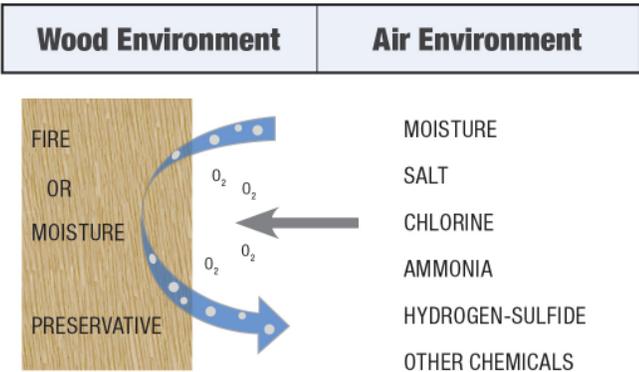


# Corrosion Protection

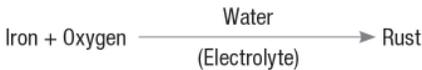
For the majority of applications, metal hangers and connectors are used in interior, above ground, dry service conditions. They are typically not being exposed to corrosive environments which can significantly reduce their strength and longevity.

**What is Corrosion?**

Corrosion is the destructive degradation of steel due to its interaction with the environment. Here the steel is the connector and the environment is whatever the connector interacts with, namely wood and air. Each environment may contain one or more corrodents (substances that cause corrosion) acting independently or in combination to degrade the strength of the connectors.



Electrochemical oxidation is the most common type of corrosion affecting metal connectors. It is a process in which iron (Fe) reacts with oxygen (O<sub>2</sub>) in the presence of an electrolyte such as water (H<sub>2</sub>O) to form iron oxide (Fe<sub>2</sub>O<sub>3</sub>), a brown and flaky by-product commonly known as rust.



Steel is an iron-based metal alloy which is susceptible to this type of corrosion, even when exposed to normal atmospheric air, since air contains oxygen and water as part of its normal composition. While steel is very strong, rust is not. Over time, the continuous formation of rust eats away the base metal and reduces the strength of the connector. The rate of oxidation generally increases with increasing moisture content, the presence of salt, or when galvanic corrosion is a contributing factor.

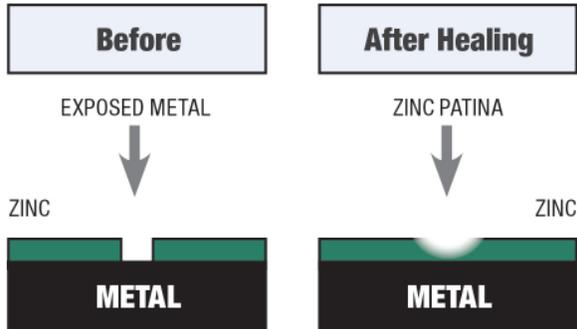
Galvanic Series (Abbreviated)	
More Active (Anodic -)	
↑	Zinc
	Aluminum
	Steel
	Brass
	Copper Nickel
	Stainless Steel - Type 304
	Stainless Steel - Type 316
More Passive (Cathodic +)	

Galvanic corrosion occurs when there is an interaction between dissimilar metals that are in contact with one another. The degree of corrosion depends on where the metals reside in the galvanic series, which is a compilation of known metals and their relative reactivity. The more active metal (anode) will corrode preferentially while shielding the more passive metal (cathode) from further degradation. For example, with galvanized steel, zinc is used as a coating on the steel because it sacrificially corrodes to protect the steel substrate underneath. The coupling between zinc and steel is said to have a lower galvanic potential than the coupling between zinc and stainless steel because zinc and steel are closer to each other in the galvanic series. In general, the coupling with a lower galvanic potential would result in a slower corrosion rate.

**Corrosion Protection Options**

**Zinc Galvanizing:**

Most connectors are manufactured from pre-galvanized sheet steel or coiled steel, which is typically made by the hot-dip process in accordance with ASTM-A653 and ASTM-A924 standards. Fasteners are galvanized in accordance with ASTM-A153. In the manufacturing of the connectors, the punching and shearing processes create exposed bare metal surfaces. Thankfully, zinc has an incredible ability to ‘heal’ itself; the zinc around the exposed metal corrodes and deposits a layer of zinc corrosion by-product called zinc patina (white powdery appearance) over the exposed metal to further protect it.



