**DISCLAIMER**

THE PROCEDURES PRESENTED IN THIS FIELD ASSEMBLY GUIDE ARE INTENDED AS A GUIDELINE ONLY, TO PROVIDE A BASIC UNDERSTANDING OF THE CONCEPTS INVOLVED IN THE PROPER AND AFFECTIVE INSTALLATION OF OUR HP+™ WALL SYSTEMS.

FOR CODE, DESIGN, AND INSTALLATION INFORMATION, PLEASE REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT.

IT REMAINS THE RESPONSIBILITY OF THE HP+™ WALL SYSTEMS INSTALLER AND/OR BUILDER TO MEASURE ALL WORK PERFORMED CONFORMS TO APPLICABLE BUILDING CODE AND LABOUR SAFETY REGULATIONS GOVERNING THE CONSTRUCTION.

**NOTE:**

ALL REFERENCES TO MASTERSEAL® NP1™ OR 1/2” OR 1” FOAM SEALANT TAPE IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS
**HIGH PERFORMANCE WALL :**
**R SERIES - CANADA**

**WALL COMPONENTS**
- MASONRY VENEER WALL
- AIR SPACE (MAX. 1")
- 1" THICK WALLTITE® SPRAYED ONTO SURFACE OF NEOPOR® SHEATHING

* SHEATHING:
  - 1" THICK NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATION (1.35 LB/FT³ MINIMUM DENSITY)
  - 2" X 4" STUDS @ 16" C/C OR 24" C/C
  - INSULATION BETWEEN STUDS BASED ON REQUIRED "R" VALUE
  - 1/2" GYPSUM BOARD

**TYPICAL WALL NOMINAL R VALUE**
TO VALIDATE ACCORDING TO THE WALL COMPOSITION

*SHEATHING CAN BE:*
- MINIMUM 1" OF NEOPOR®;
- 0.8" EXTRUDED POLYSTYRENE (XPS);
- 1/2" GYPSUM BOARD;
- 7/16" ASPHALT FIBERBOARD;
- 1/4" OSB;
- 1" EXPANDED POLYSYRENE (EPS) TYPE II;
- 7/16" NATURAL FIBERBOARD.

IMPORTANT:
RATING AND THICKNESS OF THE SHEATHING TO BE AS PER ARTICLE 9.23.17.2 OF NBC 2015, IF EXTERIOR CLADDING REQUIRES INTERMEDIATE FASTENING BETWEEN SUPPORTS (STUDS).
**STEP 1 - FLOOR ASSEMBLY**

ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS ANCHORED TO FOUNDATION WALL

SEALING GASKET UNDER THE SILL PLATE
(USE 2 PLYS IF TOP OF CONCRETE FOUNDATION WALL IS VERY ROUGH)
STEP 2 - WALL FRAMING

FIRST WALL FRAMING ASSEMBLY

2" x 4" TOP PLATE

2" x 4" STUD

2" x 4" BOTTOM PLATE

2" x 4" TOP PLATE

BRACING BAR "T" SHAPE OR TEMPORARY BRACING

16" OR 24" C/C
STEP 3A- EXTERIOR INSULATION

INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATING SHEATHING

NOTE:
FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT
STEP 3B - SEALING

INSTALL TRANSITION MEMBRANE APPROVED BY BASF™
STEP 4A - ATTACH MASONRY TIES

NOTE:
FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT
STEP 4B - SEALING

FOLD THE MEMBRANE ON THE SHEATHING

FOLD AND TEMPORARILY FIX THE TRANSITION MEMBRANE ONTO THE SHEATHING
STEP 4C - SEALING

APPLY A MASTERSEAL® NP1™ SEALANT BEAD ON THE FOUNDATION
STEP 5 - RAISE WALL ASSEMBLY IN PLACE

FOLD THE TRANSITION MEMBRANE ON THE FOUNDATION AND TRIM OFF THE EXCESS
3D VIEW

MASTERCAP® NP1™ SEALANT

TRANSITION MEMBRANE
APPROVED BY BASF

1" OF NEOPOR®
GRAPHITE - ENHANCED
EXPANDED SHEATHING

MASONRY TIES
@ 24" C/C

2" x 4"

