbs and LRFD tension capacity of 830lbs according to ESR 3027 and ACI 318-19.
- Nominal capacities are listed for use in blast/seismic designs and they do not assume a safety factor or resistance factor.
- Hilti is a registered trademark of Hilti Aktiengesellschaft Corporation.
- It is the responsibility of the design professional to detail the project drawings for proper Fast Top Clip installation.



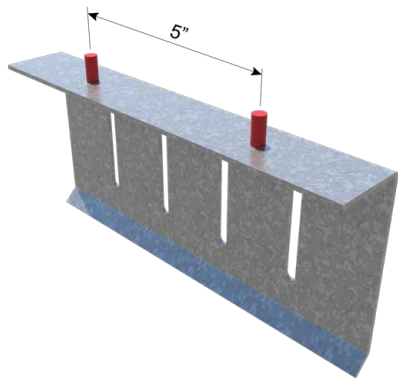
FTC3
(2) Anchor Condition



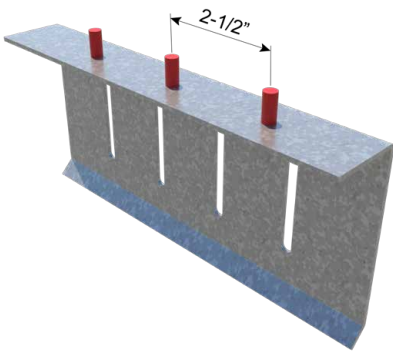
FTC5
(2) Anchor Condition



FTC5
(3) Anchor Condition



FTC8, FTC10, FTC12
(2) Anchor Condition



FTC8, FTC10, FTC12
(3) Anchor Condition

Safety Data Sheets

The manufacturers' safety data sheets for the materials on this order, each once, with the products it covers.

#	Document	Covers	Page
1	Safety Data Sheet SDS - Paper Faced Gypsum Panels · 7 pages · CertainTeed https://certainteed.widen.net/content/kf7zxacvvt/pdf/paper-faced-gypsum-panels-us-e-04-03-2025.pdf?u=nwk4fd	Regular Drywall	32
2	SDS For ASTM A1003 Steel Framing Products · 9 pages · ClarkDietrich https://www.clarkdietrich.com/sites/default/files/media/documents/CD_SDS-SteelReport_A1003.pdf	EasyClip™ U-Series™ Clip Angles; ProSTUD® / ProTRAK® with Smart Edge™ Technology; Fast Top™ Clip (FTC)	39

1. Identification

Product identifier	CertainTeed Paper-Faced Gypsum Panels
Other means of identification	
Product identifier	1/4" Flex, 1/4" CertainTeed® Regular, 3/8" CertainTeed® Regular, 1/2" Easi-Lite®, 1/2" Easi-Lite® Interior Ceiling, 1/2" Easi-Lite® Veneer Plaster Base, 5/8" Easi-Lite® 30, 1/2" CertainTeed® Soffit, 1/2" CertainTeed Patch and Repair Drywall Panels, Easi-Lite® CarbonLow™
Synonyms	Gypsum Panels
Recommended use	Gypsum panels for interior wall, ceiling, and exterior soffit applications.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name	CertainTeed Gypsum
Address	20 Moores Road Malvern, PA 19355 United States of America
Telephone	1-800-233-8990
Website	www.certainteed.com
Emergency telephone	3E Global Incident Response Hotline +1 760 476 3962 +1 866 519 4752 (Toll Free) Access Code: 336250

2. Hazard(s) identification

Physical hazards	Not classified.
Health hazards	Not classified.
OSHA defined hazards	Not classified.
Label elements	
Hazard symbol	None.
Signal word	None.
Hazard statement	The mixture does not meet the criteria for classification.
Precautionary statement	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures		
Chemical name	CAS number	%
Calcium sulfate dihydrate	10101-41-4	80 - 100
Cellulose	9004-34-6	5 - 10
Portland cement	65997-15-1	0.1 - 1

Composition comments

The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight. Components not listed are either non-hazardous or are below reportable limits.

Raw material in this product contains respirable crystalline silica as an impurity. Independent testing of this product suggests that under most conditions of use, this product will not result in exposure to respirable crystalline silica that exceeds OSHA's Action Level, (AL) or Permissible Exposure Limit (PEL). However, actual concentrations of respirable silica may vary based on the conditions of use. Specific exposures can only be determined by workplace industrial hygiene testing.

<https://www.certainteed.com/drywall/osha-crystalline-silica-techupdate-certainteed-gypsum-board-products>

4. First-aid measures

Inhalation

In case of inhalation of dust: Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Dusts may irritate the respiratory tract, skin and eyes.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical

During fire, hazardous combustion products are released that may include: Carbon oxides. Sulfur oxides. Fumes of metal oxides.

Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards

No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk. Pick up and arrange disposal without creating dust. Collect dust using a vacuum cleaner equipped with HEPA filter. Recover and recycle, if practical. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store in a dry place. Protect from weather and prevent exposure to sustained moisture. Protect from direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Cellulose (CAS 9004-34-6)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Portland cement (CAS 65997-15-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 Permissible Exposure Limits (PEL) for Mineral Dusts (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium sulfate dihydrate (CAS 10101-41-4)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Cellulose (CAS 9004-34-6)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Portland cement (CAS 65997-15-1)	TWA	50 mppcf	

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Calcium sulfate dihydrate (CAS 10101-41-4)	TWA	10 mg/m3	Inhalable fraction.
Cellulose (CAS 9004-34-6)	TWA	10 mg/m3	
Portland cement (CAS 65997-15-1)	TWA	1 mg/m3	Respirable fraction.

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Portland cement (CAS 65997-15-1)	IDLH	5000 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Cellulose (CAS 9004-34-6)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Portland cement (CAS 65997-15-1)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

Individual protection measures, such as personal protective equipment

Eye/face protection Unvented, tight fitting goggles should be worn in dusty areas.

