


# CORROSION PROTECTION NEWS



USP Structural Connectors™ is a leader in manufacturing structural connectors. We want to make sure that you and your customers are offered the appropriate products to build the safest and strongest structure. In addition to stainless steel and hot-dip galvanized, USP offers a line of Triple Zinc G-185 connectors which can be used with the new treated wood in many types of applications.

The purpose of this communication is to educate and inform our customers about the industry changes to pressure treated wood and associated use of connectors and fasteners. Your customers will be asking for the new treated wood and we want to make sure you receive the most appropriate information about what types of connectors and fasteners you should use.

Consumers purchasing treated lumber should refer to the chemical supplier of the treated lumber for more detailed information. For specific information about applications of these connectors, as well as their product life in corrosive environments and other product warranty information, please refer to the USP Structural Connectors™ Product Catalog or visit our website at [www.USPconnectors.com](http://www.USPconnectors.com).

## **Why is CCA Treated Lumber not going to be manufactured after December 31, 2003?**

Historically Chromated Copper Arsenate (CCA) has been the most commonly used type of preservative to treat wood. Recent studies have shown the CCA "leaches" (is released) from treated wood by rainwater. This can leave a residue of arsenic on the wood surface and may contaminate the soil in proximity to the wood structure. As a result, concerns have been raised related to the potential for arsenic poisoning. In response, the treated wood chemical suppliers, in cooperation with the Environmental Protection Agency (EPA), have voluntarily agreed to stop producing CCA treated wood for residential and some commercial use by January 1, 2004. CCA treated wood will still be produced, but only for industrial, highway, and agricultural applications.

## **What are the predominant types of new alternative wood preservatives available?**

**Alkaline Copper Quaternary (ACQ)** uses ethanolamine or ammonia to act as the carrier solution. Typical brand names are Preserve, Preserve Plus, NatureWood, and AC2.

**Copper Azole Type A and B (CBA-A and CA-B)** are next generation copper based preservatives. One brand name for these treatments is Natural Select Wood.

**Sodium Borate (SBX)** utilizes boron as an active ingredient. Typical brands are Timbor, EnviroSafe Plus, Advance Guard®, and SmartGUARD. Borates may not be approved for exterior applications. Consult the treated wood supplier.

## **Why should we consider Triple Zinc Products instead of the standard G60 products?**

Standard G60 products have limited corrosion resistance. When used in contact with some of the new wood preservatives the G60 products could experience accelerated corrosion as a result of the new formulas used to treat the wood. Corrosion is a multifaceted phenomenon dependent on many variables. Most of these variables are related to the environment the steel is placed in. Corrosion can occur leading to loss of strength and reduced connector load carrying capability due to exposure to ocean air or salt spray, chemicals used in fire retardant and preservative treat wood, acid rain, agricultural chemicals and fertilizers, animal wastes, swimming pool chemicals, and even common outdoor exposure with alternating wet and dry conditions. Of course, there are many more possible corrosive environments not mentioned here.

Triple Zinc G-185 contains roughly three times the amount of zinc as the standard G60 galvanizing. This provides additional protection against corrosion attributed to the new wood preservatives. Unfortunately, we are unable to predict the service life of particular connectors in selected environments. We can, however, provide a relative level of protection information regarding corrosion resistance.

**USP**  
**Structural**  
**Connectors™**  
A GIBRALTAR COMPANY

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**What effect do the preservatives have on Structural Connectors and Fasteners?**

In general, connectors, including anchors and fasteners, installed in corrosive environments or exposed to corrosive materials, or chemicals, can be damaged possibly resulting in the reduction of load capacity. While G60 connectors have historically performed well when properly installed in less corrosive environments, during 2004 USP is transitioning to G90 as a minimum level of galvanization on our standard product line. This transition will provide additional corrosion protection in our standard product line.