2" x 4"
BOTTOM PLATE

TRANSITION MEMBRANE
APPROVED BY BASF

MASTERCAP® NP1™ SEALANT

SILL PLATE GASKET
STEP 6A - WALL FRAMING WITH OPENING
SECOND WALL FRAMING AND ASSEMBLY
APPLY MASTERSEAL® NP1™ SEALANT AT ALL CORNERS OF OPENINGS

LEGEND

MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE

MASTERSEAL® NP1™ SEALANT AT ALL CORNERS OF OPENINGS
STEP 6B - LINTEL DETAILS

ALL REFERENCE TO MASTERSEAL® NP1™ OR 1/2" OR 1" FOAM SEALANT TAPE FOR THE LINTEL IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS

LEGEND

- MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE

INTERIOR

EXTERIOR

A SECTION

B SECTION

C 3D VIEW

MASTERSEAL® NP1™ SEALANT
STEP 7 - EXTERIOR INSULATION AND SEALING

INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING AND TRANSITION MEMBRANE APPROVED BY BASF

NOTE:

FOR SHEATHING FASTENERS AND SPACING REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DJI ENGINEERING TECHNICAL EVALUATION REPORT.

NOTE:

INSTALL THIS SECTION AFTER RAISING WALL
**STEP 8 - AIR / WATER TIGHTNESS OF OPENINGS**

A - ENSURE THAT MASTERSEAL® NP1™ SEALANT HAS BEEN APPLIED IN ALL CORNERS OF OPENINGS

B - INSTALL AIR BARRIER AND WATERPROOFING MEMBRANE AT EACH CORNER, COVERING SEALANT APPLIED IN STEP 6A

C - STARTING ALONG BOTTOM EDGE, INSTALL MEMBRANE AROUND ENTIRE PERIMETER OF OPENINGS

CUT AT EACH CORNER
**STEP 8 - AIR / WATER TIGHTNESS OF OPENINGS**

**D - FOLD MEMBRANE INTO OPENING**

**E - INSTALL MEMBRANE ALONG VERTICAL EDGES OF OPENINGS**

**A**

**F - WHEN REQUIRED BY MANUFACTURER USE ROLLER TO APPLY PRESSURE AND SEAL MEMBRANE TO SUBSTRATE**

**G - INSTALL THE WINDOW HEAD FLASHING**

*HP+ WALL SYSTEM R SERIES FIELD ASSEMBLY GUIDE*
STEP 9 - WALL AND OPENING DETAILS

- **MASTERSEAL® NP1™ SEALANT**
- **FLASHING**
- **MEMBRANE**
- **SILL**
- **SLOPE**
- **BEVELED SILL**
- **2" x 4" BOTTOM PLATE**
- **2" x 4"**

**SECTION B**
STEP 10 - MASONRY TIES ATTACHMENT AROUND WINDOWS

(SEE STEP #4A)

NOTE:
FOR SHEATHING FASTENERS AND SPACING
REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL
AND THE DrJ ENGINEERING TECHNICAL EVALUATION REPORT.
FURRING STRIPS IS BEST PRACTICE.

FOLD AND TEMPORARILY FIX THE TRANSITION MEMBRANE ONTO THE SHEATHING
STEP 11 - RAISE WALL ASSEMBLY

- Fold the transition membrane on the foundation and trim off the excess.
- Attach top plate.
- Apply a fill piece of NEOPOR® and the transition membrane to close the corner.

BASF
We create chemistry
STEP 12 - CORNER VIEW OF INSTALLED WALLS
STEP 13 - ATTACH CORNER MASONRY TIES

2" x 4" BOTTOM PLATE

1" OF NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING

MASONRY TIES @ 24" C/C
STEP 14 - SECOND FLOOR ASSEMBLY

ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS USING MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE
STEP 15A - BUILD AND POSITION SECOND FLOOR WALLS AND ROOF

(SEE STEPS 2 TO 14)
STEP 16 - ROOF FRAMING

A  3D VIEW

B  SECTION

- VAPOUR BARRIER*
- MASTERSEAL® NP1™ SEALANT

*AS REQUIRED BY CODE
STEP 17 - WINDOWS AND DOORS INSTALLATION

WINDOW INSTALLATION ACCORDING TO CSA A440.4

LOW EXPANSION FOAM SEALANT

MASTERSEAL® NP1™

BACKER ROD

SELF-ADHERING MEMBRANE

3D VIEW

A

LOW EXPANSION FOAM SEALANT

MASTERSEAL® NP1™

BACKER ROD

BEVELED SILL

SECTION

B

SELF-ADHERING MEMBRANE

MASTERSEAL® NP1™
**STEP 18A - INTERIOR AND EXTERIOR INSULATION: CORNER DETAILS**

WALLTITE® MUST BE INSTALLED, IN ACCORDANCE WITH BASF’S QUALITY ASSURANCE PROGRAM.