Skin protection

Hand protection

Wear suitable protective gloves to prevent cuts and abrasions. Suitable gloves can be recommended by the glove supplier.

Other

Normal work clothing (long sleeved shirts and long pants) is recommended.

Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Follow OSHA respirator regulations (29CFR 1910.134) and use NIOSH/MSHA approved respirators. Appropriate respirator selection should be made by a qualified professional.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Color	White.
Odor	Odorless.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not flammable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble in water.
Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	Not available.
Decomposition temperature	2642 °F (1450 °C)
Viscosity	Not applicable.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Exposure to sunlight. Water, moisture. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Decomposition is not expected under normal conditions of use and storage. In the event of fire: See Section 5.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
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Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Dusts may irritate the respiratory tract, skin and eyes.
Information on toxicological effects	
Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	May cause irritation through mechanical abrasion.
Serious eye damage/eye irritation	Airborne dust may cause mechanical eye irritation.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available on bioaccumulation.
Mobility in soil	The product is insoluble in water. Not expected to be mobile in soil.
Other adverse effects	No data available for this product.

13. Disposal considerations

Disposal instructions	Recover and reclaim or recycle, if practical. Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT	Not regulated as dangerous goods.
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IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

US federal regulations This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA)

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations**US. Massachusetts RTK - Substance List**

Calcium sulfate dihydrate (CAS 10101-41-4)
Cellulose (CAS 9004-34-6)

US. New Jersey Worker and Community Right-to-Know Act

Cellulose (CAS 9004-34-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Cellulose (CAS 9004-34-6)

US. Rhode Island RTK

Calcium sulfate dihydrate (CAS 10101-41-4)
Cellulose (CAS 9004-34-6)

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	08-September-2023
Revision date	03-April-2025
Revision notes	Section 1: Identification- Product Identifier
Version #	02
Further information	E - Safety Glasses, Gloves, Dust Respirator
HMIS® ratings	Health: 0 Flammability: 0 Physical hazard: 0 Personal protection: E

Disclaimer	CertainTeed Gypsum cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.
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Section 1 – Identification

1(a) Product Identifier used on Label: Prime Coated Steel Sheet (Mill Certified) per ASTM A1003

NOTE: Due to multiple steel sources, PRIME (Mill Certified) steel must be requested by customer when placing order Cold-Formed Steel framing products to ensure steel with the composition information listed in Section 3 is received.

1(b) Use/Description: Coated Steel Sheet for thin gauge framing products.

1(d) Products: Cold-Formed Steel Framing components and accessories for drywall, curtain wall and load bearing systems. Also includes metal lath and plaster accessories.

1(d) Synonyms: Hot Band, Cold Rolled, P&O, Galvanized.

1(e) Company Identification and Emergency Contact Information: ClarkDietrich

Corporate Office:

9050 Centre Point Drive, Suite 400
West Chester, OH 45069

Phone: 513-870-1100

Fax: 513-870-1300

<http://www.clarkdietrich.com/>

Manufacturing Locations:

Baltimore, MD
Dallas, TX
Rochelle, IL

Pasadena, TX
Vienna, OH
Sacramento, CA

Bristol, CT
McDonough, GA
Warren, OH

Dade City, FL
Riverside, CA
Oklahoma City, OK

Section 2 – Hazard(s) Identification

2(a) Classification of the chemical: Coated Steel Sheet is considered an article under Reach regulation (REACH REGULATION (EC) No 1907/2006) and is not subject to classification under CLP regulation (REGULATION (EC) No 1272/2008). However, Coated Steel Sheet is not exempt as an article under OSHA's Hazard Communication Standard (29 CFR 1910.1200) due to its downstream use, thus this product is considered a mixture and a hazardous material. Therefore, the categories of Health Hazards as defined in "GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS), Third revised edition ST/SG/AC.10/30/Rev.3" United Nations, New York and Geneva, 2009 have been evaluated. Refer to Section 3, 8 and 11 for additional information.

2(b) Signal word, hazard statement(s), symbols and precautionary statement(s):

Hazard Symbol	Hazard Classification	Signal Word	Hazard Statement(s)
	Carcinogenicity - 2 Reproductive Toxicity - 2 Single Target Organ Toxicity (STOT) Repeat Exposure - 1	Danger	Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Causes damage to lungs and central nervous system through prolonged or repeated inhalation exposure.
	Acute Toxicity-Oral - 4 Skin Sensitization - 1 STOT Single Exposure - 3		Harmful if swallowed. May cause an allergic skin reaction. Harmful in contact with skin. May cause respiratory irritation.
NA	Eye Irritation-2B		Causes eye irritation.

Precautionary Statement(s):

Prevention	Response	Storage/Disposal
Do not breathe dusts / fume / gas / mist / vapor / spray. Wear protective gloves / protective clothing / eye protection / face protection. Contaminated work clothing must not be allowed out of the workplace. Use only outdoors or in well ventilated areas. Wash thoroughly after handling. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not eat, drink or smoke when using this product.	If inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed, concerned or feel unwell: Get medical advice/attention. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. If on skin: Wash with plenty of water. If irritation or rash occurs: Get medical advice/attention. Take off and wash contaminated clothing before reuse. Call a poison center/doctor if you feel unwell.	Dispose of contents in accordance with federal, state and local regulations.

