

# enertite®

## Open-Cell Spray Polyurethane Foam

### Equipment Set Up and Processing:

(Please Review Technical Data Sheet)

ENERTITE NM® may be installed in new or retrofit constructions. In either case, the product must be installed in open cavities in the following locations in a wood-frame and metal stud construction that meets the requirements of the design professional, local codes and proper building science principles:

- Exterior walls including perimeter joists
- Cathedral ceilings
- Floors separating living spaces from a garage
- Cantilever overhang floors
- Interior below-grade foundation walls (proper moisture management must be employed).
- Partition walls and floors where improved sound containment is desired.

#### Safety

- Read and understand the Technical Data Sheet (TDS) for ENERTITE NM product A and B compounds
- Read and understand the Material Safety Data Sheet (MSDS)
- Obtain all necessary personal protection equipment (PPE), the required training and medical screening before proceeding with the application
- Read and follow Industry Guidelines found at [www.spraypolyurethane.com](http://www.spraypolyurethane.com)

[www.spf.basf.com](http://www.spf.basf.com)

- Read and understand all safety and operation requirements for spray foam and other equipment to be used for the application
- ENERTITE NM applications are to only be done by professional and trained applicators that have an understanding of the spray foam equipment and insulation applications. This is not a do-it-yourself product.
- The spray application site needs to be inspected before the spraying starts.



Two-component foam proper set up – Isocyanate (A); Resin (B)

# Technical Bulletin

 **BASF**  
The Chemical Company

## IMPORTANT INFORMATION

Operating equipment temperature settings for A+B primary heaters are 120° F to 140°F.

Operating equipment pressures for A+B should be between 800-1100 psi.

Shelf life of Resin (B) component is one year.

### General Information

- Two-part equipment designed to properly process SPF compounds are required. The application equipment, such as Graco equipment, must be designed to safely install and mix the liquids to form spray polyurethane foam.
- DO NOT** mix this material nor does it require recirculation.
- The resin temperature in drums must be 70-85°F or higher before spraying can begin.
- Optimum operating temp 120° F to 145° F for the A and B primary heaters and heated hose with an operating variance range of +/- 5° F for all settings as adjustments are needed.
- Pressures for A/B: should be an 800 psi minimum to 1100 maximum psi range while spraying.
- Foam should not be sprayed at ambient temperatures or to targets that are below 40°F in temperature reading.
- Temperatures at or below 60°F or any substrate target that is a “heat sink” requires a flash pass (½” thick) to optimize the second lift of open-cell material.
- Most SPF materials and applications perform better under warmer target conditions.
- Proper planning of the spray application must be done prior to starting the job. Considerations for overspray protection, site control of non PPE protected people, anticipated application and other general construction considerations must be considered well in advance to the start of the spraying job.
- Do not spray additional SPF onto rising SPF in order to avoid possible excessive heat build up within the foam material.

### Application

ENERTITE NM<sup>®</sup> must be applied by qualified applicators. Properly processed ENERTITE compounds will produce high quality polyurethane foam representative of the TDS, when applied in accordance with BASF’s instructions and industry practices. The normal application temperature range for ENERTITE NM is 40° F and warming to 120° F. If it is sprayed at lower temperatures, there is a risk that the adhesion between the foam and substrate may be affected and the physical properties may not reflect what is represented on our ENERTITE NM TDS. Before and during spraying, the resin should be agitated with a corkscrew-style or similar acceptable mixer.

### Processing Parameter

The processing parameter would include a machine capable of 1:1 ratio by volume output, chemical dispensing pressures of 800-1500 psi and a heating system to maintain the desired liquid compound temperatures while spraying. A dedicated machine is suggested when processing ENERTITE NM to prevent contamination when switching over from closed-cell spray foams. If the same unit will be used, care must be taken to properly clean out the resin side when switching from closed-cell to ENERTITE NM open-cell foam. The heavier and thicker closed-cell resin may cling to and affect the ENERTITE NM foam product for several minutes of spraying after switching over. Consult your BASF contractor sales person or our BASF Technical Department (800-706-0712) with further questions.

