

# Disaster Durable Solutions™

Strong buildings need  
strong science.

Introducing construction solutions that  
go beyond building codes.

 **BASF**  
We create chemistry

# Disasters are more frequent and more costly

\$1 billion-plus weather disasters in the United States from 2010-14

North Atlantic hurricane seasons contributed to global economic losses of US\$110 billion in 2014 & US\$138 billion in 2013, according to Swiss Re's most recent Sigma study. BASF creates chemistry to prevail against severe weather, reducing impact and protecting homes and communities

Best's News Service via Bestwire - March 25, 2015



## How does spray foam comply with sealing the roof deck for the FORTIFIED Home™ program from IBHS?

Many newer or existing homes that have recently been built or re-roofed to FORTIFIED standards have met the requirement of sealing the roof deck by applying closed-cell spray foam to the underside of the roof deck. Closed-cell spray foam creates a secondary water barrier for your roof and strengthens it against high winds. There may be additional retrofits necessary to achieve a FORTIFIED Home designation.

Contact a FORTIFIED Evaluator to learn more.

# We can't always predict the weather. But we can build and retrofit stronger homes, buildings and structures to prepare for the worst.

## How?

By combining building science, smart design, and systems-centric construction techniques.

## About FORTIFIED

FORTIFIED Home™, created by the Insurance Institute for Business & Home Safety (IBHS), is a set of engineering and building standards designed to help strengthen new and existing homes through system-specific building upgrades to withstand severe weather. The FORTIFIED Home™ program has three levels of designation – Bronze, Silver and Gold – that build upon each other. Home buyers and homeowners are able to choose the desired level of protection that best suits their budgets and resilience goals.

## Advanced disaster resilience begins with BASF chemistry and IBHS FORTIFIED methodology

When it comes to disaster resiliency, the building envelope—the part that separates the outside from the inside—is one of the most important parts of the house.

The key is to design a seamless building envelope with every element (roof, foundation and walls) securely attached and airtight. That means no gaps or holes where wind or water can enter and cause damage.



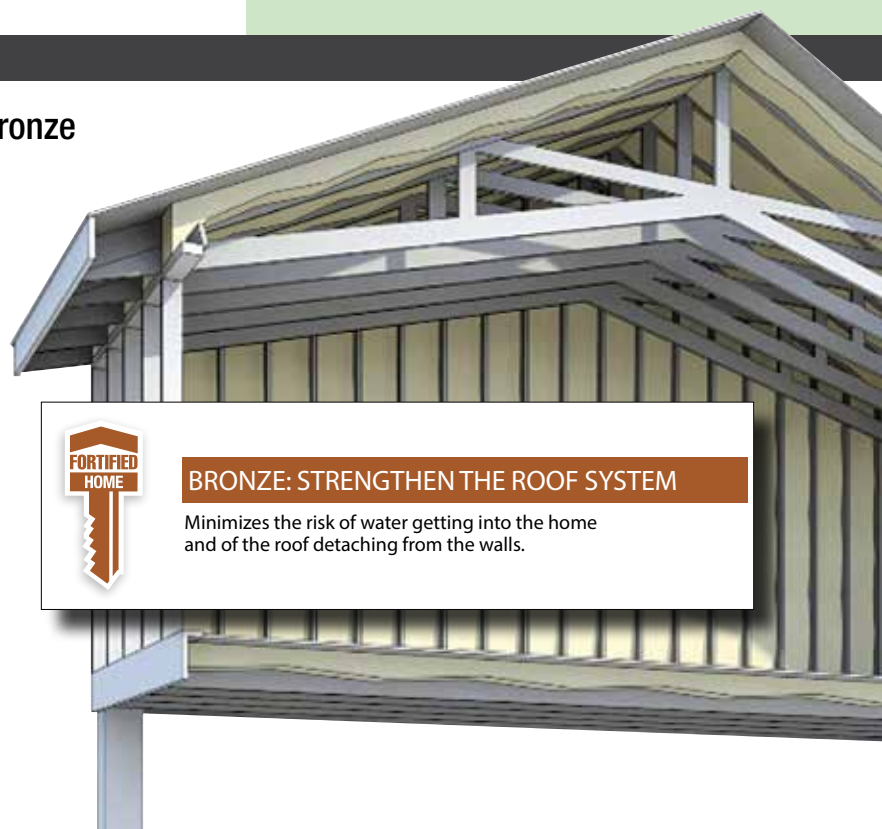
This sample project shows how a tight and secure building envelope protects against the elements.

