



ENRG Blanket®

Installation Guidelines for
Installing Over Drop-In Ceilings

Revised October 25, 2023

Important Considerations



Drop Ceilings compatible with ENRG Blanket® products:

ENRG Blanket® may be installed over any ceiling as long as the ceiling can support the weight of the material.

Material Protection and Storage

All materials shall be kept clean and dry prior to their installation. When stored outside or on a job site, materials shall be kept off the ground and adequately covered with tarpaulins. When unpacking the product, use caution to be sure that the product is not cut or punctured in any manner.

Tools needed or recommended for the job:

- **Appropriately Sized Ladder**

Appropriately Sized Ladder for the structure. Select a ladder so that worker will not need to work from top step of the ladder. Alternatively, a scaffold may work better for higher ceiling areas with few obstructions to work around.

- **Eye Protection**

Eye Protection is recommended when working in any environment and should be worn at all times for your protection. Safety glasses should be worn to protect from falling debris as ceiling tiles are removed.

- **Skid Resistant Shoes**

Skid Resistant Shoes are recommended when climbing a ladder and can reduce the risk of potential dangers when climbing ladders in a work environment.

- **Headlamp**

It's dark above the drop ceiling. A headlamp is a safe and convenient way to provide light during installation.

- **Rolling Cart**

Rolling Cart for transporting ENRG Blanket® from truck into building and staging the material around the work area.

- **Clean Rubber or Latex Gloves.**

Bright white ceiling tiles can be easily stained with dirty hands. In addition, gloves will provide safety for your hands in the event that you encounter sharp objects while working around the ceiling grid supports including wires and metal studs, metal light fixtures, heating and cooling vents, etc.

- **Plastic Tarp**

Plastic Tarp for covering desks and equipment.

- **Paper Towels and Glass Cleaner**

The ENRG Blanket® mats can be damaged during transportation. Damaged mats will show a film of oil-like phase change material (BioPCM®) on the surface of the mat. Bring clean paper towels and a glass cleaner (such as Windex) in case clean-up of mats is necessary.

DO NOT INSTALL DAMAGED MATS



BioPCM® is not toxic, however, we recommend washing hands if installers come into contact with the material.

- **Feather Duster**

Feather Duster or similar tool to sweep fallen debris from desks, chairs, all other surfaces.

- **Broomstick or similar Extended-Reach Tool.**

Dragging the ENRG Blanket® across the T-bar grid can damage the ENRG Blanket® and cause leakage of the phase change material contained inside the pouches. A broomstick or similar extended-reach tool will help to position ENRG Blanket® above ceiling tiles without dragging. The tool should be approximately 4' in length with a rubber or gripping end that will help move the mats without puncturing them.

- **Vacuum Cleaner**

Vacuum Cleaner of reasonable size with clean filter to clean debris that may fall from ceiling tiles.

- **Duct Tape**

Duct tape is useful for repair of a ceiling tile that has minor damage.

- **Replacement Ceiling Tiles**

Consider procuring a box of replacement tiles that match the existing.

- **Diagram of Building Layout and Installation Report**

Proper reporting of the installation is critical to the success of each job. Use the diagram of building layout to record where ENRG Blanket® was installed. Use Installation Report to record the amount of material installed and any problems of issued encountered. Take smartphone pictures of the installation (above and below ceiling) to document that the installation was properly completed

- **Camera**

It will be very important to take photographs of the installation. A camera (stand alone or a smart phone) is required.

Pre-Installation Evaluation/ Inspection



1. Confirm that the area above the drop-ceiling is in good condition. In particular, confirm that there are no signs of HVAC moisture problems.
Warning signs of moisture issues include:
 - a. Evidence of sweating on the HVAC air supply or air return ducts.
 - b. Significant water staining of the ceiling tiles in the area of HVAC ducting.
 - c. Evidence of mold growth on HVAC ductwork or on ceiling tiles near ductwork.
2. Confirm height of ceiling throughout the facility. Inform installation crew of ceiling heights to ensure that they bring proper sized ladders.
3. Confirm that at least 65% of ceiling is drop ceiling (not hard lid or inaccessible architectural or decorative features) and that attic space above drop ceiling provides sufficient room for installers to work.
4. Confirm that we have a reasonably accurate diagram of building and room layout so that the installation crew can record where ENRG Blanket® was installed.
5. Ensure that the proper number of ENRG Blanket® mats are loaded onto the truck.
6. Ensure that the proper ladders are loaded onto the truck.
7. Ensure that other equipment is loaded onto the truck:
 - a. Camera
 - b. Eye protection
 - c. Headlamps
 - d. Cart for transporting ENRG Blanket® into the facility
 - e. Clean rubber or latex gloves
 - f. Plastic tarps, Duct tape
 - g. Paper towels and Windex
 - h. Broomsticks or similar Extended-Reach Tools
 - i. Feather duster
 - j. Vacuum Cleaner
 - k. Replacement ceiling tiles

ENRG Blanket® Installation



1. Meet with all installation crew members. Review installation instructions. Make sure all crew members understand the huge importance of protecting equipment and leaving the facility absolutely spotless when you depart.
2. Inspect the facility. Make note and take photos of any pre-existing issues with the facility such as:
 - a. Areas that are not clean or have debris on floor, desks or equipment,
 - b. Areas that have broken or stained ceiling tiles.
3. Cover equipment and desks with tarp to ensure that equipment is not damaged by falling debris.
4. Bring ENRG Blanket® mats into facility using cart. Stage stacks of the material around the facility in convenient locations. Watch out for sharp objects which may tear or puncture the ENRG Blanket®.