By being more reactive than steel, zinc sacrificially corrodes at a steady rate over time to shield the steel from the effect of corrosion. The protection ability of zinc is proportional to its thickness, which is proportional to the amount of zinc applied. Zinc coating is specified as the total weight on both sides of the sheet steel, measured in ounces per square foot (oz/ft<sup>2</sup>). For example, G90 means that there are 0.90 oz/ft<sup>2</sup>; G185 has 1.85 oz/ft<sup>2</sup> and would last about two times longer than G90. G90 is the minimum protection for connectors and is standard in MiTek connectors.

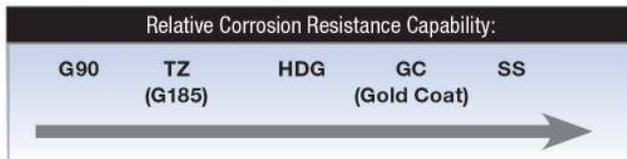
## Design Guidelines:

Where there are governing national or local building code requirements, they should be used in the selection of the connectors and their protection against corrosion. In the absence of such requirements, the decision rests on the experience and judgment of the building designer/engineer. Design guidelines are presented in this section to aid the building designer/engineer in this selection process, but it is the responsibility of the building designer/engineer to determine the most viable solution based on an evaluation of the connectors to the specific corrosive environment(s). The guidelines consist of best practices, recommended protection levels for the connectors, and strength modification factors for the lumber/connectors.

Where there are multiple options suggested, do not automatically default to the lowest protection level. The lower protection level is intended to address less severe conditions while the higher protection level is meant to address more severe conditions. Select the option that eliminates or adequately reduces the vulnerability of the connectors to the corrodents. When in doubt, use a higher level of protection than anticipated or seek professional consultation.

## Relative Corrosion Resistance Capability:

The chart below ranks the available options in terms of their relative effectiveness against corrosion. As expected, the ability to resist corrosion increases with increasing zinc thickness, so G185 is the most durable pre-galvanized product available. Gold Coat (GC) offers enhanced protection compared to G185 while stainless steel offers the best protection for most applications.



## Galvanic Corrosion:

The simplest and most practical solution to minimize galvanic corrosion is to make sure that the components that are in direct contact with each other are made of the same material or coating. Once this is achieved, there is no net galvanic potential between the components and galvanic corrosion is eliminated or significantly reduced. For example, use galvanized nails for galvanized connectors and stainless steel nails for stainless steel connectors.

## Wet Service Condition:

For lumber, this refers to any service condition in which the average equilibrium moisture content is 15% or more over a year or may exceed 19% at any time. For lumber to get above 19% moisture, the relative humidity in the air needs to reach above 80%. Unfortunately, this is above the critical humidity level for the electrochemical oxidation of steel, which is around 70%. Beyond 70%, the rate of corrosion in the connectors increases rapidly due to the abundant availability of moisture.

G90 may not be suitable for use in wet service condition.

## Preservative (Pressure) Treated Wood:

There are many preservative wood treatment formulations available on the market today. The element that is common to most of them is the presence of copper in the formulation which can contribute to the corrosion of steel connectors and fasteners.

Of the copper based preservatives, the two types are micronized copper and soluble copper. Micronized copper formulations MCA (micronized copper azole) and MCQ (micronized copper quat) are sold under different

brand names and are the most predominant formulation in today's preservative treated wood industry. Soluble copper formulations CA (copper azole) and ACQ (alkaline copper quat) have also been very popular since they replaced CCA (chromated copper arsenate) which was phased out in 2004. Other "metal free" preservatives are still used for above ground and sill plate applications, but are not as common. One of the main criterion affecting the selection of one preservative treatment over another is the type of wood being treated and how well it can be penetrated by the treatment.