2(c) Hazards not otherwise classified: None Known

2(d) Unknown acute toxicity statement (mixture): None Known

Section 3 – Composition/Information on Ingredients

3(a-c) Chemical name, common name (synonyms), CAS number and other identifiers, and concentration:

Chemical Name	Symbol	CAS Number	EC Number	% weight
Iron	Fe	7439-89-6	231-096-4	96.02-97.809
Carbon	C	7440-44-0	231-153-3	0.20-0.25
Manganese	Mn	7439-96-5	231-105-1	1.15-1.65
Phosphorus	P	7723-14-0	231-768-7	0.20-0.23
Sulfur	S	7704-34-9	231-722-6	0.007-0.04
Copper	Cu	7440-50-8	231-159-6	0.20-0.50
Nickel	Ni	7440-02-0	231-111-4	0.20-0.30
Chromium	Cr	7440-47-3	231-157-5	0.15-0.30
Molybdenum	Mo	7439-98-7	231-107-2	0.06-0.16
Vanadium	V	7440-62-2	231-171-1	0.008-0.20
Niobium (Columbium)	Nb	7440-03-1	231-113-5	0.008-0.15
Titanium	Ti	7440-32-6	231-142-3	0.008-0.20

EC - European Community

CAS - Chemical Abstract Service

- All commercial steel products contain small amounts of various elements in addition to those listed. These small quantities are frequently referred to as "trace" or "residual" elements that generally originate in the raw materials used. Steel products may contain the following trace or residual elements including typical percentages for the elements identified: aluminum (0.01-0.5), boron (≤ 0.005 max, typically 0.001%), calcium (≤ 0.005 max, typically 0.0003%), nitrogen (≤ 0.01 max, typically 0.006%), silicon (≤ 0.03 max, typically 0.002%), and tin (≤ 0.03 max, typically 0.002%). Other trace elements not frequently identified, may include antimony, arsenic, cadmium, cobalt, lead, and zirconium.
- Percentages are expressed as typical ranges or maximum concentrations of trace elements for the purpose of communicating the potential hazards of the finished product. Consult product specifications for specific composition information.
- Product surfaces may be treated with small amounts of corrosion-inhibiting oil that may contain mineral oil or petroleum distillates, or paints, epoxies, laminates, etc., generally applied at the customer's request. Refer to the coating manufacturer's SDS for hazards associated with coatings. Refer to the following table for additional information.

Base Metal Coating (if applicable) ¹

Chemical Name	CAS Number	EC Number	% weight ²
Galvanized (Per ASTM A653) ³			
Zinc	7440-66-6	231-175-3	99.0-100
Aluminum	7429-90-5	231-072-3	0.25-1.00

Other Coatings (if applicable) ¹ <0.8 total

Chemical Name	CAS Number	EC Number	% weight ² /Coating Weight
Chem Treat – Chromium (VI)	18540-29-9	606-053-1	0.3-12 MG/FT2

- Refer to product specifications for coating applicability.
- Percentages are expressed as typical ranges or maximum concentrations of trace elements in the coating, for the purpose of communicating the potential hazards of the finished product. Consult product specifications for specific composition information.
- Per ASTM A653, Section 6.2, Zinc Bath Analysis, the bath metal used in continuous hot-dip galvanizing shall contain not less than 99 % zinc. To control alloy formation and promote adhesion of the zinc coating with the steel base metal, the molten coating metal composition normally contains a percentage of aluminum. Specification B852 specifies continuous galvanizing grade (CGG) zinc alloys, including multiple zinc alloys.

Section 4 – First-aid Measures

4(a) Description of necessary measures:

- Inhalation: Coated Steel Sheet** as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if inhaled: Remove person to fresh air and keep comfortable for breathing. If exposed, concerned or feel unwell: Get medical advice/attention.
- Eye Contact: Coated Steel Sheet** as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. If eye irritation persists: Get medical advice/attention. If exposed, concerned or feel unwell: Get medical advice/attention.
- Skin Contact:** If on skin: Wash thoroughly after handling. Wash with plenty of water. If irritation or rash occurs: Get medical advice/attention. Take off and wash contaminated clothing before reuse. If exposed, concerned or feel unwell: Get medical advice/attention.
- Ingestion: Coated Steel Sheet** as sold/shipped is not a likely form of exposure. However, during further processing (welding, grinding, burning, etc.), if swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If exposed, concerned or feel unwell: Get medical advice/attention.

4(b) Most important symptoms/effects, acute and delayed (chronic):

- Inhalation: Coated Steel Sheet** as sold/shipped is not likely to present an acute or chronic health effect.
- Eye: Coated Steel Sheet** as sold/shipped is not likely to present an acute or chronic health effect.
- Skin: Coated Steel Sheet** as sold/shipped is not likely to present an acute or chronic health effect.

- **Ingestion: Coated Steel Sheet** as sold/shipped is not likely to present an acute or chronic health effect. However, during further processing (welding, grinding, burning, etc.) individual components may illicit an acute or chronic health effect. Refer to Section 11-Toxicological Information.

4(c) Immediate Medical Attention and Special Treatment: None Known

Section 5 – Fire-fighting Measures

5(a) Suitable (and unsuitable) Extinguishing Media: Not Applicable for **Coated Steel Sheet** as sold/shipped. Use extinguishers appropriate for surrounding materials.

5(b) Specific Hazards arising from the chemical: Not Applicable for **Coated Steel Sheet** as sold/shipped. When burned, toxic smoke, fume and vapor may be emitted.

5(c) Special protective equipment and precautions for fire-fighters: Self-contained NIOSH approved respiratory protection and full protective clothing should be worn when fumes and/or smoke from fire are present. Heat and flames cause emittance of acrid smoke and fumes. Do not release runoff from fire control methods to sewers or waterways. Firefighters should wear full face-piece self-contained breathing apparatus and chemical protective clothing with thermal protection. Direct water stream will scatter and spread flames and, therefore, should not be used.

Section 6 - Accidental Release Measures

6(a) Personal Precautions, Protective Equipment and Emergency Procedures: Not Applicable for **Coated Steel Sheet** as sold/shipped. For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust.

6(b) Methods and materials for containment and clean up: Not Applicable for **Coated Steel Sheet** as sold/shipped. Collect material in appropriate, labeled containers for recovery or disposal in accordance with federal, state, and local regulations. Follow applicable OSHA regulations (29 CFR 1910.120) and all other pertinent state and federal requirements.

