

## WALLTITE® XL01

### Guidelines for WALLTITE® XL01 - CCMC 14230-R

WALLTITE XL01 is a medium density polyurethane foam insulation and air barrier material<sup>1</sup>. WALLTITE XL01 produces an insulation material by the chemical reaction between an isocyanate and a resin. When these materials are combined in the spray gun's mixing chamber, a chemical reaction occurs, releasing heat. This heat or exothermic reaction causes the blowing agent to create foam expansion. The final cured product is dark purple.

WALLTITE XL01 comes in two reactivity grades: WALLTITE XL01 regular and WALLTITE XL01 Cold Temperature grade (WALLTITE XL01 CT). Unless specified, all references to WALLTITE XL01 in these Application Guidelines refer to both grades of WALLTITE XL01.

#### **CERTIFIED ACCREDITED CONTRACTORS ONLY**

Installation of WALLTITE XL01 requires special equipment and training. Only individuals certified in the Quality Assurance Program delivered by Caliber Quality Solutions to CAN/ULC S705.2 "Thermal Insulation-Spray Applied Rigid Polyurethane Foam, Medium Density-Application" through the specific BASF Canada WALLTITE Quality Assurance Program (QAP) and trained by BASF to install WALLTITE XL01 are qualified to install WALLTITE XL01.

These Application Guidelines are for general reference only. Qualified individuals must be familiar with the CAN/ULC S705.2 application standard and the WALLTITE XL01 QATP Manual, which includes specific training to the **CCMC Technical Guide "Spray-Applied Polyurethane Foam Installed in One Pass with a Maximum Claimed Thickness of 127 mm (142mm with the field safety margin)"**, MasterFormat 07 21 19.06.

#### **PROPER APPLICATION**

##### ➤ **Weather and Environmental Conditions**

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

Wind	When applying outdoors, wind speed must not be higher than 15km/h (9.3 mph) unless windscreens are used.
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 WALLTITE XL01 WALLTITE XL01 CT	The reactivity grade of WALLTITE XL01 is dependent on ambient and substrate temperatures. The following grades are recommended for each temperature range: 0°C to +40°C (32°F to 104°F) -15°C to +5°C (5°F to 41°F)

<sup>1</sup> WALLTITE XL01's intended use as an Air Barrier Material is beyond CCMC evaluation, see Report CCMC 14230-R.

## ➤ Substrate Service Temperature

Before beginning an application, ensure the continuous substrate temperature onto which WALLTITE XL01 is to be applied always remains within the following range:

-60°C to 80°C (-76°F to 176°F)

## Substrate Preparation

Prior to beginning application, determine if the substrate can be used with WALLTITE XL01 by conducting an adhesion test in accordance with WALLTITE XL01 QATP Manual.

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.

Approved substrates are exterior gypsum, OSB, plywood, concrete, and wood studs. Pay special attention to substrates with high moisture content, such as concrete less than 28 days old, and wood with moisture content over 19%, etc. See the CAN/ULC standard S705.2 and the WALLTITE XL01 QATP Manual for further information.

## ➤ Pass Thickness

The heat created by the exothermic reaction during application creates a risk of scorching and/or fire. This risk increases with pass thickness.

WALLTITE XL01 must be applied to a minimum of 50 mm (2") thickness and, to avoid the risk of scorching and/or fire, to a **maximum** nominal thickness of 127 mm (5") in one pass. Pay close attention to areas where thick pockets of WALLTITE XL01 may develop during application, such as rim joists, header spaces, exterior wall corners, small stud spaces, and wall intersections, to ensure that no section of a pass exceeds 127 mm (5").

If you spray a pass **more than** 142 mm (5.5") you must immediately remove the WALLTITE XL01 from the substrate using a non-flammable tool such as a crowbar – **do not use your hands**. After removal, break up large pieces of WALLTITE XL01 on a non-flammable surface using the non-flammable tool.

## ➤ Field Density and Adhesion Testing

For 101.6 - 127 mm (4 - 5") applications in a single pass, field density and adhesion testing will require a minimum 30 minutes cooling period prior to testing. For detailed spray instructions, refer to the WALLTITE XL01 QATP Manual.

