APPLICATION GUIDE FOR WALLTITE® INSULATION/AIR BARRIER SYSTEM

CCMC APPROVAL NUMBER:

CCMC 12840-R, FOR INSULATION
CCMC 12877-R, FOR AIR BARRIER MATERIAL
CCMC 12932-R, FOR AIR BARRIER SYSTEM

APPLICATION

For best results when using our WALLTITE system, certain instructions must be followed. Below are the recommendations to be followed when applying WALLTITE insulation / air barrier system.

THIS WALLTITE SPRAY APPLICATION GUIDE IS ONLY TO BE USED AS A GENERAL REFERENCE. THE USER IS RESPONSIBLE FOR VERIFYING THE PRODUCT'S APPLICABILITY AND APPROPRIATENESS, BEFORE THE SPRAYING PROCESS IS BEGUN. BASF ASSUMES NO RESPONSABILITY FOR ANY DAMAGES THAT MAY OCCUR OR FOR ANY CLAIMS MADE BY INDIVIDUALS USING THE PRODUCT IN ACCORDANCE WITH THE GUIDELINES BELOW.

CERTIFIED CONTRACTORS

Since our **insulation/air barrier system** is listed by the CCMC for **insulation, air barrier material, and air barrier system**, applications can only be performed by certified applicators from our Quality and Training Program, Raising Performance To New Heights®. On the certification cards it will be mentioned if the applicator could spray the WALLTITE as the insulation or also as an air barrier system.

BUILDING WALLS WITH THE AIR BARRIER SYSTEM:

Refer to the drawings in section 3 of BASF's technical product documentation. The following materials must be used in all cases:

- 20 gauge steel studs, installed at 16'' OC.

- Transition membranes approved by BASF in compliance with the CCMC/NRC. (The various adhesion tests described in section 5 of our technical product documentation are to be used as reference only. Where applicable, the types of primer to be utilized are indicated in the same section, on the individual reports).
- When determining the width of transition membrane to be used, reference should be made to the drawings in section 3 of our technical product documentation.
- # 6 TEK drywall screws, 1 ¼''
- Substrate

    - Exterior gypsum wallboard, minimum 1/2''
    - OSB, 7/16''minimum
    - Plywood, 7/16''minimum
    - Concrete block, 6''minimum
    - Poured concrete wall
- Metal tie – **Refer to section 3, drawings TD 3C and 4C, in BASF's technical product documentation.**

    - Surface mechanical connectors such as Dur-o-wal model # d/a 213, which are attached using threaded rod pins with bolt, e.g. Dur-o-pair by Dur-o-wal. Refer to section 3, drawings # TD 3C and 4C, in BASF's technical product documentation.
    - Horizontal trussed design reinforcement with built-in masonry connectors, such as Dur-o-eye by Dur-o-wal. Refer to section 3, drawings # TD 3C, in BASF's technical product documentation.
    - Adjustable mechanical connectors built into the wall framing, such as the Bailey Brick Connector 10–18. Refer to section 3, drawings # TD 4C, in BASF's technical product documentation.
- Compressible foam pressure gasket, in all openings. Refer to section 3, drawings # TD 3B, 3D, and 4B, in BASF's technical product documentation.
- Fiberglass, in all openings, where requested. Refer to section 3, drawings # TD 3B, 3D, and 4B, in BASF's technical product documentation.
- Galvanized Z bar.
- Sealant.

    - At the edge of the membrane on the cement slab, a bituminous polymer based sealant, i.e., BAKOR 570-05 or equivalent. Refer to section 3, drawings # TD 3B, 3D, and 4B, in BASF's technical product documentation.
    - At all openings, TREMCO Dy Monic sealant. Refer to section 3, drawings # TD 3B, 3D, and 4B, in BASF's technical product documentation.

