

<b>Use Category</b>	<b>Brief Description</b>
UC1	Interior Dry
UC2	Interior Damp
UC3A	Exterior Above Ground, Coated with Rapid Water Runoff
UC3B	Exterior Above Ground, Uncoated or Poor Water Runoff
UC4A	Ground Contact, General Use
UC4B	Ground Contact, Heavy Duty
UC4C	Ground Contact, Extreme Duty
UC5A	Marine Use, Northern Waters (Salt or Brackish Water)
UC5B	Marine Use, Central Waters (Salt or Brackish Water)
UC5C	Marine Use, Southern Waters (Salt or Brackish Water)
UCFA	Interior Above Ground Fire Protection
UCFB	Exterior Above Ground Fire Protection

Waterborne, Creosote, and Oil-borne (penta) are the three broad classes of preservatives typically used when pressure-treating wood.

Wood treated with waterborne preservatives is typically used in residential, commercial and industrial building structures. Creosote is primarily used for treating railroad ties, guardrail posts, and timbers used in marine structures. Oil-borne (penta) is most often used for treating utility poles and cross arms.

Several typical waterborne preservatives used in building applications include: Chromated Copper Arsenate (CCA-C), Alkaline Copper Quat (ACQ-C, ACQ-D, ACQ-D Carbonate), Micronized Copper Quat (MCQ), Copper Azole (CA-B & CA-C,  $\mu$ CA-C) and Sodium Borates (SBX/DOT). These treatments are often referred to by trade names such as: Wolmanized Natural Select™ (Copper Azole), Preserve and NatureWood® (ACQ), MicroPro™, Smart Sense™ (MCQ), and Advance Guard® (Borate). Each preservative usually has a number of variations available so care should be exercised when specifying treated wood.

Some different oil-borne preservatives that are used are Chlorpyrifos/IBPC, Copper Naphthenate and Pentachlorophenol. One advantage of these treatments is that they do not create swelling in the wood, but there is generally an added cost over water-borne treatments as well as availability in some regions.

**What does retention level mean and what retention level should I use?**

Retention level refers to the amount of preservative that remains in the wood after the treatment process is complete. It is measured on a weight basis and is typically expressed as pounds of preservative per cubic foot (pcf) of wood.

There are a number of typical retention levels available. Generally, the harsher the condition the wood is exposed to, the higher the retention level must be

Higher chemical content refers to wood for ground contact with specified retention levels greater than

- 0.40 pcf for ACQ
- 0.34 pcf for MCQ
- 0.21 pcf for CA-B
- 0.15 pcf for CA-C and MCA, or
- 0.14 pcf for  $\mu$ CA-C.

Where fasteners are in contact with preservative-treated lumber, high exposure refers to wood with specified retention levels higher than

- 0.15 pcf for ACQ,
- 0.15 pcf for MCQ,
- 0.10 for CA-B,
- 0.06 pcf for CA-C and MCA, and
- 0.05 pcf for  $\mu$ CA-C.

Rot resistance is the principle reason(s)....

**Pressure-treated lumber** is wood that has been immersed in a **liquid preservative** and placed in a **pressure chamber**. The chamber forces the chemical into the wood fibers. The pressurized approach makes sure that the chemical makes it to the core of each piece of wood -- it is much more effective than simply soaking the wood in the chemical.

The most common chemical used to treat lumber used to be **chromated copper arsenate**, or CCA. In 2003, however, the Environmental Protection Agency restricted the use of CCA in residential settings due to health and environmental concerns about arsenic leaching out of the wood. The most widely used alternative to CCA is **alkaline copper quat**, or ACQ. Copper is toxic to various insects and fungi that might cause decay. ACQ binds to wood fibers very well and allows wood to last decades even when it is in contact with the ground.

The protection provided by the chemical depends on the amount of chemical that the wood absorbs. In the United States, the amount of chemical is measured in pounds of chemical per cubic foot of wood. For ground contact, 0.40 pounds per cubic foot is needed. For foundations, 0.60 pounds per cubic foot is the standard.

About all the big boxes carry is 0.1 and 0.2 (read the tables) unless it's special ordered... Next time you cut up some BB PT look at the cross section... More often than not the green doesn't always makes it all the way to the center either...

Think of all that BB PT that has been improperly installed because of the lack of knowledge...

The chemicals in treated wood are generally not good for humans. **This is why you see warnings advising you to wear gloves, avoid breathing the sawdust, and refrain from burning treated wood. Keeping small children away from treated wood is also a good idea.**

UC.1 Interior Dry

UC.2 Interior Damp

UC.3A Exterior Above Ground, Coated with Rapid Water Runoff

UC.3B Exterior Above Ground, Uncoated or Poor Water Runoff

UC.4A Ground Contact, General Use

UC.4B Ground Contact, Heavy Duty

UC.4C Ground Contact, Extreme Duty

UC.5A Marine Use, Northern Waters (Salt or Brackish Water)

UC.5B Marine Use, Central Waters (Salt or Brackish Water)

UC.5C Marine Use, Southern Waters (Salt or Brackish Water)

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