Section 7 - Handling and Storage

7(a) Precautions for safe handling: Not Applicable for **Coated Steel Sheet** as sold/shipped, however further processing (welding, burning, grinding, etc.) with the potential for generating high concentrations of airborne particulates should be evaluated and controlled as necessary. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in well ventilated areas. Practice good housekeeping. Avoid breathing metal fumes and/or dust. Do not eat, drink or smoke when using this product. Cut resistant gloves and sleeves should be worn when working with steel products.

7(b) Conditions for safe storage, including any incompatibilities: Store away from acids and incompatible materials.

Section 8 - Exposure Controls / Personal Protection

8(a) Occupational Exposure Limits (OELs): **Coated Steel Sheet** as sold/shipped in its physical form does not present an inhalation, ingestion or contact hazard, nor would any of the following exposure data apply. However, operations such as burning, welding (high temperature), sawing, brazing, machining, grinding, etc. may produce fumes and/or particulates. The following exposure limits are offered as reference for an experienced industrial hygienist to review.

Ingredients	OSHA PEL ¹	ACGIH TLV ²	NIOSH REL ³	IDLH ⁴
Iron	10 mg/m ³ (as iron oxide fume)	5.0 mg/m ³ (as iron oxide dust and fume)	5.0 mg/m ³ (as iron oxide dust and fume)	2,500 mg Fe/m ³
Manganese	(C) 5.0 mg/m ³ (as Fume & Mn compounds)	0.2 mg/m ³	(C) 5.0 mg/m ³ 1.0 mg/m ³ (as fume) (STEL) 3.0 mg/m ³	500 mg Mn/m ³
Nickel	1.0 mg/m ³ (as Ni metal & insoluble compounds)	1.5 mg/m ³ (as inhalable fraction ⁵ Ni metal) 0.2 mg/m ³ (as inhalable fraction Ni inorganic only insoluble and soluble compounds)	0.015 mg/m ³ (as Ni metal & insoluble and soluble compounds)	10 mg/m ³ (as Ni)
Silicon	15 mg/m ³ (total dust, PNOR ⁶) 5.0 mg/m ³ (as respirable fraction, PNOR)	10 mg/m ³	10 mg/m ³ (as total dust) 5.0 mg/m ³ (as respirable dust)	NE

8(a) Occupational Exposure Limits (OELs) (continued):

NE - None Established

1. OSHA Permissible Exposure Limits (PELs) are 8-hour TWA (time-weighted average) concentrations unless otherwise noted. A (C) designation denotes a ceiling limit, which should not be exceeded during any part of the working exposure unless otherwise noted. A Peak is defined as the acceptable maximum peak for a maximum duration above the ceiling concentration for an eight-hour shift. A skin notation refers to the potential significant contribution to the overall exposure by the cutaneous route, either by contact with vapors or, of probable greater significance, by direct skin contact with the substance. A Short Term Exposure Limit (STEL) is defined as a 15-minute exposure, which should not be exceeded at any time during a workday. An Action level (AL) is used by OSHA and NIOSH to express a health or physical hazard. They indicate the level of a harmful or toxic substance/activity, which requires medical surveillance, increased industrial hygiene monitoring, or biological monitoring. Action Levels are generally set at one half of the PEL but the actual level may vary from standard to standard. The intent is to identify a level at which the vast majority of randomly sampled exposures will be below the PEL.
2. Threshold Limit Values (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH) are 8-hour TWA concentrations unless otherwise noted. A Short Term Exposure Limit (STEL) is defined as the maximum concentration to which workers can be exposed for a short period of time (15 minutes) for only four times throughout the day with at least one hour between exposures. A "skin" notation refers to the potential significant contribution to the overall exposure by the cutaneous route, either by contact with vapors or, of probable greater significance, by direct skin contact with the substance. ACGIH-TLVs are only recommended guidelines based upon consensus agreement of the membership of the ACGIH. As such, the ACGIH TLVs are for guideline use purposes

and are not legal regulatory standards for compliance purposes. The TLVs are designed for use by individuals trained in the discipline of industrial hygiene relative to the evaluation of exposure to various chemical or biological substances and physical agents that may be found in the workplace.

3. The National Institute for Occupational Safety and Health Recommended Exposure Limits (NIOSH-REL)- Compendium of Policy and Statements. NIOSH, Cincinnati, OH (1992). NIOSH is the federal agency designated to conduct research relative to occupational safety and health. As is the case with ACGIH TLVs, NIOSH RELs are for guideline purposes only and as such are not legal, regulatory limits for compliance purposes.
4. The "immediately dangerous to life or health air concentration values (IDLHs)" are used by NIOSH as part of the respirator selection criteria and were first developed in the mid- 1970's by NIOSH. The Documentation for Immediately Dangerous to Life or Health Concentrations (IDLHs) is a compilation of the rationale and sources of information used by NIOSH during the original determination of 387 IDLHs and their subsequent review and revision in 1994.
5. Inhalable fraction. The concentration of inhalable particulate for the application of this TLV is to be determined from the fraction passing a size-selector with the characteristics defined in the ACGIH 2013 TLVs ® and BEIs ® (Biological Exposure Indices) Appendix D, paragraph A.
6. PNOR (Particulates Not Otherwise Regulated). All inert or nuisance dusts, whether mineral, inorganic, or organic, not listed specifically by substance name are covered by a limit which is the same as the inert or nuisance dust limit of 15 mg/m³ for total dust and 5 mg/m³ for the respirable fraction.

8(b) Appropriate Engineering Controls: Use controls as appropriate to minimize exposure to metal fumes and dusts during handling operations. Provide general or local exhaust ventilation systems to minimize airborne concentrations. Local exhaust is necessary for use in enclosed or confined spaces. Provide sufficient general/local exhaust ventilation in pattern/volume to control inhalation exposures below current exposure limits.