### Process Requirements

- Graco spray foam guns capable of 2.3–6.8 kg/min (5–20 lb/min) output
- Dry air is required to be used to supply SPF guns.
- Primary heaters set between 115–145° F and ability to maintain 115–145° F while processing
- Automatic hose heat control and properly insulated hoses need to be in proper working order.
- Drums to be at 15-25° C or 70-85° F for best application performance
- Liquid A and B materials are to be stored in a clean, dry area between the temperature ranges of 50-80° F.

## Application Techniques

- Ensure that the substrate is clean and dry before spraying.
- Apply only indoors.
- Allow 10-15 minutes before cutting.
- Can be applied up to 6" per pass or lift. Allow minimum of 5 minutes in between each lift.
- During application, steam will be produced from ENERTITE NM as a product of the chemical reaction. *Warning: the foam will be HOT for a period of time.*
- Preferred spraying is from side to side of the cavity, but it can be sprayed vertically.
- Keep passes to less than 2' wide to help reduce voids within the ENERTITE foam mass.
- Keep the gun between 12" to 18" from substrate.
- Overlap a minimum of 50-75% between passes, adjusting arm speed and gun to target distance accordingly.
- Fill stud with liquid completely; do not leave any unsprayed areas allowing the foam to fill them.
- Spray every other stud or rafter cavity to facilitate trimming and then go back and fill in the others after the first ones have been trimmed.
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## Special Notes

- ENERTITE is NOT designed for use as an EXTERIOR roofing system. Enercite is not intended for cold storage structures such as coolers and freezers. High humidity rooms, such as pools, demand special design considerations with regards to thermal insulation and moisture- vapor drive.
- Typically, there should be no compatibility issues changing from one open-cell product to the ENERTITE NM open-cell product. However, the operator should run a quality control check to confirm this once the new material has completely filled the equipment and before applying the material in the wall cavity.
- Going from Enercite NM to any BASF's closed cell material or vice versa does not require any special steps. One material can be pushed through the lines with the other. The material can be either bled out or sprayed out.
- When spraying out closed-cell material, there will be some cross contamination of the two resins. The result will be the rise of open-cell foam but the skin and cells of closed-cell foam. Continue to spray until the cells are opened. NOTE: closed-cell resin that has set in a line for some time will take longer to flush out.
- When spraying out open-cell material, there will be some cross contamination of the resins. Continue spraying out until the difference in the foam is noticed. Be careful of this; improperly mixed and perhaps off ratio foam can result in possible exothermic build up. This could lead to an excessive heat build up in the foam mass and result in an ignition. We suggest you always store these away from each other, located outside and away from combustible materials. Cut open the foam mass into small masses and allow air to ventilate. Any large volume of flush matter ( > 12" thick ) should be cut and stored away from combustible materials.
- The finished ENERTITE NM spray foam insulation is combustible and will burn with open flame, oxygen. Special care must be taken to avoid open flames, welding torches, and other hot work near the unprotected foam surface.

## Protecting Yourself

With proper precautions and the use of personal protective equipment (PPE), professional applicators and workers can protect themselves from overexposure to MDI/PMDI and other spray foam ingredients during the application of the SPF system. People that do not have the necessary training and personal protection equipment cannot be around the spray area.

## Interior Spraying

When spraying a spray polyurethane foam system indoors, sprayers and helpers should wear:

- A NIOSH-approved full face or hood-type supplied air respirator (SAR) (as outlined in your company's Respiratory Protection Program).
- MDI-resistant chemical gloves (e.g., nitrile), or fabric gloves coated in nitrile, neoprene, butyl, or PVC
- Chemically resistant long-sleeve coveralls or chemically resistant full body suit with hood
- MDI-resistant fitted boots/booties



Professional applicator wearing proper PPE for application of SPF system.

[www.spf.basf.com](http://www.spf.basf.com)

