Waterproof Sealant on Basement Walls

Overview

- Water seepage through basement walls can lead to cracks in the walls as well as mold growth.
- Waterproof sealants can be applied to the interior basement walls and foundation in order to reduce floodwater seepage in the basement.
- Sealants are compounds that can be applied directly to the walls.
- This measure is not intended to prevent high level flooding but is intended to help prevent low-level leakage.
- Sealants include:
  - Polymer-based sealants
  - Liquid rubber
  - Cement or mortar (parging)
  - Etc.
- Do not apply the sealant on painted walls or on efflorescence (white deposits on concrete walls).
- An interior drainage system with a sump pump may be required in order to remove leaking floodwater.
- Do not apply sealants until the walls (and floor) are completely dry.
- Plug holes and cracks in the basement walls prior to applying sealant.
- Remove old paint or coating prior to applying the new sealant.
- This is one of several dry floodproofing measures. Dry floodproofing measures are often more successful when used together. Therefore, doors and windows should be closed off with permanent or temporary shields in addition to the installation of backflow valves and an interior drainage system with a sump pump.



Key Takeaways

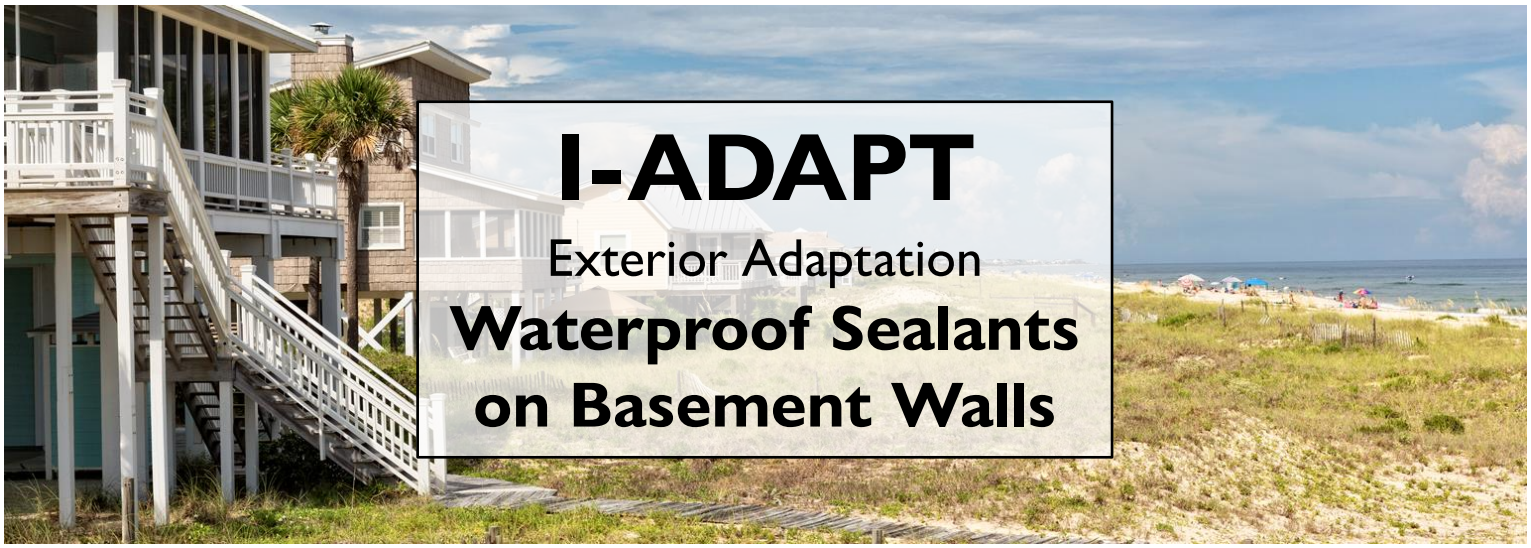
During flood events, water that enters a structure can damage personal property.

To avoid flood damage inside of a structure, waterproof sealants can be applied to the interior basement walls of the structure.

Waterproof sealants are compounds that are applied to the structure to prevent floodwaters from percolating through the building.



Photo credit: Hardcast65 by CC2.0



I-ADAPT

Exterior Adaptation

Waterproof Sealants on Basement Walls

Estimated Costs/Benefits

*U.S. dollars (2022), estimates are subject to change

Potential Costs		Potential Benefits	
Item (quantity needed)	*Estimate*	*Post-Flood Recovery Actions*	*Estimate*
Sealant (10)	$30-$100 per gallon	Mold Remediation	$1,100-$3,400
Interior drainage system with sump pump*	$2,000-$10,000	Filling New Cracks	$250-$1,200 per crack
ESTIMATED TOTAL COST **1,000 sq ft structure** *if necessary	**$300-$11,000**	**ESTIMATED TOTAL SAVINGS**	**$1,350- $4,600+**

Expected Maintenance

- Walls must be inspected annually as well as prior to and post flooding for cracks or damage.
- Follow the manufacturer's guidelines regarding how often the sealant will need to be re-applied.

Additional Resources

- FEMA Flood Damage-Resistant Materials Requirements
- FEMA Floodproofing Non-Residential Buildings

Resources can also be found at https://de.gov/iadapt

Additional Actions

- Plug holes and cracks in the basement walls prior to applying sealant.
- An interior drainage system with a sump pump may be required in order to remove leaking floodwater.
- Dry floodproofing measures are often more successful when used together. Therefore, doors and windows should be closed off with permanent or temporary shields.

Permitting Agencies

Contacts for permitting requirements include but are not limited to the following:

- Your city and/or county government for local flood ordinances or regulations
- Your city and/or county government for building permits

Who to Contact

- Design professional or engineer
- Waterproofing contractor

Technical definitions and more information are located on the I-ADAPT website: https://de.gov/iadapt.

This information is intended to be used for planning purposes. It is not intended to substitute or take precedence over the guidance of design engineers, contractors, utility companies or regulatory agencies.

For more information, contact DNREC's Division of Climate, Coastal and Energy at DNREC_IADAPT@Delaware.gov