While many of the advanced wood treatment formulations containing copper used today have proven to be less corrosive to steel, especially micronized copper, MiTek recommends a higher level of corrosion protection for connectors in contact with copper based wood treatments.

Connectors and fasteners in contact with metal free wood preservatives do not require additional corrosion protection due to the preservative itself, however all factors that can create the corrosive environment should be considered when selecting the appropriate finish. If unsure as to whether a particular treatment is corrosive to steel fasteners, check with the supplier of the preservative treated wood product for their recommendation.

## Fire Retardant Treated (FRT) Wood:

Although most common FRT products are not corrosive to metal connectors, not all products are non-corrosive. Additionally, they typically require proprietary strength reductions applied to the lumber in accordance with the manufacturer's specifications. Since the lumber strength is lower, the lateral and withdrawal resistance of nails must also be reduced accordingly. It is important to note that some fire retardants cause the wood to absorb more moisture from the air than untreated lumber. Consequently, the connector may be exposed to a higher level of moisture, resulting in more corrosion.

## Swimming Pools:

This is one of the most hazardous environments for steel connectors due to continuous exposure to high temperature, high moisture content, and corrosive chemicals such as chlorine, bromine, and other disinfectants. The combination of all these factors can lead to accelerated corrosion and premature structural failure. This environment is so corrosive that all possible preventive measures should be employed to prevent the hanger from being exposed to the pool water. These include the use of a vapor barrier and a ventilation system that does not take the air from the pool environment.

Additionally, it has been known that certain grades of stainless steel (316 and others) are susceptible to a mode of structural failure known as stress corrosion cracking (SCC) when exposed to a swimming pool environment. SCC is usually localized near areas of high residual stress and small cracks can rapidly propagate and cause catastrophic failures. See warning below.



### WARNING

Stainless steel connectors and fasteners shall not be used for metal hangers over swimming pools due to stress corrosion cracking. SCC has been known to occur under the following conditions:

- Use of certain grades of stainless steel (grades 316 and others).
- Structural members subjected to high tensile stress.
- Presence of certain chemicals, including chlorine and bromine.

Gold Coat may be the best choice in this environment.

# Corrosion Information

The **Structural Connectors Coating Recommendations** chart below was developed by reviewing field service performance and accelerated corrosion test results. They are offered as general guidelines and are not intended to cover all possible service conditions. Additional consideration may also be needed for:

- wet service conditions
- preservation treated lumber
- fire retardant treated lumber
- strength reducing chemicals
- building near salt water coastal areas.

Additionally, the **Corrosion Protection Guidelines** to the right may also be used to assist in making the proper choice of corrosion protection.

The building designer/engineer has the ultimate responsibility of selecting the most viable protective coating based on knowledge of project specific corrosive environments and local building code requirements.

## Corrosion Protection Guidelines:

- USP recommends stainless steel connectors for the highest level of corrosion protection. As an economical alternative to stainless steel our new Gold Coat connectors are specifically designed for exterior application when in contact with preservative treated wood.
- For connectors in contact with preservative treated wood, the Triple Zinc option provides the minimum G-185 coating thickness required by code and is an economical alternative for exterior applications.
- The use of correct fastener with the connector is critical. Stainless steel connectors require stainless steel fasteners. For exterior applications, hot-dip galvanized fasteners (HDG) or exterior coat (EXT) must be used with both Triple Zinc and hot-dip galvanized finishes. Gold Coat connectors require gold coat or exterior coat.
- USP's zinc dichromate WS Wood Screws are not recommended for use with preservative or fire-retardant treated wood. Some wood screws are available in Gold Coat or exterior coat.
- USP clearly differentiates standard interior G90 connectors from the corrosion resistant connectors. Gold Coat connectors are distinguishable from other connectors due to their gold color.