- **Respiratory Protection:** Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. Concentration in air of the various contaminants determines the extent of respiratory protection needed. Half-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 10 times the exposure limit. Full-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 50 times the exposure limit. Protection by air-purifying negative-pressure and powered air respirators is limited. Use a positive-pressure-demand, full-face, supplied air respirator or self-contained breathing apparatus (SCBA) for concentrations above 50 times the exposure limit. If exposure is above the IDLH (Immediately dangerous to life or health) for any of the constituents, or there is a possibility of an uncontrolled release or exposure levels are unknown, then use a positive-demand, full-face, supplied air respirator with escape bottle or SCBA.

Warning! Air-purifying respirators both negative-pressure, and powered-air do not protect workers in oxygen-deficient atmospheres.

- **Eyes:** Wear appropriate eye protection to prevent eye contact. For operations which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use safety glasses to prevent eye contact. Contact lenses should not be worn where industrial exposures to this material are likely. Use safety glasses or goggles as required for welding, burning, sawing, brazing, grinding or machining operations.
- **Skin:** Wear appropriate personal protective clothing to prevent skin contact. Cut resistant gloves and sleeves should be worn when working with steel products. For operations which result in elevating the temperature of the product to or above its melting point or result in the generation of airborne particulates, use protective clothing, and gloves to prevent skin contact. Protective gloves should be worn as required for welding, burning or handling operations. Contaminated work clothing must not be allowed out of the workplace.
- **Other protective equipment:** An eyewash fountain and deluge shower should be readily available in the work area.

Section 9 - Physical and Chemical Properties

9(a) Appearance (physical state, color, etc.): Solid, Metallic Gray

9(b) Odor: Odorless

9(c) Odor Threshold: NA

9(d) pH: NA

9(e) Melting Point/Freezing Point: ~2750 °F (~1510 C)

9(f) Initial Boiling Point and Boiling Range: ND

9(g) Flash Point: NA

9(h) Evaporation Rate: NA

9(i) Flammability (solid, gas): Non-flammable, non-combustible

NA - Not Applicable

ND - Not Determined for product as a whole

9(j) Upper/lower Flammability or Explosive Limits: NA

9(k) Vapor Pressure: NA

9(l) Vapor Density (Air = 1): NA

9(m) Relative Density: 7.85

9(n) Solubility(ies): Insoluble

9(o) Partition Coefficient n-octanol/water: ND

9(p) Auto-ignition Temperature: NA

9(q) Decomposition Temperature: ND

9(r) Viscosity: NA

Section 10 - Stability and Reactivity

10(a) Reactivity: Not Determined (ND) for product in a solid form. Do not use water on molten metal.

10(b) Chemical Stability: Steel products are stable under normal storage and handling conditions.

10(c) Possibility of hazardous reaction: None Known

10(d) Conditions to Avoid: Storage with strong acids or calcium hypochlorite

10(e) Incompatible Materials: Will react with strong acids to form hydrogen. Iron oxide dusts in contact with calcium hypochlorite evolve oxygen and may cause an explosion.

10(f) Hazardous Decomposition Products: Thermal oxidative decomposition of steel products can produce fumes containing oxides of iron and manganese as well as other alloying elements.

Section 11 - Toxicological Information

11 Information on toxicological effects: The following toxicity data has been determined for **Coated Steel Sheet** when further processed using the information available for its components applied to the guidance on the preparation of an SDS under the GHS requirements of OSHA and the EU CPL:

Hazard Classification	Hazard Category		Hazard Symbols	Signal Word	Hazard Statement
	EU	OSHA			
Acute Toxicity Hazard (covers Categories 1-4)	NA*	4 ^a		Warning	Harmful if swallowed.
Eye Damage/ Irritation (covers Categories 1, 2A and 2B)	NA*	2B ^c	No Pictogram	Warning	Causes eye irritation.
Skin/Dermal Sensitization (covers Category 1)	NA*	1 ^d		Warning	May cause an allergic skin reaction.
Carcinogenicity (covers Categories 1A, 1B and 2)	NA*	2 ^g		Warning	Suspected of causing cancer.
Toxic Reproduction (covers Categories 1A, 1B and 2)	NA*	2 ^h		Warning	Suspected of damaging fertility or the unborn child.
Specific Target Organ Toxicity (STOT) Following Single Exposure (covers Categories 1-3)	NA*	3 ⁱ		Warning	May cause respiratory irritation.
STOT following Repeated Exposure (covers Categories 1 and 2)	NA*	1 ^j		Danger	Causes damage to lungs and central nervous system through prolonged or repeated inhalation exposure.

* Not Applicable - Semi-formed steel products are considered articles under Reach regulation (REACH REGULATION (EC) No 1907/2006) and are not subject to classification under CLP regulation (REGULATION (EC) No 1272/2008).

Toxicological data listed below are presented regardless to classification criteria. Individual hazard classification categories where the toxicological information has met or exceeded a classification criteria threshold are listed above.

a. No LC₅₀ or LD₅₀ has been established for **Coated Steel Sheet**. The following data has been determined for the components:

- Iron:** Rat LD₅₀ = 98.6 g/kg (REACH)
Rat LD₅₀ = 1060 mg/kg (IUCILID)
Rat LD₅₀ = 984 mg/kg (IUCILID)
Rabbit LD₅₀ = 890 mg/kg (IUCILID)
Guinea Pig LD₅₀ = 20 g/kg (TOXNET)
- Nickel:** LD₅₀ > 9000 mg/kg (Oral/Rat)
- Silicon:** LD₅₀ = 3160 mg/kg (Oral/Rat)
- Manganese:** Rat LD₅₀ > 2000 mg/kg (REACH)
Rat LD₅₀ > 9000 mg/kg (NLM Toxnet)

b. No Skin (Dermal) Irritation data available for **Coated Steel Sheet** as a mixture or its components.

c. No Eye Irritation data available for **Coated Steel Sheet** as a mixture. The following Eye Irritation information was found for the components:

- Iron:** Causes eye irritation.
- Silicon:** Slight eye irritation in rabbit protocol
- Nickel:** Slight eye irritation from particulate abrasion only.

