



Home Inspection Services Newsletter

January 1, 2007

Educational Section: **PEX Plumbing Pipe**

The potable water piping in the majority of new homes that we inspect is no longer copper but cross-linked **Polyethylene** or **PEX** tubing.

History: **PEX** was developed and utilized in Europe since the 60s. It was introduced in the US in the 80s and is now heavily used in new builds.

Why PEX: **PEX** is easy to install, flexible, good high and low temperature range, tends to be quieter than copper, its smooth interior resists mineral build up and corrosion, and generally costs less to install.

Indoor Applications: Hot & cold water distribution, underground and under slab water feed are approved in the national plumbing code.

Outdoor Application: **PEX** is not designed for unprotected or above ground application. **PEX** should be shielded from Sunlight (UV).

PEX distribution configuration: Most **PEX** piping systems utilize a “home run” or manifold system providing dedicated lines from a manifold to a plumbing fixture. This design reduces the number of joints in the system, allows the proper sizing of lines, and reduces the amount of water that must be purged from the lines to get hot water at a fixture.

Joints: There are two approved methods which involve mechanical fittings; crimp (most widely used) and compression fittings. **PEX** cannot be joined by solvent cement or heat fusion.

Safety: No significant product claims have come to our attention. Bear in mind that the installed product has not passed the “test of time”.

Inspection Findings: At the pre-drywall inspection stage, 80% of the time we find these types of installation problems: **PEX** tubing in contact with metal gusset plates, nails into or proximate to tubing, and tubing too close to finished wall surface (subject to nail penetration).

Snow Birders Note: Some high end manifold systems feature fixture shut-off valves allowing the user to shut off the water to individual fixtures from one location. If you’re building a custom “vacation home”, you may wish to specify this type of system for ease of “close down”.

Inspection Item for Jan.: **Lint in the dryer exhaust**

(Each month, we select appropriate items so that over a 12 month period you are reminded to attend to most common household maintenance/inspection items.) It's not easy to pull out the dryer, disconnect the exhaust hose, and vacuum the hose and dryer. People will go for years without cleaning those areas. That lint can fully or partially block the exhaust and is a fire waiting to happen. The regularity of cleaning depends on the amount of use and the type and method of piping outside the home (vertical exhaust through the roof clogs quicker). We suggest cleaning it, mark the date on the calendar, clean it again in 6 months and then decide how often cleaning needs to take place.

Question of the Month: **What is "Reverse Polarity"?**

Modern 110 Volt electrical circuits consist of three wires; hot (black), neutral (white), and ground (uninsulated). Electrical devices (receptacles, lights, etc.) have designated wiring connections. When the hot wire is incorrectly attached to the neutral terminal and the neutral wire is attached to the hot terminal, polarity is reversed. This condition creates a safety (electrical shock) hazard in certain situations. Examples: the wall switch (on the hot wire) does not kill power to the device; the threads on a light bulb contact the hot side of the circuit instead of the neutral.

Safety Tip of the Month: **Smoke Detectors**

Test them using the test button. Have a supply of 9 Volt batteries on hand. If a detector fails to respond or chirps after test, we recommend replacing the batteries in all units. If your detectors cannot be tested, we recommend replacing them with testable detectors. Current safety standards call for one detector per bedroom, in halls proximate to bedrooms, and on each floor. Consider adding additional detectors.

Drawing for January: **Bottle of Red Wine-Lauren's Pick**

To enter, send a reply email with "January Drawing" in the subject along with your name and Ph# to Lauren@hainspect.com Mary R of Mesa was December's winner.

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