

HOLDRITE® HydroFlame™ - Your Partner in GREEN Building



Worldwide buildings represent 40% of the world's energy demand and energy consumption is expected to grow as much as 45% by the year 2025. Through improvements in the areas of both building construction and increased efficiencies in building operation, global CO² emissions can be controlled and decreased.

HOLDRITE is committed to making substantial contributions with regards to GREEN Building.

Though products alone cannot be certified under LEED, the performance characteristics of the HOLDRITE HydroFlame System can assist LEED practitioners in identifying attributes that contribute to green building credits/points under a variety of categories. These categories include:

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality

Sustainable Sites – HydroFlame sleeving systems support several sustainable building characteristics

1. Water tightness of floor penetrations helps to avoid jobsite damages during the construction phases of a building that might otherwise be caused by inclement weather or water spillage. HydroFlame sleeves contain UL Classified water tight ratings (UL “W-Rated”). This water tight rating exists in two critical locations in each floor penetration. The annular space between the penetrant and the inner surface of the sleeve itself is sealed as well as the outside of the sleeve that meets the concrete floor slab. Both potential water paths are blocked and contain the UL “W-Rating”.
2. Water tightness of floor penetrations during the life of the building helps to protect against property damage caused by water leaks or the results of firefighting activities. These damages include potential harm to a wide variety of building components, including mechanical and electrical equipment and structural components. Water damage can also affect ceiling structures, drywall surfaces and similar porous materials that may result in mold growth. Damages of these types contribute to health risks, occupant disruptions and financial impacts to building ownership resulting from forced vacancies during periods of repair.
3. Movement capabilities are enhanced through the use of HydroFlame sleeves which allow for expansion and contraction of piping systems and surrounding structural components without damaging critical building utility umbilical systems and power sources.

4. Firestop, which is built into HydroFlame sleeving systems, protect both lives and property from the ravages of fire. These firestop properties are tested and classified by international standards bodies, such as UL, for this purpose.

Water Efficiencies – A variety of water saving benefits and a reduction in water pollution

1. Water savings is realized through the use of HydroFlame sleeving system by providing an alternative to core drilling of floor penetrations to allow for building utilities to travel from floor to floor. Core drilling machines often consume substantial amounts of water while drilling each hole.
2. Water savings is also realized by the elimination of the use of fire caulking compounds to seal floor penetrations. The clean-up of personnel and equipment resulting from manual caulking applications requires water.

Energy and Atmosphere – Contributions to energy efficiency and protection for airborne toxins

1. Air leakage in buildings adversely affects both heating and cooling system efficiencies. Penetrations through floor systems caused by cables, conduits and piping systems can allow for unbalanced and inefficient heating and cooling zones. HydroFlame sleeves provide built-in factory installed components that create air tight floor penetrations, thus contributing to energy savings. Field applied attempts to seal these floor penetrations rarely remain intact during the life of a building and thus allow for these leakages to occur. HydroFlame sleeves are classified by UL with an “L-Rating” which results protection against air/smoke leakage.
2. Air tight floor penetrations also protect building occupants against the hazard of toxic fumes and gases that can leak and travel from floor to floor in the event of a fire or toxic chemical or vapor leak occurrence. When air tight seals are in place within floor and wall penetrations that are in contact with soils surrounding a building, such as in the case of the HydroFlame Wall and Floor Seals, contaminants are blocked from entering the building. These contaminants can include insects, methane, radon and various saturated soil contaminants.
3. Thermal Resistance is enhanced through the use of the HydroFlame sleeving system. By providing tight penetration seals where pipes, cables and conduits pass through floors energy is conserved by blocking potential leakage between heating and cooling zones within a building.
4. Soundproofing is enhanced through the use of HydroFlame sleeves. Second only to water intrusion, noise is a major irritant of building occupants. With each floor penetration being sealed as building systems travel from floor to floor noise is reduced as a result of the pliable UL classified materials used to create these floor seals. These seals are also effective because they keep penetrating pipes from contacting the edges of each floor penetration, which would otherwise provide an effective path for noise transmission to the building’s structure.