5. DO NOT INSTALL DAMAGED MATS

ENRG Blanket® mats can be damaged during transportation. Damaged mats will show a tear or a puncture and may have film of oil-like phase change material (BioPCM®) on the surface of the ENRG Blanket®. Note the number of damaged mats and the nature of the damage on the Installation Report and return these mats to the warehouse.

6. Mats adjacent to damaged mats may have film of oil-like BioPCM® on the surface of the ENRG Blanket®. Inspect these mats to ensure that there is no visible damage. If the mat is undamaged, remove the film of oil-like BioPCM® using Windex and paper towels.
7. Installers must clean hands and wear clean rubber or latex gloves. The bright white ceiling tiles can be easily stained with dirty hands. Change gloves if they become dirty.

ENRG Blanket® Installation



8. **Two-Person Ladder Teams:** It is recommended that installers work in two-person teams allowing one person to be on the ladder installing ENRG Blanket® while the other is handing product up to the installer.

9. **Remove Ceiling Tile (Ladder Man):** *Gently* push up on the ceiling tile to remove. **DO NOT FORCE.** If a ceiling tile is tight in the T-bar grid, simply move to another tile. Once a tile is removed, place it top of the T-bar grid as opposed to handing it down and placing on the floor. This technique avoids several trips up and down the ladder.

10. **Inspect Installation Area (Ladder Man):** Look around the area where the ENRG Blanket® will be laid down. Look for areas that have sharp objects (such as T-bar grid wire) that could tear or puncture the ENRG Blanket®.

**DO NOT INSTALL ENRG Blanket® ON TOP OF SHARP OBJECTS.
DO NOT NAIL INTO OR PUNCTURE THE ENRG Blanket®**

11. **Fold and Hand Up ENRG Blanket® (Floor Man):** Gently fold the ENRG Blanket® mats twice to make it easy for the product to fit through the opening in drop ceiling. Mats are very flexible and easily folded.

12. **Placing ENRG Blanket® (Ladder Man):** Carefully lift and place ENRG Blanket® mat on top of the ceiling tile and T-bar grid. The foil side of the ENRG Blanket® must face down towards the floor. (If the ENRG Blanket® does not have foil on one side, you can disregard the foil instruction.)

- It is **NOT** necessary to cover every square inch of the ceiling with ENRG Blanket®. Some gaps between mats or overlap of the mats will be fine. In general, there should be no need to cut or trim the ENRG Blankets®.
- Place the ENRG Blanket® to fit around light fixtures, wiring, duct work, or any other obstacles you encounter above the ceiling tiles.

ENRG Blanket® Installation



- c. It is OK if some ends of the ENRG Blanket® stick up, as they are placed directly next to obstacles such as walls, ductwork and wiring.
- d. It is OK if some of the ENRG Blanket® mats overlap as you maneuver around obstacles such as walls, ductwork and wiring. It's also OK if blankets get folded and they do not have to fit perfectly into corners.
- e. When working around lighting fixtures, 6 inches of clearance is recommended between the light fixture and the ENRG Blanket®.
- f. When placing material at distances greater than arm's length, use a Broomstick or similar Extended-Reach Tool to assist in lifting and spreading the product into place. This will reduce the possibility of dragging the ENRG Blanket® mats over sharp objects such as support wires and ceiling tile grids which can cause rips, punctures and leakage of the BioPCM® from the damaged pouches.
- g. If an ENRG Blanket® mat is damaged during installation, remove it from the ceiling area, note the problem on the Installation Report, and return the material to the warehouse.
- h. Place mats in all directions around the open tile.
- i. When a section is complete, carefully and gently replace the drop ceiling tile with ENRG Blanket® above.
- j. Move ladder to the next location.

Special Situations

- **Cracked or Broken Ceiling Tiles:** On occasion, a ceiling tile will get damaged or broken. If the damage is minor, use dust tape to repair the tile from the backside. If the damage is major and requires a tile replacement:
 - > Look above the drop ceiling for spare tiles. A few spare tiles are often found somewhere above the drop ceiling.
 - > If no spare ceiling tile is found, put the broken tile back into its place in the T-bar grid (as long as it will stay in the grid safe and secure). Report the broken tile in the Installation Report.
- **Installing Partial Sheets:** Only full sheets of ENRG Blanket® should be used, as they should not be cut. In the rare instance when less than a full sheet needs to be installed, please contact Phase Change Solutions to provide a custom size for you.
- **Insulation Sitting on Top of Ceiling Tiles:** If there is insulation over the ceiling tiles, simply install the ENRG Blanket® material between the tiles and the insulation.

SAFETY



Follow all warnings and precautions listed on tools and equipment during the installation.

Use CAUTION while climbing ladders and working around electrical wiring.

- Make sure installers use the correct height ladder.
- After removing a ceiling tile, the installer will lay mats in all directions. At some point, the installer may need to install facing away from the ladder and lose 3 points of contact. If this happens, the installer must reposition the ladder.
- Care should be taken when moving and positioning ladders around desks and furniture.



813 WINSTON ST,
GREENSBORO, NC 27405
USA

800-283-7887 (U.S.)
336-510-4406 (INTERNATIONAL)

PHASECHANGE.COM
INFO@PHASECHANGE.COM

Smart Materials For People and The Planet