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 EFFECTIVE 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 :
E SERIES - CANADA

WALL COMPONENTS

- EXTERIOR CLADDING
- 1" x 3" VERT. STRAPPING @ 16" C/C OR 24" C/C
- 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
- 2 1/2" THICK WALLTITE® SPRAYED ONTO SURFACE OF NEOPOR® SHEATHING
- 1/2" GYPSUM BOARD

** TYPICAL WALL NOMINAL R VALUE **

<table>
<thead>
<tr>
<th>COMPONENTS</th>
<th>R VALUE</th>
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</thead>
<tbody>
<tr>
<td>OUTSIDE AIR FILM</td>
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<tr>
<td>EXTERIOR CLADDING</td>
<td>+/- R 0.62</td>
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<tr>
<td>AIR SPACE 3/4&quot;</td>
<td>R 1.02</td>
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<tr>
<td>NEOPOR® SHEATHING 1&quot;</td>
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<tr>
<td>WALLTITE® CM01, 2 1/2&quot;</td>
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<tr>
<td>AIR SPACE 1&quot;</td>
<td>R 1.02</td>
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<tr>
<td>GYPSUM BOARD 1/2&quot;</td>
<td>R 0.44</td>
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<tr>
<td>INSIDE AIR FILM</td>
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<td>TOTAL R</td>
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** NOMINAL R VALUES DETERMINED ACCORDING TO COMMON INDUSTRY PRACTICE **

** FOR PLASTIC FOAM INSULATION AT HEADERS AND THERMAL BARRIER REFER TO THE APPLICABLE BUILDING CODE. **

(2020-09-15)
**HIGH PERFORMANCE WALL:**
**E SERIES - CANADA**

**WALL COMPONENTS**
- EXTERIOR CLADDING
- 1" x 3" VERT. STRAPPING @ 16" C/C OR 24" C/C
- 1 1/2" THICK NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE INSULATION (1.35 lb/ft³ MINIMUM DENSITY)
- 2" x 4" STUDS @ 16" C/C OR 24" C/C
- 2 1/2" THICK WALLTITE® SPRAYED ONTO SURFACE OF NEOPOR® SHEATHING
- 1/2" GYPSUM BOARD

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**TYPICAL WALL NOMINAL R VALUE**

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<tr>
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<tr>
<td>AIR SPACE 1&quot;</td>
<td>R 1.02</td>
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<td>GYPSUM BOARD 1/2&quot;</td>
<td>R 0.44</td>
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<tr>
<td>INSIDE AIR FILM</td>
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**TOTAL R**

R 24.45

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* NOMINAL R VALUES DETERMINED ACCORDING TO COMMON INDUSTRY PRACTICE

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**FOR PLASTIC FOAM INSULATION AT HEADERS AND THERMAL BARRIER REFER TO THE APPLICABLE BUILDING CODE.**
HIGH PERFORMANCE WALL:
E SERIES - CANADA

PATENT PENDING

WALL COMPONENTS
- EXTERIOR CLADDING
- 1" x 3" VERT. STRAPPING @ 16" C/C OR 24" C/C
- 2" THICK NEOPOR® GRAPHITE - ENHANCED
  EXPANDED POLYSTYRENE INSULATION
  (1.35 lb/ft³ MINIMUM DENSITY)
- 2" x 4" STUDS @ 16" C/C OR 24" C/C
- 2 1/2" THICK WALLTITE® SPRAYED
  ONTO SURFACE OF NEOPOR® SHEATHING
- 1/2" GYPSUM BOARD

TYPICAL WALL NOMINAL R VALUE

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<td>AIR SPACE 3/4&quot;</td>
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<td>NEOPOR® SHEATHING 2&quot;</td>
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<td>R 0.44</td>
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<td>INSIDE AIR FILM</td>
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</table>

TOTAL R  R 26.85

* NOMINAL R VALUES DETERMINED ACCORDING TO COMMON INDUSTRY PRACTICE

** FOR PLASTIC FOAM INSULATION AT HEADERS AND THERMAL BARRIER REFER TO THE APPLICABLE BUILDING CODE.
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)

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

HP+™ WALL SYSTEM  E SERIES  FIELD ASSEMBLY GUIDE

We create chemistry
STEP 2 - WALL FRAMING

FIRST WALL FRAMING ASSEMBLY

2" x 4" OR 2" x 6"

TOP PLATE

2" x 4" OR 2" x 6"

STUD

BRACING BAR "T" SHAPE OR TEMPORARY BRACING

NOTE: ADVANCE FRAMING ACCEPTED
**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

INSULATION TO COVER HEADER AT THIS STAGE OR LATER
STEP 3B- WEATHER RESISTIVE BARRIER (WRB) - OPTIONAL

NOTE:
NEOPOR'S® FASTENERS ARE NOT SHOWN ON THIS PAGE AND THE FOLLOWING PAGES TO SIMPLIFY THE DRAWINGS.