d. No Skin (Dermal) Sensitization data available **Coated Steel Sheet** as a mixture. The following Skin (Dermal) Sensitization information was found for the components:

- Nickel:** May cause allergic skin sensitization.

e. No Respiratory Sensitization data available for **Coated Steel Sheet** as a mixture or its components.

f. No Germ Cell Mutagenicity data available for **Coated Steel Sheet** as a mixture. The following Mutagenicity and Genotoxicity information was found for the components:

- Iron:** IUCILID has found some positive and negative findings in vitro.
- Nickel:** EU RAR has found positive results in vitro and in vivo but insufficient data for classification.

g. Carcinogenicity: IARC, NTP, and OSHA do not list **Coated Steel Sheet** as carcinogens. The following Carcinogenicity information was found for the components:

- Welding Fumes** - IARC Group 2B carcinogen, a mixture that is possibly carcinogenic to humans.
- Chromium (as metal and trivalent chromium compounds)** - IARC Group 3 carcinogens, not classifiable as to their human carcinogenicity.
- Nickel and certain nickel compounds** - Group 2B - metallic nickel Group 1 - nickel compounds ACGIH confirmed human carcinogen. Nickel -

EURAR Insufficient evidence to conclude carcinogenic potential in animals or humans; suspect carcinogen classification Category 2 Suspected of causing cancer.

- h. No Toxic Reproduction data available for **Coated Steel Sheet** as a mixture. The following Toxic Reproductive information was found for the components:
- **Nickel:** Effects on fertility.
- i. No Specific Target Organ Toxicity (STOT) following a Single Exposure data available for **Coated Steel Sheet** as a mixture. The following STOT following a Single Exposure data was found for the components:
- **Iron:** Irritating to Respiratory tract.
- j. No Specific Target Organ Toxicity (STOT) following Repeated Exposure data was available for **Coated Steel Sheet** as a whole. The following STOT following Repeated Exposure data was found for the components:
- **Manganese:** Inhalation of metal fumes - Degenerative changes in human Brain; Behavioral: Changes in motor activity and muscle weakness (Whitlock *et al.*, 1966).
 - **Nickel:** Rat 4 wk inhalation LOEL 4 mg/m³ Lung and Lymph node histopathology. Rat 2 yr inhalation LOEL 0.1 mg/m³ Pigment in kidney, effects on hematopoiesis spleen and bone marrow and adrenal tumor. Rat 13 Week Inhalation LOAEC 1.0 mg/m³ Lung weights, and Alveolar histopathology.

The above toxicity information was determined from available scientific sources to illustrate the prevailing posture of the scientific community. The scientific resources includes: The American Conference of Governmental Industrial Hygienist (ACGIH) Documentation of the Threshold Limit Values (TLVs) and Biological Exposure indices (BEIs) with Other Worldwide Occupational Exposure Values 2009, The International Agency for Research on Cancer (IARC), The National Toxicology Program (NTP) updated documentation, the World Health Organization (WHO) and other available resources, the International Uniform Chemical Information Database (IUCID), European Union Risk Assessment Report (EU-RAR), Concise International Chemical Assessment Documents (CICAD), European Union Scientific Committee for Occupational Exposure Limits (EU-SCOEL), Agency for Toxic Substances and Disease Registry (ATSDR), Hazardous Substance Data Bank (HSDB), and International Programme on Chemical Safety (IPCS).

The following health hazard information is provided regardless to classification criteria and is based on the individual component(s) and potential resultant components from further processing:

Acute Effects:

- **Inhalation:** Excessive exposure to high concentrations of metal dust may cause irritation to the eyes, skin and mucous membranes of the upper respiratory tract. Excessive inhalation of fumes of freshly formed metal oxide particles sized below 1.5 micrometer and usually between 0.02-0.05 micrometers from many metals can produce an acute reaction known as "metal fume fever". Symptoms consist of chills and fever (very similar to and easily confused with flu symptoms), metallic taste in the mouth, dryness and irritation of the throat followed by weakness and muscle pain. The symptoms come on in a few hours after excessive exposures and usually last from 12 to 48 hours. Long-term effects from metal fume fever have not been noted. Freshly formed oxide fumes of manganese have been associated with causing metal fume fever.
- **Eye:** Excessive exposure to high concentrations of metal dust may cause irritation to the eyes.
- **Skin:** Skin contact with metal dusts may cause irritation or sensitization, possibly leading to dermatitis. Skin contact with metallic fumes and dusts may cause physical abrasion.
- **Ingestion:** Ingestion of harmful amounts of this product as distributed is unlikely due to its solid insoluble form. Ingestion of metal dust may cause nausea or vomiting.

Acute Effects by component:

- **Iron and iron oxides:** Iron is harmful if swallowed, causes skin irritation, and causes eye irritation. Contact with iron oxide has been reported to cause skin irritation and serious eye damage. Particles of iron or iron compounds, which become imbedded in the eye, may cause rust stains unless removed fairly promptly.
- **Manganese and manganese oxides:** Manganese and Manganese oxide are harmful if swallowed.
- **Nickel and nickel oxides:** Nickel may cause allergic skin sensitization. Nickel oxide may cause an allergic skin.
- **Silicon and silicon oxides:** May be harmful if swallowed.

