

ENERTITE® 1-2-1

Guidelines for ENERTITE 1-2-1 Low Density Open-Cell Polyurethane Insulation

ENERTITE 1-2-1 is a low-density polyurethane spray insulation system which combines the properties of insulating material and air barrier and is installed by qualified applicators trained by BASF Canada Inc. Incorporating water as the sole blowing agent, ENERTITE 1-2-1's superior specifications make it ideal for residential, commercial and institutional applications.

CERTIFIED CONTRACTORS ONLY

Installation of ENERTITE 1-2-1 requires special equipment and training. Only individuals trained and certified through the BASF Canada Quality Assurance Training Program (QATP) can install ENERTITE 1-2-1.

These Application Guidelines are for general reference only. Qualified individuals must be familiar with the QATP Program Manual. For any questions regarding how to properly apply ENERTITE 1-2-1 please refer to the QATP Program Manual. To speak to BASF regarding ENERTITE 1-2-1, call 1-866-474-3538.

PROPER APPLICATION

Weather and Environmental Conditions

Before beginning an application, ensure the surrounding environment meets the following conditions:

Humidity	Care should be taken whenever the relative humidity (RH) is greater than 80%. High RH could cause blistering problems and weaken foam adhesion.
Temperature	The reactivity of ENERTITE 1-2-1 is dependant on ambient and substrate temperatures.
Temperature range	-10°C to 40°C (14°F to 41°F)

Substrate Service Temperature

Before beginning an application, ensure the continuous substrate temperature onto which ENERTITE 1-2-1 is to be applied remains within the following range at all times:

-60°C to 80°C (-76°F to 176°F)

Substrate Preparation

Prior to beginning application, determine if the substrate can be used with ENERTITE 1-2-1.

All substrates to be sprayed must be free of:

- Frost;
- Dew;
- Moisture;
- Dust;
- Oil;
- Grease;
- Oxidization (rust); and
- Any other element that may affect how the product adheres to the surface.

Metal surfaces require the application of a primer and may require sandblasting prior to priming. Other surfaces may require additional preparation – pay special attention to substrates with high moisture content (concrete less than 28 days old, and wood with moisture content over 19%, etc.). See the QATP Manual for further information.

ENERTITE 1-2-1

Pass Thickness

Maximum 305 mm (12 inches) per pass.

MACHINE REQUIREMENTS

- A machine capable of 1:1 by volume output, chemical dispensing pressures of 59–83 bar (850-1200 psi) and a minimum 10 kW of primary heating capacity. A dedicated machine is recommended for using ENERTITE 1-2-1 to prevent contamination when switching over from WALLTITE® v.3.
- Modern application guns capable of 2.3–6.8 kg/min (5–15 lb/min) output
- Cool air dryer must be used when using air purge guns
- Primary heaters set between 54–65°C (130–150°F) and ability to maintain the same temperature in the hose
- Automatic hose heat control and properly insulated hoses
- Drums to be stored at 15-25°C (60-77°F) for application
- Cooling recommended in trailer if unable to keep ambient temperature below 30°C (86°F)
- Corkscrew style 2 inch drum mixer capable of 800 rpm at 700 kPa (100 psi) air pressure with dry air and an inline lubricator (e.g. Graco Twistork)

HOW TO MIX THE MATERIAL BEFORE SPRAYING

- Mix ENERTITE 1-2-1 resin drum on **high speed (800 rpm or level 3 on a Twistork)** for a **MINIMUM** of 30 minutes prior to flushing.
- Constant mixing on **low speed (400 rpm or level 1.5 on a Twistork)** is required during application of foam.
- After drum has been mixing for 15 minutes, recirculate fresh material into the resin line from the drum, turn on the hose heat after recirculating and continue to mix the drum for an additional 15 minutes.
- Good mixing – product will appear creamy. Poor mixing – product will appear frothy.

HOW TO SPRAY ENERTITE 1-2-1

The following equipment settings are recommended:

- Ensure that the substrate is clean and dry before spraying.
- Hose heat and primary heater temperature set between 54°C-65°C (130°F-150°F)
- Dispensing pressure of 59-83 bar (850-1200psi).
- Start with a hose heat of 54°C (130°F) and a dispensing pressure of 69 bar (1000psi). Make adjustments to those settings in small increments (+/- 3°C (5°F), +/- 7 bar (100 psi).
- Check the reactivity, density, spray pattern, mix quality, and foam cell quality by test spraying onto a disposable piece of substrate.
- The product must be installed in open cavities. Refer to CCMC report.
- Hold the spray gun perpendicular from 23 to 30 cm (9 to 12 inches) from the substrate. Arm movement, extension and stretching should be minimized while spraying.
- Overlap a minimum of 75% between passes, adjusting arm speed accordingly.
- Fill cavity width completely with spray pattern.
- Keep passes to less than 61 cm (2 feet) in width to help reduce voids.
- Spray from the top of stud to bottom when spraying vertically.
- Allow 10–15 minutes before cutting.
- Can be applied up to 30 cm (12") per pass.
- During application in cool weather, steam will be produced from ENERTITE 1-2-1.
- The thickness of a pass depends on the speed of the arm movement while spraying. Smooth, steady movements ensure proper application and uniform density.

For detailed spray instructions, refer to the QATP Manual.

DAILY WORK SHEETS MUST BE COMPLETED AT THE END OF EVERY DAY.

TECHNICAL ASSISTANCE

For more detailed information, call:

Toll-Free: 1-866-474-3538

BASF Canada Inc.: www.walltite.com

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Warning! These products can be used to prepare a variety of polyurethane products. Polyurethanes are organic materials and must be considered combustible.

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