NOTE:
WEATHER RESISTIVE BARRIER INSTALLED AS PER MANUFACTURER SPECIFICATIONS
STEP 4 - NEOPOR® SEALING JOINTS - VARIOUS OPTIONS

SEAL BUTT JOINTS; SHIPLAP AND T&G JOINTS MAY BE LEFT UNSEALED WHEN DESIGN SHEDS WATER

SEALANT TAPE APPROVED BY BASF CANADA

WEATHER RESISTIVE BARRIER (WRB)
NOTE:
FOR SHEATHING AND STRAPPING FASTENERS AND SPACING, REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE DJJ ENGINEERING TECHNICAL EVALUATION REPORT.
STEP 6 - RAISE WALL ASSEMBLY IN PLACE
**A** 3D VIEW

**B** SECTION

- **1" x 3" STRAPPING**
- **NEOPOR® GRAPHITE - ENHANCED EXPANDED SHEATHING**
- **2" x 4" OR 2" x 6" BOTTOM PLATE**
- **2" x 4" OR 2" x 6"**
- **MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE**
- **SILL PLATE GASKET**

- **2" x 4" OR 2" x 6"**
- **MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE**
- **SILL PLATE GASKET**

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**HP+™ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE**

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**BASF**

We create chemistry
STEP 7A - 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

A

B

MASTERSEAL® NP1™ SEALANT AT ALL CORNERS OF OPENINGS
ALL REFERENCE TO MASTERSEAL® NP1™ OR 1/2" OR 1" FOAM SEALANT TAPE FOR THE LINTEL IS FOR BEST PRACTICE TO IMPROVE AIR TIGHTNESS
STEP 8 - EXTERIOR INSULATION

INSTALL NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING

NOTE:

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

FIX THIS SECTION AFTER RAISING WALL
STEP 9A - 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 INSTALLED IN STEP 7A

C - STARTING ALONG BOTTOM EDGE, INSTALL MEMBRANE AROUND ENTIRE PERIMETER OF OPENINGS
**STEP 9A - AIR / WATER TIGHTNESS OF OPENINGS**

D - FOLD MEMBRANE INTO OPENING

E - INSTALL MEMBRANE ALONG VERTICAL EDGES OF OPENINGS

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

G - INSTALL THE WINDOW HEAD FLASHING
STEP 9B - AIR / WATER TIGHTNESS OF OPENINGS - WEATHER-RESISTIVE BARRIER OPTION

EXECUTE STEPS "A TO G" AND CONTINUE WITH THE FOLLOWING STEPS WHEN USING A WEATHER-RESISTIVE BARRIER

H - INSTALL THE WEATHER-RESISTIVE BARRIER

I - INSTALL A SELF-ADHESIVE TAPE ALONG THE EDGES OF THE WEATHER-RESISTIVE BARRIER
STEP 9C - AIR / WATER TIGHTNESS OF OPENINGS - WEATHER-RESISTIVE BARRIER + LIQUID MEMBRANE OPTION

A - INSTALL THE WEATHER-RESISTIVE BARRIER AND FOLD THE EDGES AT THE FOUR SIDES OF THE OPENING

B - APPLY THE HP+™ FLASH LIQUID FLASHING MEMBRANE: IN THE CORNERS 1, AT THE NEOPOR® WOOD JOINT 2, ON THE SILL OF THE OPENING 3, ON EACH SIDE OF THE OPENING 4 AND ON THE HEAD OF THE OPENING.

C - EXTEND THE HP+™ FLASH LIQUID FLASHING MEMBRANE USING A TROWEL

STEP 9C - AIR / WATER TIGHTNESS OF OPENINGS - WEATHER-RESISTIVE BARRIER + LIQUID MEMBRANE OPTION

E - EXTEND THE HP™ FLASH LIQUID FLASHING MEMBRANE USING A TROWEL

F - INSTALL THE WINDOW HEAD FLASHING

G - APPLY MASTERSEAL® NP1™ SEALANT ON TOP OF THE WINDOW HEAD FLASHING
STEP 10 - WALL AND OPENING DETAILS

**A**  SECTION

**B**  SECTION - WEATHER-RESISTIVE BARRIER OPTION

**C**  SECTION - WEATHER-RESISTIVE BARRIER + LIQUID MEMBRANE OPTION

**D**  PLAN SECTION
STEP 11 - STRAPPING INSTALLATION AROUND WINDOWS

(SEE STEP #5)

NOTE:
FOR SHEATHING AND STRAPPING FASTENERS AND SPACING, REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE D&J ENGINEERING TECHNICAL EVALUATION REPORT. FURRING STRIPS IS BEST PRACTICE.
STEP 12 - RAISE WALL ASSEMBLY

ATTACH TOP PLATE

SECURE STRAPPING TO WINDOW OPENING AFTER DRIP FLASHING INSTALLATION

APPLY A FILL PIECE OF NEOPOR® TO CLOSE THE CORNER
STEP 13 - CORNER VIEW OF INSTALLED WALLS

- Apply SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE around the corners of the installed walls.