INSTALLATION OF TRANSITION MEMBRANES

When applying self-adhesive or flame applied membranes, it is important to follow the membrane manufacturer's instructions pertaining to substrate preparation, primer application, and primer curing time. All membranes must be applied by contractors who have been qualified / authorized by the membrane manufacturer/supplier. Since jobsite conditions are different from those prevailing in a laboratory, we have decided to use **110 kPa (16 psi)** as a minimum value as the reference measurement for membrane-to-substrate adhesion. This value was established when verifying adhesion between WALLTITE and a Bakor Blue Skin membrane, on a plywood substrate. The tests results can be obtained in section 5 of our technical product documentation. If this value still cannot be obtained after corrections are made, the membrane will have to be mechanically fastened (contact the membrane manufacturer / supplier).

Adhesion tests are not required if the membrane is secured mechanically.

MEMBRANE TO SUBSTRATE ADHESION TESTS

Since the transition membranes are an integral part of the air barrier system and since they act as a substrate at several locations for our WALLTITE product, adhesion tests should be conducted on site using COM-TEN INDUSTRIES series 301N1M equipment or an equivalent. Contractors certified from our program Raising Performance To New Heights, to install our air barrier system will be able to use this type of equipment. **On their certification cards, we indicated if they are qualified to install this air barrier system.**

The membrane adhesion test should be done after the manufacturer's required bonding time has elapsed.

- Adhesion tests should be conducted at all corners and building angles, as well as at the wall/cement slab intersections. Do one test on every wall that is less than 30m (100ft) in length. For walls that are between 30 and 60m (100 and 200ft) in length, two tests should be conducted. If the wall is more than 60m (200ft) long, tests should be conducted at 30m (100ft) intervals. If it is not possible to conduct any adhesion tests on the cement slab, the membrane should be mechanically fastened. Repeat this procedure at the wall-roof intersections.
- Verify the adhesion of the transition membranes at the perimeters of all openings. If the project comprises more than 10 openings, adhesion tests should be conducted on 15% of them. For jobs comprising 10 or fewer openings, 30% of these should undergo adhesion tests.

- Adhesion tests should be performed on the transition membranes at every tenth column or beam.
- Adhesion tests are not required if the membrane is mechanically fastened.

Additional tests may be requested by the architect or engineer responsible for the project. If the required minimum adhesion value – **110 kPa (16 psi) –** still cannot be obtained after corrections are made, the membrane will have to be mechanically fastened (contact the membrane manufacturer/supplier).

In order to reduce the thermal bridge, all the mechanical fastenings should be covered with WALLTITE. A piece of wood cannot be considered as an adequate securing system.

A solution proposed by one membrane manufacturer is to use a 3/4'' X 3/4'' drywall corner bead. This is installed 1 inch from the opening's, with one side lying flat and the other pointing 90° angle outward from the building. The manufacturer's recommendation was to install the screws at 8'' intervals.

Transition membranes being installed in openings or around columns must be no less than 3'' wide. Refer to the technical drawings in section 3 of our technical product documentation.

WALLTITE ADHESION TESTS TO SUBSTRATE

Refer to National Standard of Canada CAN/ULC-S705.2-98 (Standard thermal insulation – spray applied rigid polyurethane foam, medium density – installation and applications) when verifying adhesion between WALLTITE and various substrates. The type of equipment used, as well as a description, is contained in section 7.3, paragraphs 7.3.1, 7.3.2, and 7.3.3.

SUBSTRATE PREPARATION

The substrate being sprayed should have no traces of oil, grease, wax, rust, oxidization, dirt, or water. Certain metal surfaces will require sandblasting and the application of a primer in order to promote adhesion of the foam. Special attention must be paid to laminated woods that have been surface treated, since these materials may adversely affect WALLTITE's adhesion. Should any doubts arise, have an adhesion test conducted, as described in CAN/ULC-S705.2-98 (Standard for thermal insulation – spray applied rigid polyurethane foam, medium density – installation and applications).

SPRAYING IN SUMMER MONTHS, COLD WEATHER SPRAYING, SPRAYING IN THICK LAYERS,

Refer to BASF's technical product documentation, in the section entitled: WALLTITE Spray Application Guide.

FOAM DENSITY

Refer to BASF's technical product documentation, in the section entitled: WALLTITE Spray Application Guide.

FACTORS AFFECTING FOAM DENSITY

Refer to BASF's technical product documentation, in the section entitled: WALLTITE Spray Application Guide.