## Structural Connectors Coating Recommendations

AWPA <sup>9</sup> Use Category	Service Conditions	Use Environment	Example Applications	Preservatives and Retentions <sup>6,7,10</sup>	Minimum Coating Requirements <sup>1,2,3,4</sup>
<b>UC1</b> Interior/Dry	Interior construction, Above ground, Dry	Continuously protected from weather or other sources of moisture	General framing, interior construction	Untreated	G90
<b>UC2</b> Interior/Damp	Interior construction, Above ground, Damp	Protected from weather, but may be subject to sources of moisture	Sill plates	SBX-DOT, Organic ACQ-D (0.15), CA-B (0.10), CA-C (0.06), MCQ (0.06), µCA-C (0.05)	G90  Triple Zinc (G-185) <sup>8,9</sup>
<b>UC3A</b> Above Ground Protected	Exterior construction, Above ground, Rapid water runoff	Exposed to all weather cycles, not exposed to prolonged wetting	Exposed exterior beams or columns in an open, covered structure	ACQ-D (0.25), MCQ (0.15), CA-B (0.10), CA-C (0.06), µCA-C (0.05), Organic	Triple Zinc (G-185) or USP Gold Coat
<b>UC3B</b> Above Ground Exposed	Exterior construction, Above ground, Poor water runoff	Exposed to all weather cycles, including prolonged wetting	Deck beams and joists	ACQ-D (0.25), MCQ (0.15), CA-B (0.10), CA-C (0.06), µCA-C (0.05), Organic	Triple Zinc (G-185) or USP Gold Coat
<b>UC4A</b> Ground Contact General Use	Ground contact, Fresh water; includes above ground applications	Ground contact or fresh water exposed to all weather cycles, Normal exposure	Deck posts, beams and joists. Fresh water docks <sup>11</sup>	ACQ-D (0.40), MCQ (0.23), CA-B (0.21), CA-C (0.15), µCA-C (0.14)	Triple Zinc (G-185) or USP Gold Coat <sup>5</sup>
<b>UC4B</b> Ground Contact Heavy Duty	Exterior construction, Ground contact, Critical components	Ground contact, fresh/salt water water splash exposed to all weather cycles	Permanent wood foundations, critical structural members	ACQ-D (0.60), MCQ (0.23), CA-B (0.31), CA-C (0.25), µCA-C (0.23)	Stainless Steel

1) G90 and G-185 refer to galvanization requirements for ASTM A653 material.  
 2) Connectors galvanized to ASTM A123 may be used in place of either G90 or G185 coatings.  
 3) Other coating may be suitable for a given environment if the conditions are known and predictable.  
 4) For G185 connectors use fasteners galvanized per ASTM A153. For Gold Coat connectors, use Gold Coat fasteners and for stainless steel connectors, use stainless steel fasteners.  
 5) If the environment has the potential to contain elements which may make it more corrosive, the use of stainless steel is recommended.  
 6) MCQ is a micronized copper treatment such as *Micro Pro* by Koppers. µCA-C is a dispersed copper treatment manufactured by Arch Treatment Technologies. Organic preservatives include L<sup>3</sup> from Arch Treatment Technologies and EcoLife II from Viance, LLC.  
 7) For wood treatments not shown, contact USP or the wood preservative manufacturer for recommended coatings.  
 8) Testing by USP has found that in interior applications where the treated wood will remain relatively dry during its service life the use of G90 connectors with MCQ or µCA-C treated wood is appropriate.  
 9) American Wood Protection Association Standard U1-16.  
 10) SBX/DOT= Sodium Borate; ACQ-D = Alkaline Copper Quat Type D; CA-B = Copper Azole Type B; CA-C = Copper Azole Type C; MCQ = Micronized Copper Quat; µCA-C = Dispersed Copper Azole Type C. The number listed in the parenthesis is the required retention level in pounds per cubic foot, or PCF.  
 11) Deck joists and beams must be treated to Use Category UCA4 when they are difficult to maintain, repair or replace and are critical to the performance and safety of the deck.

# Corrosion Information

## Corrosion Resistant Finishes

USP offers several corrosion resistant finishes to cover a range of corrosion performance.