- Use MASTERSEAL® NP1™ SEALANT around the edges of the walls and corners for additional sealing.

- Ensure proper alignment and adhesion to prevent leaks and air infiltration.
STEP 14 - CORNER STRAPPING INSTALLATION

1" x 4" STRAPPING

1" x 6" BOARD

1" x 3" STRAPPING

1" x 3" STRAPPING

1" x 3" STRAPPING

NEOPOR® GRAPHITE - ENHANCED EXPANDED POLYSTYRENE SHEATHING

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

SEALANT TAPE APPROVED BY BASF CANADA

SEALANT TAPE APPROVED BY BASF CANADA

2" x 4" OR 2" x 6"

2" x 4" OR 2" x 6"

2" x 4" OR 2" x 6" BOTTOM PLATE
STEP 15 - SECOND FLOOR ASSEMBLY

ENSURE SEAL OF ALL FLOOR FRAMING COMPONENTS USING MASTERSEAL® NP1™ SEALANT OR 1/2" OR 1" FOAM SEALANT TAPE
STEP 16A - BUILD AND POSITION SECOND FLOOR WALLS

(SEE STEPS 2 TO 14)
**STEP 16B - DETAILS**

**A**  SECTION

**B**  3D VIEW

- **Sealant Tape**
  - Approved by BASF Canada

- **3D View**
  - MasterSeal™ NP1™
  - Sealant or 1/2" or 1" Foam sealant tape

**HP+™ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE**
STEP 17 - ROOF FRAMING

3D VIEW

SECTION

VAPOUR BARRIER*

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

*AS REQUIRED BY CODE
STEP 18A - WINDOWS AND DOORS INSTALLATION

WINDOW INSTALLATION ACCORDING TO CSA A440.4

LOW EXPANSION FOAM SEALANT

MASTERSEAL® NP1™

BACKER ROD

SELF-ADHERING MEMBRANE

BEVELED SILL

LOW EXPANSION FOAM SEALANT

MASTERSEAL® NP1™

SELF-ADHERING MEMBRANE

HP+™ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE
STEP 18B - WINDOWS AND DOORS INSTALLATION - ALTERNATIVE DETAIL

WINDOW INSTALLATION ACCORDING TO CSA A440.4

LOW EXPANSION FOAM SEALANT

MASTERSEAL® NP1™

BACKER ROD

LOW EXPANSION FOAM SEALANT

FOAM SEALANT

MASTERSEAL® NP1™

BEVELED SILL

HP+™ FLASH LIQUID FLASHING MEMBRANE

WEATHER RESISTIVE BARRIER

3D VIEW

A

SECTION

B

HP+™ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE
STEP 19A - INTERIOR INSULATION CORNER DETAILS

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

WALLTITE® IS INSTALLED BEFORE OR AFTER ELECTRICAL WIRING AND PLUMBING TASKS.

NOTE: REFER TO THE BASF HP+™ TECHNICAL INSTALLATION MANUAL AND THE D&J ENGINEERING TECHNICAL EVALUATION REPORT.
STEP 19C - INTERIOR INSULATION: SECOND FLOOR WALLS AND HEADERS

A 3D VIEW

B SECTION

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

SEALANT TAPE APPROVED BY BASF CANADA

HP+ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE
VARIOUS DETAILS: 1- KNEE WALL

3D VIEW

A

SECTION

B

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

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

SEAL TAPE APPROVED
BY BASF CANADA

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

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

HP+ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE

BASF

WE CREATE CHEMISTRY
VARIOUS DETAILS:
3- CANTILEVERED FLOOR ON BEAM

INTERIOR

SELF-ADHERING MEMBRANE

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

EXTERIOR

SELF-ADHERING MEMBRANE

3D VIEW

SECTION

A

B

HP+™ WALL SYSTEM E SERIES FIELD ASSEMBLY GUIDE
VARIOUS DETAILS:

4- UNHEATED GARAGE

ELECTRICAL OUTLET

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

OUTDOOR ELECTRICAL OUTLET

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

UNHEATED GARAGE

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

SECTION A

SECTION B
VARIOUS DETAILS: 5- RAISED HEEL ROOF TRUSS

3D VIEW

SECTION

A

NEOPOR®
UP TO THE SOFFIT

VAPOUR BARRIER

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

B

*AS REQUIRED BY CODE