Download a sample BASF DDS home  
[www.DisasterDurableSolutions.com](http://www.DisasterDurableSolutions.com)

## Getting the Roof Right – FORTIFIED Home™ –Bronze

The roof is the most important and vulnerable part of any building – it is the first line of defense against Mother Nature. In fact, roofs are involved in more than 90% of insurance claims involving wind damage. IBHS engineers estimate that if we could get the roofs right in the U.S., we would reduce property losses by 50%. This could be the difference between a homeowner being able to live in their home after a disaster or being displaced for many weeks or months.

FORTIFIED Home™ –Bronze focuses on improving the roof's durability and performance during severe weather. A critical requirement for this level of designation is to seal the roof deck to minimize the risk of water getting into the home through gaps between roof sheathing. There are four different methods for sealing roof decks, including spraying closed-cell spray foam.



### BRONZE: STRENGTHEN THE ROOF SYSTEM

Minimizes the risk of water getting into the home and of the roof detaching from the walls.

Visit "Is your Roof FORTIFIED: FORTIFIED Home™ –Bronze" to get the roof right.



Joel W. May  
IBHS FORTIFIED Home Evaluator  
LEED® Green Associate



[in](#) Connect with Joel  
joel.may@basf.com

## Disaster resilience—no matter the budget

BASF Disaster Durable Solutions™ (DDS) provides homeowners, insurance professionals, contractors and builders with mitigation choices that can be added to most any project.

Working with a certified FORTIFIED Home™ Evaluator, DDS trained spray foam applicators can help contractors and homeowners satisfy two critical requirements for the FORTIFIED Home™—Bronze designation. Specific BASF 2-part closed-cell spray foam products can be used to seal the roof deck and improve the connection of the roof deck when applied using the techniques below. Other upgrades may be required to earn a FORTIFIED Home™ designation so consult a certified FORTIFIED Home™ Evaluator for further details.

Qualifying products are available in all regions. Closed-cell foam products offer an affordable solution, particularly when looking to strengthen an existing home without re-roofing.

Look for DDS applicators and contractors that have earned a FORTIFIED Wise™ credential.

For information about FORTIFIED Home  
[disastersafety.org/fortified](http://disastersafety.org/fortified)

Learn about FORTIFIED Wise trainings  
[disastersafety.org/fortified/fortified-home-training](http://disastersafety.org/fortified/fortified-home-training)

Find a FORTIFIED Evaluator  
[fortified.archtest.com/listing/](http://fortified.archtest.com/listing/)

## Do insurance companies provide premium discounts for FORTIFIED Homes™?

FORTIFIED programs are recognized and supported by certain government-run property insurance organizations and private property insurers. Every insurance company makes its own business decisions, some offer discounts or other incentives for superior construction, including FORTIFIED.

Contact your insurance agent or state department of insurance to find out how building or retrofitting your home using FORTIFIED Home™ may affect your insurance costs.

For information visit  
[www.DisasterDurableSolutions.com](http://www.DisasterDurableSolutions.com)



Image of minimal critical seal method

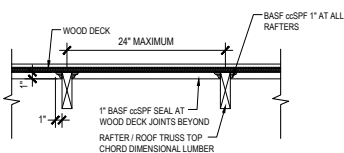


Image of 1" min. FILL method

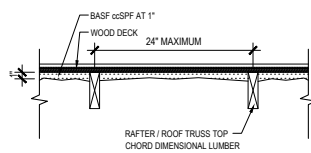


Image of 3" FILLET method

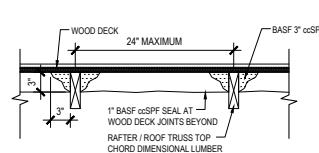
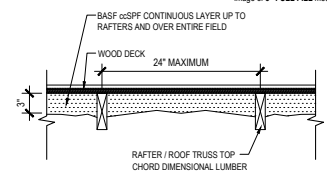


Image of 3" FULL FILL method



### 3 ROOF DECK SECTION-CRITICAL SEAL

1:12" = 1'-0"  
SEALED ROOF DECK / SECONDARY WATER BARRIER AT RAFTERS AND DECK JOISTS

### 4 ROOF DECK SECTION-1" INSULATING LAYER

1:12" = 1'-0"  
FULL 1" INSULATING LAYER ON SEALED ROOF DECK

### 5 ROOF DECK SECTION-3" FILLET AT RAFTER

APPLICATION TYPE: 3" FILLET @ FRAMING WITH 1" INSULATING LAYER  
1:12" = 1'-0"  
SEALED ROOF DECK / SECONDARY WATER BARRIER AND WIND UPLIFT / SUPPLEMENTAL DECK ATTACHMENT

### 6 TYPICAL ROOF DECK SECTION

APPLICATION TYPE: 3" MINIMUM FULL INSULATING LAYER  
1:12" = 1'-0"  
INSULATION AND AIR SEAL, SEALED ROOF DECK / SECONDARY WATER BARRIER AND WIND UPLIFT / SUPPLEMENTAL DECK ATTACHMENT