Corrosion Protection Level	Finish / Material	Description	Required Fastener	Ordering
<b>CONNECTORS</b>				
	USP Primer	Primer paint is used to protect steel during shipping and installation but is not considered a corrosion protection method when installed in corrosive environments.	Bright fasteners	Stock number as listed in the chart
	G90 Galvanizing	Galvanizing provides a prefabrication coating of 0.90 ounces of zinc per square foot of surface area (both sides) measured in accordance with ASTM A 653.	Bright fasteners	Stock number as listed in the chart
	Triple Zinc (TZ) (G-185 Galvanizing)	TZ galvanizing provides a prefabrication coating of 1.85 (G-185) ounces of zinc per square foot of surface area (both sides) measured in accordance with ASTM A 653.	Hot-dip galvanized or <b>Exterior Coat</b> fasteners	To order, add TZ to stock number, as in C44-TZ
	Hot-Dip Galvanized (HDG)	HDG coating provides an after-fabrication hot-dipped zinc coating. The coating thickness is dependent on the connector material, but generally ranges from 1.2 to 2.3 ounces of zinc per square foot of surface area (both sides). Hot-dip products meet requirements set forth in ASTM A 123.	Hot-dip galvanized or <b>Exterior Coat</b> fasteners	To order, add HDG to stock number, as in KCC44-HDG
	Gold Coat (GC)	Gold Coat is a proprietary multi-layer protection system. It is comprised of an organic top coat barrier layer and a zinc layer placed over a steel substrate.	Gold Coat or Hot-dip galvanized fasteners	To order, add GC to stock number, as in AC7-GC
	Stainless Steel (SS)	Best option for corrosion protection. Quality stainless steel (316SS grade steel) is used to fabricate connectors. Although costs are higher, some applications may need the virtual corrosion proof quality of stainless steel.	Stainless Steel fasteners	To order, add SS to stock number, as in PBES44-SS
<b>FASTENERS</b>				
	Yellow Zinc	Zinc yellow chromate finish		Stock number as listed in the chart
	Hot-Dip Galvanized (HDG)	HDG coating provides an after-fabrication hot-dipped zinc coating. The coating thickness is dependent on the connector material, but generally ranges from 1.2 to 2.3 ounces of zinc per square foot of surface area (both sides). Hot-dip products meet requirements set forth in ASTM A 123.		Stock number as listed in the chart
	Exterior Coat (EXT)	EXT finish is a proprietary coating recommended for use in contact with preservative treated lumber when installed in above ground applications away from salt water environments.		Stock number as listed in the chart
	Gold Coat (GC)	Gold Coat is a proprietary multi-layer protection system. It is comprised of an organic top coat barrier layer and a zinc layer placed over a steel substrate.		Stock number as listed in the chart
	Stainless Steel (SS)	Best option for corrosion protection.		Stock number as listed in the chart

### DISCLAIMER

The general information and guidelines provided in this USP Product Catalog shall not be used as a substitute for competent professional examination and verification. It is the responsibility of the building designer/engineer to determine the applicability and suitability of the information provided. Anyone making use of this information assumes all responsibility and liability arising from such use.

Updated product information is designated in **blue font**.

