The Facts About Housewrap and UV Exposure.

Here are two facts about housewrap: One, a damaged housewrap won’t perform as it’s intended, and two, the major cause of damage is deterioration due to excessive exposure to the sun’s ultraviolet (UV) rays.

The sun’s UV energy reaches the earth in a wide range of wavelengths, most of which are invisible. This UV radiation is commonly divided into three groups:

- UV-A (315-400 nm) - closest to visible light
- UV-B (280-315 nm)
- UV-C (less than 280 nm)

The measure “nm” stands for nanometers, or billionths of a meter, which is important to know because short-wavelength radiation has higher energy levels, increasing its ability to damage exposed materials. For example, UV-A causes your skin to sunburn, but the shorter and more powerful UV-B wavelengths penetrate more deeply to damage chromosomes of living cells.

Fortunately, the earth’s ozone layer completely absorbs UV-C, the shortest wavelengths; and it partially absorbs UV-B. However, most of the longest wavelengths, UV-A, reach the earth’s surface. It is the combination of UV-A and UV-B wavelengths that can adversely impact the durability of many building materials, such as polymer-based housewraps and other water resistive barriers (WRBs).

Prolonged exposure to UV radiation can cause photo-degradation, discoloration, loss of tensile strength, delamination of surface layers and reduced water repellency.

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The Facts (Cont’d.)

Some WRB manufacturers protect against UV attack by modifying the material fibers, by coating them with inhibitors to absorb or chemically neutralize photochemical reactions, or by reflecting energy back to the atmosphere.

Of course, it is best to avoid leaving housewrap exposed at the jobsite for longer than necessary, but TYPAR HouseWrap is designed and manufactured to offer the user a unique advantage over other products because it can be exposed for up to six months. Many housewraps on the market only offer up to four months of UV protection (see Figure 1).

The manufacturers of TYPAR HouseWrap have incorporated a patented technology to resist UV attack, an approach so effective that product replacement is guaranteed if it deteriorates due to excessive UV exposure. An independent testing lab has shown TYPAR to hold its value much better compared to other polymer based housewraps and paper (See Fig 2 and 3).

For more information on TYPAR® Weather Protection System products, visit typar.com.