Delayed (chronic) Effects by component:

- **Iron and iron oxides:** Chronic inhalation of excessive concentrations of iron oxide fumes or dusts may result in the development of a benign pneumoconiosis, called siderosis, which is observable as an X-ray change. No physical impairment of lung function has been associated with siderosis. Inhalation of excessive concentrations of ferric oxide may enhance the risk of lung cancer development in workers exposed to pulmonary carcinogens. Iron oxide is listed as a Group 3 (not classifiable) carcinogen by the International Agency for Research on Cancer (IARC).
- **Manganese and manganese oxides:** Chronic exposure to high concentrations of manganese fumes and dusts may adversely affect the central nervous system with symptoms including languor, sleepiness, weakness, emotional disturbances, spastic gait, mask-like facial expression and paralysis. Animal studies indicate that manganese exposure may increase susceptibility to bacterial and viral infections. Occupational overexposure (manganese) is a progressive, disabling neurological syndrome that typically begins with relatively mild symptoms and evolves to include altered gait, fine tremor, and sometimes, psychiatric disturbances. May cause damage to lungs with repeated or prolonged exposure. Neurobehavioral alterations in worker populations exposed to manganese oxides include: speed and coordination of motor function are especially impaired.
- **Nickel and nickel oxides:** Exposure to nickel dusts and fumes can cause sensitization dermatitis, respiratory irritation, asthma, pulmonary fibrosis, edema, and may cause nasal or lung cancer in humans. Nickel causes damage to lungs through prolonged or repeated inhalation exposure. IARC lists nickel and certain nickel compounds as Group 2B carcinogens (sufficient animal data). ACGIH 2013 TLVs® and BEIs® lists insoluble nickel compounds as confirmed human carcinogens. Nickel is suspected of damaging the unborn child.
- **Silicon and silicon oxides:** Silicon dusts are a low health risk by inhalation and should be treated as a nuisance dust. Eye contact with pure material can cause particulate irritation. Skin contact with silicon dusts may cause physical abrasion.

Section 12 - Ecological Information

12(a) Ecotoxicity (aquatic & terrestrial): No Data Available for **Coated Steel Sheet** as sold/shipped. However, individual components of the product when processed have been found to be toxic to the environment. Metal dusts may migrate into soil and groundwater and be ingested by wildlife as follows:

- **Iron Oxide:** LC₅₀: >1000 mg/L; Fish 48 h-EC₅₀ > 100 mg/L (Currenta, 2008k); 96 h-LC₀ ≥ 50,000 mg/L Test substance: Bayferrox 130 red (95 – 97% Fe₂O₃; < 4% SiO₂ and Al₂O₃) (Bayer, 1989a)
- **Hexavalent Chrome:** EU RAR listed as category 1, found acute EC₅₀ and LD₅₀ to algae and invertebrates < 1 mg.
- **Nickel Oxide:** IUCLID found LC₅₀ in fish, invertebrates and algae > 100 mg/l.

12(b) Persistence & Degradability: No Data Available for **Coated Steel Sheet** as sold/shipped or individual components.

12(c) Bioaccumulative Potential: No Data Available for **Coated Steel Sheet** as sold/shipped or individual components.

12(d) Mobility (in soil): No data available for **Coated Steel Sheet** as sold/shipped. However, individual components of the product have been found to be absorbed by plants from soil.

12(e) Other adverse effects: None Known

Additional Information:

Hazard Category: Not Reported

Signal Word: No Signal Word

Hazard Symbol: No Symbol

Hazard Statement: No Statement

Section 13 - Disposal Considerations

Disposal: Steel scrap should be recycled whenever possible. Product dusts and fumes from processing operations should also be recycled, or classified by a competent environmental professional and disposed of in accordance with applicable federal, state or local regulations.

Container Cleaning and Disposal: Follow applicable federal, state and local regulations. Observe safe handling precautions. European Waste Catalogue (EWC): 16-01-17 (ferrous metals), 12-01-99 (wastes not otherwise specified), 16-03-04 (off specification batches and unused products), or 15-01-04 (metallic packaging).

Please note this information is for Coated Steel Sheet in its original form. Any alterations can void this information.

Section 14 - Transport Information

14 (a-g) Transportation Information:

US Department of Transportation (DOT) under 49 CFR 172.101 **does not** regulate **Coated Steel Sheet** as a hazardous material. All federal, state, and local laws and regulations that apply to the transport of this type of material must be adhered to.

Shipping Name: Not Applicable (NA)

Shipping Symbols: NA

Hazard Class: NA

UN No.: NA

Packing Group: NA

DOT/IMO Label: NA

Special Provisions (172.102): NA

Packaging Authorizations

a) Exceptions: NA

b) Group: NA

Authorization: NA

Quantity Limitations

a) Passenger, Aircraft, or Railcar: NA

b) Cargo Aircraft Only: NA

Vessel Stowage Requirements

a) Vessel Stowage: NA

b) Other: NA

DOT Reportable Quantities: NA

International Maritime Dangerous Goods (IMDG) and the Regulations Concerning the International Carriage of Dangerous Goods by Rail (RID) classification, packaging and shipping requirements follow the US DOT Hazardous Materials Regulation.

Regulations Concerning the International Carriage of Dangerous Goods by Road (ADR) does not regulate **Coated Steel Sheet** as a hazardous material.

Shipping Name: Not Applicable (NA)

Classification Code: NA

UN No.: NA

Packing Group: NA

ADR Label: NA

Special Provisions: NA

Limited Quantities: NA

Packaging

a) Packing Instructions: NA

b) Special Packing Provisions: NA

Mixed Packing Provisions: NA

Portable Tanks & Bulk Containers

a) Instructions: NA

Special Provisions: NA

International Air Transport Association (IATA) does not regulate **Coated Steel Sheet** as a hazardous material.

Shipping Name: Not Applicable (NA)

Class/Division: NA Hazard Label (s):

NA UN No.: NA

Packing Group: NA

Excepted Quantities (EQ): NA

Passenger & Cargo Aircraft Limited Quantity (EQ)

Pkg Inst: NA

Pkg Inst: NA

Max Net Qty/Pkg: NA

Max Net Qty/Pkg: NA

Cargo Aircraft Only Pkg Inst: NA

Max Net Qty/Pkg: NA

Special Provisions: NA

ERG Code: NA

Pkg Inst – Packing Instructions

Max Net Qty/Pkg – Maximum Net Quantity per Package

ERG – Emergency Response Drill Code

Transport Dangerous Goods (TDG) Classification: **Coated Steel Sheet** does not have a TDG classification.