# Corrosion Resistant Product Offering



USP Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Exterior Coat (EXT)	Gold Coat (GC)	Stainless Steel (SS)	USP Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)	USP Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
<b>Fasteners / Anchors</b>						<b>Holdowns / Foundation Anchors</b>					<b>Column / Post Caps</b>				
AB1212-HDG						STB24					PB66-6TZ				
AB126-HDG						STB28					PBC44-TZ				
AB128-HDG						STB34					PBC66-TZ				
AB5812-HDG						STB36 USA					PBES44				
BP12						STBL24					PBES66				
BP583						STBL28					PBS44				
HBPS12						TA51 USA					PBS66				
HBPS58						TA71 USA					PBS66R				
LBP12-TZ						TDL5					PCM44				
LBP58-TZ						TDX2-TZ					PCM4416				
LBPS12-TZ						<b>Column / Post Caps</b>					PCM46				
LBPS58-TZ						BC400-TZ					PCM4616				
LL915						BCS2-24					PCM4816				
LL930						BCS2-36					PCM66				
N10C						C44					PCM6616				
N10-GC						C46					<b>Column / Post Bases</b>				
N16C						C46R					APB66				
N8-GC						C66					APB66				
NA11						C66R					CBSQ44-TZ				
NA16D						EPCM4416					CBSQ46-TZ				
NA20D						EPCM4616					CBSQ66-TZ				
NA9D						EPCM6616					D44-TZ				
NA8DHDGPT USA						EPCM66					D46				
N8CHDGPT USA						KCC325-4 USA					D46R-TZ				
NA10DHDGPT USA						KCC325-6 USA					D66				
N10CHDGPT USA						KCC44 USA					D66R				
NA16DHDGPT USA						KCC46 USA					EBG44-TZ				
SSN10C						KCC48 USA					EBP44T-TZ				
SSN16C						KCC525-4					EPB4408				
SSN8C						KCC525-6					EPB4608				
SSNA10D						KCC64 USA					EPB6608				
SSNARD						KCC66 USA					EPBH44				
THR1218-HDG						KCC68 USA					EPBH46R				
THR1224-HDG						KCC88 USA					EPBH66				
THR1236-HDG						KCCQ325-4					EPBH66R				
THR125-HDG						KCCQ325-6					KCB44				
THR126-HDG						KCCQ44					KCB46				
THR128-HDG						KCCQ46					KCB48				
THR5812-HDG						KCCQ48 USA					KCB66				
THR5816-HDG						KCCQ525-4					KCB68				
THR588-HDG						KCCQ525-6					KCB88				
WS15						KCCQ525-8 USA					KCB1010				
WS2 USA						KCCQ64					KCB1212				
WS25 USA						KCCQ66					KCBQ44				
WS3						KCCQ71-4 USA					KCBQ46				
WS35 USA						KCCQ71-6 USA					KCBQ66				
WS45						KCCQ74 USA					KCBQ88				
WS6						KCCQ76 USA					PA44E				
WS8 USA						KECC325-4 USA					PA44				
WSBH25-EXT USA						KECC325-6 USA					PA46E				
WSBH4-EXT USA						KECC44 USA					PA46				
WSBH6-EXT USA						KECC46 USA					PA66E				
WSBH8-EXT USA						KECC525-4 USA					PA66ER-TZ				
WSBH10-EXT USA						KECC525-6 USA					PA66R				
WSWH278 USA						KECC64 USA					PA66				
WSWH358-EXT USA						KECC66 USA					PAU44				
WSWH45 USA						KECC68 USA					PAU46				
WSWH5 USA						KECC88 USA					PAU66				
WSWH6 USA						KECCQ325-4					PAU88				
WSWH8-EXT USA						KECCQ325-6					RPB-TZ				
<b>Holdowns / Foundation Anchors</b>						KECCQ44					RSCH44				
FA3						KECCQ46					RSCH46				
FA4						KECCQ48 USA					WAS44				
FWAN-TZ						KECCQ525-4 USA					WAS46				
LTS19-TZ						KECCQ525-6					WAS66				
PA18						KECCQ525-8 USA					WE44				
PA23						KECCQ64					WE46				
PA28						KECCQ66					WE66				
RP6						KECCQ71-4 USA					<b>Framing Plates &amp; Angles</b>				
ST1-TZ						KECCQ71-6 USA					A3				
ST2-TZ						KECCQ74 USA					AC5				
STB16						KECCQ76 USA					AC7				
STB20						PB44-6TZ					AC9				

USA Only available in USA    🇨🇦 Only available in Canada

- Corrosion Finish**
- 🔵 Stainless Steel
  - 🟡 Gold Coat
  - ⬛ Exterior Coat
  - ⬜ HDG
  - 🟢 Triple Zinc