NOTE: REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DRJ ENGINEERING TECHNICAL EVALUATION REPORT

**2" x 4" BOTTOM PLATE**

**MASONRY TIES @ 24" C/C**

**1" OF NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING**

**1" OF WALLTITE®**

**INSULATION BETWEEN STUDS AS PER EXISTING DESIGN**

**CORNER SECTION**
**STEP 18B - INTERIOR AND EXTERIOR INSULATION: FIRST FLOOR WALLS AND HEADERS**

**A** 3D VIEW

- Insulation between studs as per existing design

**B** SECTION

- Masonry ties @ 24" C/C
- Insulation between studs as per existing design

- Transition membrane approved by BASF
- MasterSeal® NP1™ sealant

**MasterSeal® NP1™ Sealant**

We create chemistry
STEP 18C - INTERIOR AND EXTERIOR INSULATION: SECOND FLOOR WALLS AND HEADERS

A  3D VIEW

B  SECTION

INSULATION BETWEEN STUDS AS PER EXISTING DESIGN

MASSONRY TIES @ 24" C/C

INSULATION BETWEEN STUDS AS PER EXISTING DESIGN
VARIOUS DETAILS: 1- KNEE WALL

A 3D VIEW

INSULATION BETWEEN STUDS AS PER EXISTING DESIGN

B SECTION

INSULATION BETWEEN STUDS AS PER EXISTING DESIGN

TRANSITION MEMBRANE APPROVED BY BASF

MASTERSEAL® NP1™ SEALANT
VARIOUS DETAILS:
2- CANTILEVERED FLOOR

INSULATION BETWEEN STUDS AS PER EXISTING DESIGN

INSULATION BETWEEN FLOOR JOISTS AS PER EXISTING DESIGN

SECTION

3D VIEW

INSULATION BETWEEN STUDS AS PER EXISTING DESIGN
VARIOUS DETAILS:

3- CANTILEVERED FLOOR ON BEAM

- INSULATION BETWEEN STUDS AS PER EXISTING DESIGN
- SELF-ADHERING MEMBRANE

SECTION

3D VIEW

- INSULATION BETWEEN FLOOR JOISTS AS PER EXISTING DESIGN
- SELF-ADHERING MEMBRANE

INTERIOR

EXTERIOR
VARIOUS DETAILS:
4- UNHEATED GARAGE
ELECTRICAL OUTLET

NOTE:
ALL EXPOSED FOAM PLASTIC INSULATION MUST BE COVERED WITH A THERMAL BARRIER APPROVED BY CODE

MEMBRANE
OUTDOOR ELECTRICAL OUTLET
MASTERSEAL® NP1™ SEALANT
VARIOUS DETAILS: 5- RAISED HEEL ROOF TRUSS

3D VIEW

SECTION

NEOPOR®
UP TO THE SOFFIT

MASTERSEAL® NP1™ SEALANT

VAPOUR BARRIER *

* AS REQUIRED BY CODE
**VARIOUS DETAILS: 6- SEALING AROUND WALL PENETRATIONS**

A - INSTALL A TRANSITION MEMBRANE AROUND THE PIPE.

Cut the edge of the membrane to ensure the membrane is well adhered to the wall and along the perimeter of the pipe.

Note: Install the membrane starting from the bottom of the pipe.

B - ENSURE THE MEMBRANE IS WELL ADHERED TO THE WALL AND ALONG THE ENTIRE PERIMETER OF THE PIPE.
VARIOUS DETAILS: 6- SEALING AROUND WALL PENETRATIONS

C - INSTALL A MEMBRANE ON THE WALL TO COVER THE LOWER HALF OF THE PIPE.

D - INSTALL A SECOND MEMBRANE ON THE WALL TO COVER THE UPPER PART OF THE PIPE AND OVERLAP WITH THE LOWER MEMBRANE. SEAL THE PERIMETER AND ALL THE MEMBRANE JOINTS.

E - SPRAY WALLTITE® BEFORE LAYING BRICKS.