The results of our corrosion testing have shown that ACQ and CA-B preservative treatments tend to corrode at a greater rate than CCA. The SBX and DOT preservatives tend to corrode at a slower rate than CCA. The relative results of these tests are summarized in the chart shown below. For ACQ and CA-B wood preservatives, USP recommends the use of Triple Zinc G-185 as a minimum level of corrosion protection. The fasteners used with Triple Zinc G-185 connectors should be hot-dip galvanized. Stainless steel connectors and fasteners will provide the best level of corrosion protection.

With all wood preservatives, other potential environmental factors should be considered when selecting an appropriate level of corrosion protection. Often it is difficult to control the type of wood preservative that will be in contact with a connector. USP recommends the use of Triple Zinc G-185 connectors in all outdoor applications and with treated wood, unless the preservative used and the surrounding environment can be anticipated and controlled.

**What is the physical difference between the standard G60 connector and the Triple Zinc G-185 connector?**

The difference between USP's standard G60 connectors and Triple Zinc G-185 connectors is in the amount of zinc coating on each product. G60 connectors are made from hot-dip galvanized steel having a minimum of 0.60 ounces per square foot of zinc coating. Triple Zinc G-185 connectors are made from hot-dip

galvanized steel coated with roughly three times the G60 amount of zinc, offering enhanced protection from corrosion. The appearance of the standard G60 steel connector and the Triple Zinc G-185 connector, however, are very similar.

**What do I need to do to prepare for the transition from the standard G60 products to the Triple Zinc G-185 connectors?**

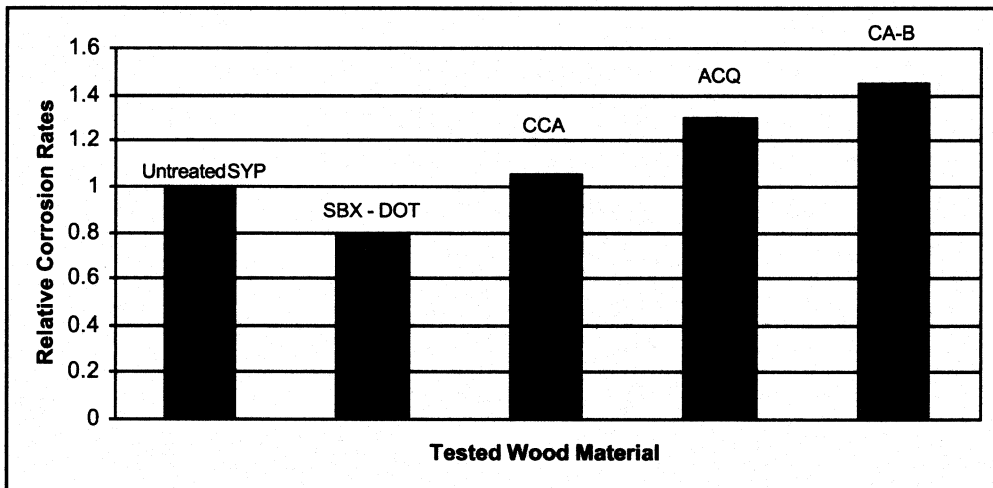
While you can sell any existing inventory using CCA wood treatments through December 31, 2004, we recommend you prepare to sell the new wood treatments by developing a transition plan today. As you make the transition from CCA to the new treated lumber, you should also make the transition to the appropriate structural connectors recommended for use with the new treated lumber.

USP Structural Connectors offers an extensive product line of Triple Zinc structural connectors that we recommend as a minimum for use with the wood treatments. USP Structural Connectors has also developed special packaging to differentiate the standard connectors from the Triple Zinc connectors. The Triple Zinc connectors are identified with a green label on cartons, green bin cards on retail displays and green writing on each product identification sticker. A consumer brochure is also available that educates consumers on the topic.

We recommend that you contact your USP Technical Sales Representative to develop a plan for making the transition to the required structural connectors for the new treated lumber. This will ensure that you are providing your customers the most appropriate materials for their construction projects.

**What products are available in Triple Zinc from USP?**

USP's corrosion resistant product offering enables you to increase your profits. We have expanded our triple zinc product line to include the most common used connectors in outdoor applications for use with treated wood. This product offering is shown on page 3.