Materials and Resources – Reuse of building materials and systems reduces environmental impact

1. Reuse of UL Classified firestop penetration systems are a key focus with HydroFlame firestop devices. Field installed firestop solutions typically retain a very short lifespan even when substantially undisturbed. This is especially true when building systems experience retrofit work













throughout the life of a building. When pipe and conduit systems are removed and re-installed through HydroFlame floor sleeve devices there is no need to apply mineral packing materials or field applied caulking components since the firestop and water stop components are built into the sleeves themselves for the life of the building.

2. Minimizing Construction Waste is another key feature of the HydroFlame system. The installation of field applied firestop systems results in a large amount of waste materials. Use of HydroFlame sleeving systems eliminates the debris generated by:
 - a. Expended fire caulking tubes
 - b. Multiple packaging boxes required for a variety of components.
 - c. Concrete & sleeve debris from demolition of temporary plastic and sheet metal sleeves
 - d. Field built wood safety hole covers placed on floor openings during construction phases
 - e. Field built and assembled sleeve pipe remnants/scrap from hand cut materials on site
3. Landfill Disposal needs are reduced as a result of the one-step installation of custom built HydroFlame sleeves. As a result, there are no scrap materials generated. These sleeves also include OSHA compliant “safety hole covers” built in, which eliminate the need for field cutting and fabricating safety covers from a variety of materials and the resulting scrap generated.
4. Recyclable Packaging is typical for HydroFlame shipping containers.
5. Power Tool Usage is minimized when HOLDRITE HydroFlame sleeves are used. While other methods of sleeving require cutting of sleeve riser materials, cutting of safety hole covers, drilling of cored holes, demolition tools for removal of temporary sleeves and welding of steel sleeve mounting clips, HydroFlame sleeves are efficiently pre-fabricated to the exact specifications for use on the jobsite without the need for energy consuming power tools.

Indoor Environmental Quality – is enhanced with the use of HydroFlame sleeving systems

1. Low VOC. HydroFlame products are constructed with solid materials and with adhesives that contain low levels of volatile organic compounds (VOC).
2. Harsh Chemicals are often used when manual firestop and water stop caulking is field installed. When these products include silicone, the clean-up often requires MEK (Methyl Ethyl Ketone), caustic to both installers and the environment. During installation of certain types of caulking the pipes and hole openings must be cleaned using solvent rich cleaners.
3. Airborne Contaminants often result when field applied firestop systems are manually installed on a jobsite. Many of the firestop systems installed on jobsites require the use of mineral wool materials that are manually cut from large insulation bails and packed into holes surrounding pipes at floor hole penetration locations. These materials can be hazardous to the installer during construction and can become airborne when disturbed within a finished building throughout the life of the finished building. HydroFlame sleeves do not contain these types of materials and thus do not pose this hazard.

Summary of HOLDRITE HydroFlame's Green Performance Characteristics

LEED Category →	Sustainable Sites				Water Efficiency		Energy and Atmosphere				Materials and Resources				Indoor Environmental Quality			
	Water Tightness - During Construction	Water Tightness - Post Construction	Movement	Firestop	Water Savings - Elimination of core drilling	Water Savings - Minimizing Clean-up	Air Leakage - Inefficient Heating & Cooling	Air Tightness - Blockage Against Caustic Exposure	Thermal Resistance	Soundproofing	Reuse of Firestop Materials	Minimized Construction Waste	Reduces Landfill Disposal	Recyclable Packaging	Minimized Power Tool Usage	Low VOC Components	No Use of Harsh Chemicals	Reduced Airborne Contaminates
Mechanical & Electrical Penetrations ↓																		
Corrugated Metal Deck Pipe Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Flat Form Deck Pipe Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bathub Drain Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Toilet Drain Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Floor Drain Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Shower Drain Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cable and Line-set Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Electrical Conduit Floor Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sprinkler & Standpipe Penetrations 	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Slab and Wall Sleeve Seals (Non-Firestop) 	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
  <p>For details on each category, please refer to our web site www.holdrite.com</p>																		