## ➤ <sup>2</sup>Multiple Passes

After spraying a pass, cooling time **must** be allowed for the dissipation of heat. Not allowing adequate cooling time raises the risk of scorching and/or fire. All subsequent passes beyond the first pass are to be less than 101.6 mm (4").

**WALLTITE XL01 regular grade:** A period of 1 hour is required before applying a second pass of WALLTITE XL01. If a third layer is required to bring the depth to more than 228.6 mm (9") total thickness, there **must** be a cooling period of at least 2 hours between passes before spraying an additional pass. Maximum 304.8mm (12") per 24 hrs.

**WALLTITE XL01 CT:** Allow the surface of the first pass to cool to ambient temperature (approximately 2 hours) before applying the second pass. If a third layer is required to bring the depth to more than 228.6 mm (9"), there **must** be a cooling period of at least 6 hours before spraying additional passes.

Reactivity Grade	Wait Time Before Second Pass	Wait Time Before Additional Passes	Maximum Thickness per 24 Hour Period
Regular	1 Hour	2 Hours	304.8 mm (12")
CT	2 Hours	6 Hours	304.8 mm (12")

<sup>2</sup> Multiple passes are beyond the scope of the CCMC Technical Guide "Spray-Applied Polyurethane Foam Installed in One Pass with a Maximum Claimed Thickness of 127 mm", MasterFormat 07 21 19.06. Time between passes was determined by BASF for applications greater than 5"

## HOW TO SPRAY WALLTITE XL01

A 1:1 part by volume fixed ration proportioner is required to spray WALLTITE XL01. A mix chamber capable of 15 lbs/min or larger is recommended

The following equipment settings are recommended:

- Hose heat and primary heater temperature of 32°C - 49°C (90°F - 120°F)
- Dispensing pressure of 59-97 bar (850-1200psi) with 1:1 PBV proportioner.
- Start with a hose heat of 43°C (110°F) and a dispensing pressure of 76 bar (1000psi). Adjust 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.
- Hold the spray gun perpendicular from 0.3 to 0.9 meters (1-3 feet) from the substrate. Arm movement, extension and stretching should be minimized while spraying.
- The thickness of a pass depends on the speed of the arm movement while spraying. Smooth, steady movements ensure proper application and uniform density.

### **How to Spray WALLTITE XL01 into Stud Cavities, Rim Joists, etc.**

- A reverse picture frame technique is required to accommodate possibility of post growth on thick applications
- The middle section of the stud cavity or rim joist must be installed first to allow the foam to expand and prevent splitting
- The sides along the studs can be brought up to thickness after the middle areas have become tack free
- Check thickness on the entire section and do touchups as required before moving to the next cavity

## HOW TO SPRAY WALLTITE XL01 CT FOR FLAT WALLS

WALLTITE XL01 CT must be applied the same way as WALLTITE XL01, with the following important additional instructions:

- Begin spraying in the corners or at the wall-ceiling intersection points. Apply foam in a 0.6-0.9 meter (2-3 feet) wide section and leave a space 0.3-0.6 meters (1-2 feet) wide between the first section and the additional sections. Continue spraying 3-5 meter (10-15 feet) wide sections, leaving 0.3-0.6 meter (1-2 feet) wide spaces between sections. Finish spraying with a 0.6-0.9 meter (2-3 feet) wide section at the next intersection point.
- Allow the foam surface to cool to room temperature before filling in the 0.3-0.6 meter (1-2 feet) spaces left between the sprayed sections.

For detailed spray instructions, refer to the WALLTITE XL01 QATP Manual.

**DAILY WORK SHEETS MUST BE COMPLETED AT THE END OF EVERY DAY. DAILY WORK RECORDS TO BE SENT TO [DWR@CALIBERQA.COM](mailto:DWR@CALIBERQA.COM)**

## TECHNICAL ASSISTANCE

**For more detailed information, call:**

Toll-Free: 1-866-474-3538

BASF Canada Inc.: [www.walltite.com](http://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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