# USP Structural Connectors™ Triple Zinc (G-185) Product Offerings

**Holdowns/ Foundation Anchors**

FA3-TZ  
 LTS20B-TZ  
 PA18-TZ  
 PA23-TZ  
 PA28-TZ  
 PA35-TZ  
 ST1-TZ  
 ST2-TZ  
 TA51-TZ  
 TA71-TZ  
 TDX2-TZ

**Embedded Truss Anchors**

HLPTA75-TZ  
 HTA16-18TZ  
 HTA20-18TZ  
 HTA20-TZ  
 HTA24-TZ  
 TA20-TZ  
 TA20R-TZ  
 TA22-TZ  
 TA24-TZ  
 TAPL16-TZ

**Hurricane/Seismic Anchors**

HHCP2-TZ  
 LFTA6-TZ  
 RT3-TZ  
 RT4-TZ  
 RT5-TZ  
 RT7-TZ  
 RT7A-TZ  
 RT10-TZ  
 RT15-TZ  
 RT16-TZ  
 RT16-2TZ  
 RT20-TZ

**Column Post Bases**

D44-TZ  
 D46-TZ  
 D66-TZ  
 EBG44-TZ  
 PA44-TZ  
 PA44E-TZ  
 PA46-TZ  
 PA46E-TZ  
 PA66-TZ  
 PA66E-TZ  
 PAT35-TZ  
 PAU44-TZ  
 PAU46-TZ  
 PAU66-TZ  
 WAS44-TZ  
 WAS46-TZ  
 WAS66-TZ  
 WE44-TZ  
 WE46-TZ  
 WE66-TZ

**Column Post Caps**

C44-TZ  
 C46-TZ  
 C66-TZ  
 EPCM4416-TZ  
 EPCM4616-TZ  
 PB44-6TZ  
 PB66-6TZ  
 PBES44-TZ  
 PBES66-TZ  
 PBS44-TZ  
 PBS66-TZ  
 PCM44-TZ  
 PCM4416-TZ  
 PCM46-TZ  
 PCM4616-TZ  
 PCM66-TZ  
 PCM6616-TZ

**Joist Hangers**

HUS26-TZ  
 HUS28-TZ  
 HUS28-2IFTZ  
 HUS210-TZ  
 HUS210-2IFTZ  
 JUS24-TZ  
 JUS26-TZ  
 JUS26-2TZ  
 JUS28-TZ  
 JUS28-2TZ  
 JUS28-3TZ  
 JUS210-TZ  
 JUS210-2TZ  
 JUS210-3TZ  
 JUS214-2TZ  
 JUS44-TZ  
 JUS46-TZ  
 JUS48-TZ  
 JUS410-TZ  
 JUS414-TZ  
 LSSH210-TZ  
 LSSH31-TZ  
 SKH26R/L-TZ  
 SKH28R/L-TZ  
 SKH210R/L-TZ  
 TMU26-TZ

**Truss Hangers**

HJC26-TZ  
 HTHJ26-18TZ  
 MSH29-TZ  
 MSH218-2TZ  
 MSH222-2TZ  
 MSH418-TZ  
 MSH422-TZ  
 SBP4-TZ  
 SBP6-TZ  
 THD26-TZ  
 THD26-2TZ  
 THD28-TZ  
 THD28-2TZ  
 THD210-2TZ  
 THDH28-2TZ

**Framing Plates & Angles**

A3-TZ  
 AC5-TZ  
 AC7-TZ  
 AC9-TZ  
 JA1-TZ  
 MP3-TZ  
 MP34-TZ  
 MP4F-TZ  
 MP5-TZ  
 MP7-TZ  
 MP9-TZ  
 MPA1-TZ  
 MPA1F-TZ

**Stud Plate Ties**

RSPT4-TZ  
 SPT4-TZ  
 SPT6-TZ  
 SPT8-TZ  
 SPT22-TZ  
 SPT24-TZ  
 SPTH4-TZ  
 SPTH6-TZ  
 SPTH8-TZ

**Straps**

KRPS18-TZ  
 KRPS22-TZ  
 MSTA9-TZ  
 MSTA12-TZ  
 MSTA15-TZ  
 MSTA18-TZ  
 MSTA21-TZ  
 MSTA24-TZ  
 MSTA30-TZ  
 MSTA36-TZ  
 RS150-TZ  
 RT24F-TZ