Section 15 - Regulatory Information

Revision Date: 10-13-2025

Page 7 | 9

Regulatory Information: *The following listing of regulations relating to a ClarkDietrich product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.*

This product and/or its constituents are subject to the following regulations:

OSHA Regulations: Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-2, Z-3): The product, **Coated Steel Sheet** as a whole is not listed. However, individual components of the product are listed: Refer to Section 8, Exposure Controls and Personal Protection

EPA Regulations: The product, **Coated Steel Sheet** is not listed as a whole. However, individual components of the product are listed:

Components	Regulations
Manganese	CAA, SARA 313, SDWA
Nickel	CAA, CERCLA, CWA, SARA 313

SARA 311/312 Potential Hazard Categories: Immediate Acute Health Hazard; Delayed Chronic Health Hazard

Regulations Key:

CAA	Clean Air Act (42 USC Sec. 7412; 40 CFR Part 61 [As of: 8/18/06])
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (42 USC Secs. 9601(14), 9603(a); 40 CFR Sec. 302.4, Table 302.4, Table 302.4 and App. A)
CWA	Clean Water Act (33 USC Secs. 1311; 1314(b), (c), (e), (g); 136(b), (c); 137(b), (c) [as of 8/2/06])
RCRA	Resource Conservation Recovery Act (42 USC Sec. 6921; 40 CFR Part 261 App VIII)
SARA	Superfund Amendments and Reauthorization Act of 1986 Title III Section 302 Extremely Hazardous Substances (42 USC Secs. 11023, 13106; 40 CFR sec. 372.65) and Section 313 Toxic Chemicals (42 USC Secs. 11023, 13106; 40 CFR Sec. 372.65 [as of 6/30/05])
TSCA	Toxic Substance Control Act (15 U.S.C. s/s 2601 et seq. [1976])
SDWA	Safe Drinking Water Act (42 U.S.C. s/s 300f et seq. [1974])

Section 313 Supplier Notification: The product, **Coated Steel Sheet** contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act and 40 CFR part 372:

CAS #	Chemical Name	Percent by Weight
7439-96-5	Manganese	2.0 max
7440-02-0	Nickel	0.5 max

State Regulations: The product, **Coated Steel Sheet** as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

Pennsylvania Right to Know: Contains regulated material in the following categories:

- Hazardous Substances: Manganese and Silicon
- Environmental Hazards: Manganese and Nickel
- Special Hazardous Substance: Nickel

California Prop. 65: Contains elements known to the State of California to cause cancer or reproductive toxicity. This includes nickel, chromium (VI), and not intentionally added trace amounts arsenic, cadmium, cobalt and lead.

New Jersey: Contains regulated material in the following categories:

- Hazardous Substance: Manganese, and Nickel

Minnesota: Manganese, Nickel and Silicon Massachusetts: Manganese and Nickel

Other Regulations:

WHMIS Classification (Canadian): The product, **Coated Steel Sheet** is not listed as a whole. However individual components are listed.

Ingredients	WHMIS Classification
Iron	B4, D2B
Manganese	B4, D2A
Nickel	D2A, D2B

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Section 16 - Other Information

Prepared By: ClarkDietrich

Original Issue Date: 05/01/2015

Revised Date: 10-13-2025

Additional Information:

Hazardous Material Identification System (HMIS) Classification

Health Hazard	1
Fire Hazard	0
Physical Hazard	0

National Fire Protection Association (NFPA)



HEALTH= 1, Denotes possible chronic hazard if airborne dusts or fumes are generated. Irritation or minor reversible injury possible.

FIRE= 0, Materials that will not burn

PHYSICAL HAZARD= 0, Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosives.

HEALTH = 1, Exposure could cause irritation but only minor residual injury even if no treatment is given.

FLAMMABILITY = 0, Materials that will not burn

INSTABILITY = 0, Normally stable, even under fire exposure conditions, and are not reactive with water.

ABBREVIATIONS/ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	NIF	No Information Found
BEIs	Biological Exposure Indices	NIOSH	National Institute for Occupational Safety and Health
CAS	Chemical Abstracts Service	NTP	National Toxicology Program
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ORC	Organization Resources Counselors
CFR	Code of Federal Regulations	OSHA	Occupational Safety and Health Administration
CNS	Central Nervous System	PEL	Permissible Exposure Limit
GI, GIT	Gastro-Intestinal, Gastro-Intestinal Tract	PNOR	Particulate Not Otherwise Regulated
HMIS	Hazardous Materials Identification System	PNOC	Particulate Not Otherwise Classified
IARC	International Agency for Research on Cancer	PPE	Personal Protective Equipment
LC50	Median Lethal Concentration	ppm	parts per million
LD50	Median Lethal Dose	RCRA	Resource Conservation and Recovery Act
LD_{Lo}	Lowest Dose to have killed animals or humans	RTECS	Registry of Toxic Effects of Chemical Substances
LEL	Lower Explosive Limit	SARA	Superfund Amendment and Reauthorization Act
LOEL	Lowest Observed Effect Level	SCBA	Self-contained Breathing Apparatus
LOAEC	Lowest Observable Adverse Effect Concentration	SDS	Safety Data Sheet
µg/m³	microgram per cubic meter of air	STEL	Short-term Exposure Limit
mg/m³	milligram per cubic meter of air	TLV	Threshold Limit Value
mppcf	million particles per cubic foot	TWA	Time-weighted Average
MSHA	Mine Safety and Health Administration	UEL	Upper Explosive Limit
NFPA	National Fire Protection Association		

Disclaimer: This information is taken from sources or based upon data believed to be reliable. Our objective in sending this information is to help you protect the health and safety of your personnel and to comply with the OSHA Hazard Communication Standard and Title III of the Emergency Planning and Community Right-to-Know Act. ClarkDietrich Building makes no warranty as to the absolute correctness, completeness, or sufficiency of any of the foregoing, or any additional, or other measures that may not be required under particular conditions.