# Corrosion Resistant Product Offering



USP Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)	USP Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)	USP Stock No.	Triple Zinc G-185 (TZ)	Hot-Dip Galv. (HDG)	Gold Coat (GC)	Stainless Steel (SS)
<b>Framing Plates &amp; Angles</b>					<b>Straps</b>					<b>Hangers</b>				
ANJ44S-HDG					PS418-HDG	USA				SKHH210R-2				
CDA-HDG	USA				PS720-HDG	USA				SKHH210R-2IF				
JA1					RS150					SKHH410L				
KHL33					RS16-R	USA				SKHH410LIF				
KHL35					T6					SKHH410R				
KHL37					TH12-HDG					SKHH410RIF				
KHL43					<b>Hangers</b>					SKHH414LIF				
KHL46					HD210-2IF					SKHH414RIF				
KHL55					HD210-3IF					SKHH46L				
KHL57					HD28-2IF					SKHH46LIF				
KHL76					HD410					SKHH46R				
ML24-TZ					HD410IF					SKHH46RIF				
ML26-TZ					HD412					SUH210	USA			
MP3					HD412IF					SUH210-2				
MP34					HD44IF					SUH210-3				
MP4F					HD46					THD28-2				
MP5					HD46IF					THD410				
MP6F					HD48					THD46				
MP7					HD48IF					THD48				
MP9					HD610					THDH412				
MPA1					HD610IF					THDH610	USA			
<b>Stud Plate Ties</b>					<b>Hurricane / Seismic Anchors</b>									
RSPT6					HD612					HHCP2				
RSPT6-2					HD612IF					HHCP4-TZ				
SPT22					HD68					LFTA6				
SPT24					HD68IF					RT10				
SPT4					HDQ210-2IF	USA				RT15				
SPT6					HDQ210-3IF	USA				RT16-2				
SPT8					HDQ310IF	USA				RT16A				
SPTH4					HDQ410IF	USA				RT20				
SPTH6					HDQ412IF	USA				RT3A				
SPTH8					HDO610IF	USA				RT4				
<b>Lateral Joist Connectors</b>					<b>Embedded Truss Anchors</b>									
LJC-TZ					HUS210					HTA20	USA			
LJQ15-TZ					HUS210-2IF					<b>Deck &amp; Fences</b>				
LJQ17-TZ					HUS212-2					ADTT-TZ				
LJQ20-TZ					HUS26					CSH-TZ				
LJQ23-TZ					HUS28					DC50-TZ				
LJQ25-TZ					HUS28-2IF					DTB-TZ				
LJQ35-TZ					JL210IF-TZ					ERB24-TZ				
<b>Twist Straps</b>					<b>Straps</b>									
HTW20					JL24IF-TZ					FB14-TZ				
LTW12					JL26IF-TZ					FB23-TZ				
LTW18					JL28IF-TZ					FB24-TZ				
MTW12					JPF24					FB26-TZ				
MTW16					JPF26					FC24-TZ	USA			
MTW20					JUS210					FPH24-TZ	USA			
MTW30					JUS210-2					FRB24-TZ				
<b>Straps</b>														
HRS416-TZ					JUS210-3					PRT15-TZ				
HTP37-TZ					JUS24					PRT2H-TZ				
KHST2	USA				JUS24-2					PRT2-TZ	USA			
KHST3	USA				JUS26					PRVIC2-TZ				
KRPS22					JUS26-2					SCA10-TZ				
KRPS28					JUS28					SCA9-TZ				
KST227					JUS28-2					SDJT14-TZ				
KST237					JUS28-3					SDPT5-TZ				
KST248					JUS36					SDPT7-TZ				
KST260					JUS410					<b>General Hardware</b>				
L6					JUS44					ICPL516-TZ				
LH12					JUS46					ICPL58				
LSTA36					JUS48					TTA12-TZ				
MSTA12					LSSH15-TZ					TTA2-TZ				
MSTA15					LSSH210					TTB22-TZ				
MSTA18					LSSH31					TTC24-TZ				
MSTA21					MSH422					TTC42-TZ				
MSTA24					SKH210L					TTF22-TZ				
MSTA30					SKH210L-2					TTR-TZ				
MSTA36					SKH210R					TTU2-TZ				
MSTA9					SKH210R-2					WT22				
MSTAM24					SKH26L					WT22B-HDG	USA			
MSTAM36					SKH26R									
PS218-HDG	USA				SKH28L									
					SKH28R									
					SKHH210L-2									
					SKHH210L-2IF									

**Corrosion Finish**  
■ Stainless Steel  
■ Gold Coat  
■ Exterior Coat  
■ HDG  
■ Triple Zinc

USA Only available in USA    🇨🇦 Only available in Canada

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