**Twist Straps**

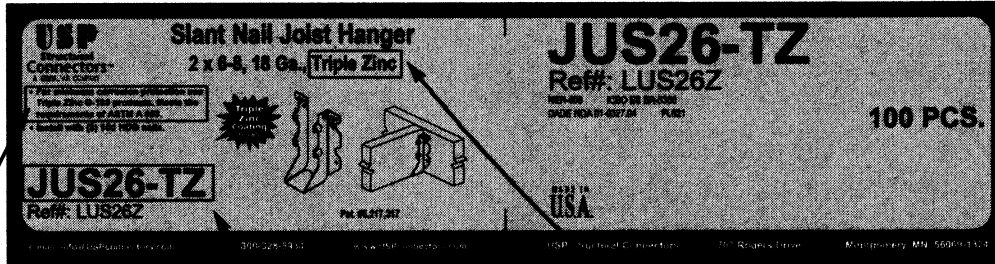
LTW12-TZ  
 LTW18-TZ  
 MTW12-TZ  
 MTW16-TZ  
 MTW20-TZ  
 MTW30-TZ  
 RT24T-TZ

**Miscellaneous**

DC50-TZ  
 ERB24-TZ  
 FB14-TZ  
 FB16-TZ  
 FB23-TZ  
 FB240-TZ  
 FRB24-TZ  
 FRB-TZ  
 ICPL58-TZ  
 L6-TZ  
 PRT2-TZ  
 SCA9-TZ  
 SCA10-TZ  
 SDJT14-TZ  
 SDPT5-TZ  
 SDPT7-TZ  
 T6-TZ

USP Structural Connectors™ clearly differentiates our Triple Zinc products from the Standard G60 products. These are examples of our Triple Zinc carton labels, bin cards for retail displays, and individual product labels.

**Carton Label**



USP recommendation and standards that are met with the Triple Zinc coating.

Part number is referenced with a TZ at the end for Triple Zinc products.

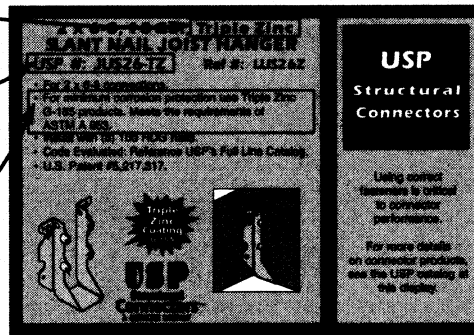
Triple Zinc is called out after product description.

**Triple Zinc Bin Card**

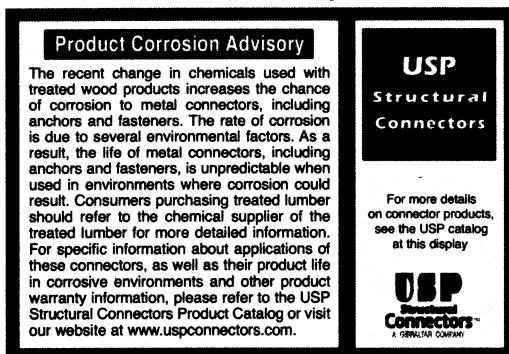
Triple Zinc is called out after product description.

Part number is referenced with a TZ at the end for Triple Zinc products.

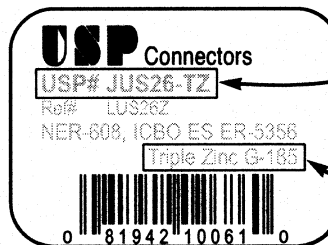
USP recommendation and standards met with Triple Zinc coating.



**Product Corrosion Advisory Bin Card**



**Individual Product Label**



Part number is referenced with a TZ at the end for Triple Zinc products.

Triple Zinc G-185 is referenced above the bar code.