Asphalt and Tar:
- UV degradation – prime glass surface with suitable primer.
- Glossy or very smooth surfaces – sand or abrade surfaces.
- Oils – wash with detergent.
- Oils, Hydrated Alumina – clean with solvent, never use a caustic solution, and prime with a high adhesion bonding primer suitable for aluminum.

Applying foam over aluminum:
- Oils – wash with minerals spirits and then prime with a suitable primer. Brush blasting, sanding or abrading may be necessary as foam requires a mechanical
  setpoint temperatures” listed below and on the Technical Data Sheet are suggested general starting parameters; it’s important to observe the foam and the reaction time
  in off-spec foam and does not comply with the ICC Evaluation Service Report and does not qualify for the Huntsman Building Solutions Limited Lifetime Warranty.

Applying foam over stainless steel:
- Oils – wash with minerals spirits and then prime with a suitable primer. Brush blasting, sanding or abrading may be necessary as foam requires a mechanical
  bond.
- Oils, Hydrated Alumina – clean with solvent, never use a caustic solution, and prime with a high adhesion bonding primer suitable for aluminum.
- UV degradation – prime glass surface with suitable primer.

Applying foam over glass:
- Oils – wash with detergent.
- Glossy or very smooth surfaces – sand or abrade surfaces.
- UV degradation – prime glass surface with suitable primer.

Asphalt and Tar:
- Solvents – allow to cure and for solvent to evaporate, prime with suitable primer.
Rigid Polyurethane Foam:

- UV degradation – remove surface of foam with wire brush or wire grinding wheel.

Polypropylene, polyethylene, some silicones and some ceramic surfaces:

- Sealection NM may not adhere without a mechanical attachment to these substrates.

APPLICATION PARAMETERS

EQUIPMENT – Follow the spray equipment manufacturer’s safe operation guidelines. Every spray unit is slightly different and you will need to adjust your primary heater and hose temperatures accordingly for each polyurethane foam system. Adjust your processing pressures and application technique for an appropriate spray pattern for the substrate and structure.

PROPORTIONER – Use only fixed ratio (one-to-one), volumetric positive displacement pumps connected to a common drive. B-side drum mixer: Mix only the Sealection NM B-side resin material during chemical circulation and the spraying process. The A-side material should not be mixed.

TRANSFER PUMPS – Use 2:1 or 1:1 double acting transfer pumps assuring equal pressure is delivered from both sides to the proportioner. If diaphragm pumps are used, contact the Huntsman Building Solutions Technical Service Department for recommendations.

PRIMARY HEATERS – The primary heaters should be resistance controlled, direct contact heating rods, either submersible, mass block and tube style or combination of direct heating contact rods and mass block (hybrid heater). The primary heaters should be controlled through independent controllers, separated from the hose heat to ensure an accurate setpoint temperature. Sealection NM may not be consistently sprayed in conformance with the written specification if the combination of the proportioner’s pumping capacity, the primary heat capability and spray gun discharge rate (mixing chamber size) is out of balance. Contact the Huntsman Building Solutions Technical Service Department for further guidance.

HEATED HOSE – Huntsman Building Solutions recommends the use of heated spray hoses rated at ≥ 2000 psi. Use moisture resistant hoses specifically designed for isocyanate. The heated spray hose should be able to maintain temperatures up to 190°F (88°C) and should be heated using an electrical element with an independent temperature sensor. The heated hose should also be adjusted and monitored separately from the A and B primary heaters, and should be capable of maintaining the temperature of the A and B primary heaters all the way to the spray gun.

FLUSHING/CHANGING FROM ANOTHER CHEMICAL TO SEALECTION NM

Follow the published flushing procedure on the Huntsman Building Solutions website. Never flush water through the A-side (iso side). Failure to properly flush will result in off-spec foam and does not comply with the ICC Evaluation Service Report and does not qualify for the Huntsman Building Solutions Limited Lifetime Warranty.

FOAM APPLICATION

In preparation for spraying, an off-target test spray should be performed to verify the processing pressure, primary heater and hose temperature settings. The “initial setpoint temperatures” listed below and on the Technical Data Sheet are suggested general starting parameters; it is important to observe the foam and the reaction time of the reacting mass and make additional adjustments throughout the day as needed to maintain proper cell structure, adhesion, cohesion and general foam quality.

<table>
<thead>
<tr>
<th>RECOMMENDED PROCESSING CONDITIONS*</th>
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<tbody>
<tr>
<td>Initial Primary Heater Setpoint Temperature</td>
</tr>
<tr>
<td>Initial Hose Heat Setpoint Temperature</td>
</tr>
<tr>
<td>Initial Processing Setpoint Pressure</td>
</tr>
<tr>
<td>Substrate &amp; Ambient Temperature</td>
</tr>
<tr>
<td>Moisture Content of Substrate</td>
</tr>
<tr>
<td>Moisture Content of Concrete</td>
</tr>
</tbody>
</table>

*Foam application temperatures and pressures can vary widely depending on temperature, humidity, elevation, substrate, equipment and other factors. While processing, the applicator must continuously observe the characteristics of the sprayed foam and adjust processing temperatures and pressures to maintain proper cell structure, adhesion, cohesion and general foam quality. It is the sole responsibility of the applicator to process and apply Sealection NM within specification.

One proven method of applying Sealection NM is to spray perpendicular (90 degree angle) to the substrate, starting at the bottom of the cavity, holding the gun 10-14” away from the substrate and wetting the substrate and the vertical framing members while slowly working toward the top of the cavity. This technique also helps minimize over spray. Applying at an angle with the gun directed into the reacting mass may cause lack of adhesion, blisters, blow-off, excessive over spray, and an irregular surface finish which may affect yield and create unacceptable physical properties of the finished insulation product.

Always spray perpendicular to the surface in a minimum 3” lift. There is no maximum thickness due to physical properties, so Sealection NM can be sprayed as thick as possible in a single pass without signs of blow-off from the reacting mass. Thin foam layers often results in poor physical properties, and poor chemical reaction due to low exothermic heat generated from the chemical reaction, which is needed to create proper cell formation.

If touch-ups or subsequent passes are needed to achieve the prescribed thickness, allow the foam lifts to cool and release any steam generated during the spraying process. Wait at least 2-5 minutes before successive foam lifts are applied. Small blisters may form on the surface of the foam if this recommendation isn’t followed.

HOW TO AVOID OVER SPRAY

Over spray with open cell foams occurs for a variety of reasons such as spraying the product too cool, applying the product to a substrate that is too cold, not spraying perpendicular to the surface, and high wind conditions. Flash coating to warm the surface is not a recommended practice and may create unwanted over spray. Flash coats are very thin and may not have enough exothermic reaction present to properly cure. Excessive over spray may lead to blisters or delaminating of additional passes of foam or coating. Over spray can travel long distances and may adhere to objects left unprotected such as windows, buildings and automobiles. Protect anything that should not get foamed.
LIMITATIONS OF USE
Sealection NM is a combustible material with a maximum continuous service temperature of 180°F (82°C). Sealection NM should not be used in direct contact with chimneys, flues, steam pipes, recessed lighting or heat emitting devices. Consult the listing or label of such materials for clearance to combustibles. A minimum clearance of 3" should be maintained when applying around recessed lighting, and it’s important to avoid spraying inside electric outlets or junction boxes. Properly prep and secure any material or surface that should not get insulated. If in doubt about the substrate temperature or surface conditions, a trial application should be conducted to check foam quality and spray performance. Water on the surface from rain, fog, condensation, etc. will react chemically with the isocyanate, adversely affecting the foam and physical properties, particularly adhesion.

COLD WEATHER PROCESSING
The minimum substrate and ambient temperature for Sealection NM is 30°F (-1°C). Low temperatures affect the foaming process in two ways.

1. Chemical reactions can be slowed due to reduced exothermic energy within the expanding mass, which could lead to poor cell structure, dripping and voids from slow plastic formation.

2. This reduced temperature often leads to reduced yield.

The temperature and type of substrate has a greater influence on the quality of the foam than the temperature of the air because the rate of heat transfer from liquid to air is much slower than the rate from liquid to substrate. If the substrate temperature is too low, or it is a highly conductive material such as metal or concrete, the heat produced by the chemical reaction may be drawn into the substrate so rapidly that plastic formation and cell generation becomes very slow, thus reducing yield. It is not a good practice to use the heated chemicals to warm the surface (flash coat). Instead, if the substrate to be sprayed is too cold to produce proper foam, the substrate should be heated using an indirect-fired heater or the foam should be sprayed on a warmer substrate on a warmer day. No open flame or direct heating is permitted during the spraying process.

THERMAL AND UV PROTECTION
Like all foam plastics, Sealection NM must be separated from the living space by a 15 minute thermal barrier in accordance with applicable codes. This product must not be used when the continuous service temperature of the substrate or foam is below -60°F (-51°C) or above 180°F (82°C). Sealection NM must be protected from direct exposure to sunlight; incidental exposure during construction may cause surface discoloration but will not degrade the performance of the foam.

VENTILATION
Ventilate during spray foam application and for a minimum of 24 hours following the application or until no objectionable odor remains. If not adequately ventilated during and shortly after application, the odors can be absorbed in adjacent materials such as fibrous insulation, wood framing and household or stored items. Sheet plastic should be placed over any absorbent material that cannot be removed during the spray and ventilation operation.

CHEMICAL STORAGE
Sealection NM B-side resin is packaged in totes or in open-head metal drums. A-PMDI is packaged in totes or in closed-head metal drums. Store both A-PMDI and B-side chemicals at temperatures between 50°F (10°C) and 100°F (38°C). Keep away from direct sunlight. Remove the transfer pump and tightly close the bungs of the A-PMDI and B-side drum after use. Sealection NM B-side resin has a 12 month shelf life when stored within the acceptable storage temperatures and the drum is in its original condition with the bungs having never been removed. See Sealection NM B-side SDS for additional product information.

FOR MORE INFORMATION
Visit www.huntsmanbuildingsolutions.com or call 817-640-4900 for more information on health, safety and environmental protection with respect to polyurethane chemicals.

Disclaimer: The information herein is to assist customers in determining whether our products are suitable for their applications. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, expressed or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent inferred. All patent rights are reserved. The foam product is combustible and must be protected in accordance with applicable codes. Protect from direct flame and spark contact, around hot work for example. The exclusive remedy for all proven claims is replacement of our materials.