

Product Description

NB-6000 is a 100% Modified Silicone based paintable sealant formulated to reduce or eliminate dirt pickup, surface streaking, and substrate staining. NB-6000 is a premium one-component, medium-modulus, neutral cure, UV resistant sealant useful on a wide variety of materials in new or remedial applications. Supplied as a paste, NB-6000 produces a durable rubber joint sealant upon cure.

Typical Performance Properties

Performance

Cured Sealant Durability - cured sealant rubber exhibits excellent long term resistance to natural weathering including: extreme temperatures, ultraviolet radiation, rain and snow, with negligible change in elasticity.

Adhesion - Primerless adhesion to many substrates and finishes. Most appropriate product for use with numerous construction-related materials, including: glass, polycarbonate vinyl, numerous plastics, treated and untreated wood, fluoropolymer and powder coated paints, conversion-coated, and anodized aluminum, brick, terra-cotta, ceramic and porcelain materials, concrete and natural stones. Some finishes or substrates may require a primer.

Movement Capacity - Can accommodate 35% movement in both extension and compression and has excellent elongation and shape retention.

Low VOC Content - VOC levels are within the limits specified by L.E.E.D. for sealants. Neutral cure by product with negligible odor.

Thermal Stability (cured state) - Once cured, the material remains flexible over a range of -55°F (-48°C) to 250°F (121°C) and up to 350°F (177°C) under intermittent short term exposure.

Ease of Application

Stable Consistency (uncured state) - supplied as a lightweight paste, the consistency of which remains relatively unchanged over a wide temperature range. The paste may be easily gunned and tooled under hot and cold conditions.

Good Tooling Time - Designed to allow the user sufficient time for installation and tooling.

Low Sag or Slump - Useful for application to horizontal, vertical or overhead surfaces.

Special Formulation - Alstone's unique formulation offers a cleaner sealant option when sealing visible building joints. The cured sealant has a reduced tendency to attract airborne contaminants and minimize the subsequent streaking that can occur when rainwater washes over joints. The reduced dirt pickup characteristic allow it to be used as a substitute for organic sealants but with the delivery of traditional silicone weatherability and long life performance. In addition, the potential for staining from fluid migration is effectively reduced when sealing natural stones, including: marbles, granites and limestones.

Finish - matte finish produces a non-glossy surface appearance.

Product Compatibility

Fully compatible with all Alstone Sealants and Adhesives.

Basic Uses

NB-6000 is recommended for the following applications:

Natural Stone

Useful on natural stones when staining from migration is undesired.

Weatherproofing

- Between dissimilar or similar materials in either new or remedial glazing and sealing applications.
- Around window perimeters and punched openings.
- Sealing of ACP joints.

Packaging

NB-6000 is available in the following packings:

- 300ml. cartridge
- 600ml. sausage

Colors

NB-6000 is available in White color.

Limitations

NB-6000 is not recommended:

- For use in food contact applications.

NB-6000 should not be applied or used:

- As a structural adhesive in Structural Glazing applications.
- Under exceedingly hot or cold conditions (see Sealant Application section for additional information).
- On frozen or contaminated surfaces.
- On excessively alkaline or acidic substrates.

Precautions

- This material requires atmospheric moisture to cure from paste to rubber and may not attain its listed final cured rubber properties when used in designs or applications where the sealant is encapsulated and without access to atmospheric moisture.
- Due to the inherent variability of natural materials it is recommended that stain testing be performed on all natural alstone types prior to use to ascertain the visual acceptability of any particular sealant-stone combination. Contact Alstone Technical Services for additional information.
- Some materials that bleed plasticizers or oils cause a discoloration on the surface of sealants. When sealing to or over items such as: rubberized gaskets, bituminous-based materials, butyl or oil-based products, oily woods, tapes etc., Alstone recommends that compatibility testing be performed prior to application to confirm the suitability of these materials when in contact with each other.
- Sealants are hydrophobic in nature and if inadvertently over-applied onto adjacent joint surfaces (even if removed immediately), can create a waterproofing effect on same substrate types visible when the substrate is wet.

Technical Services

Alstone provides Advanced Project Management Services (APMS) Wherein we undertake various testings like compatibility, stain, UV testing etc.

Specifications

Typical property values of NB-6000 as cured are set forth in the tables below. Typical product data values should not be used as specifications. Assistance with specifications is available by contacting Alstone at +91-8860787878.

Typical Properties

Property	Value
Consistency	Paste
Base	MS Polymer®
Specific Gravity	1.50g/ml
Work Life (tooling time)	12-15 minutes
Tack Free Time	40 minutes (@ 73°F, 50% RH)
Sag/Slump	1mm Max.
Movement Capability	±35%
Shore A Hardness	38-40
Curing Rate (*) (20°C/65% R.V.)	2 mm/24h
Elongation at break	400%

Joint Designs and Dimensions

Joint Movement

The dimensions of joints in typical construction applications change daily as a result of solar heat gain and building sway, and throughout the year due to seasonal changes. The movement in a sealant bead installed on the sun-side of a building or during the hottest portion of the day will be almost entirely in extension during the cold season or cycle, while the movement of a bead installed during the coldest condition will be almost entirely in compression during the hotter season or cycle. In addition to these above movements, the designer should consider the effect of construction tolerances in his/her project to minimize the occurrence of over-sized or under-sized joints during construction. All moving (dynamic) joints must be designed so as not to allow three-sided adhesion of the sealant to occur. Three-sided adhesion hinders the ability of the sealant to extend and compress freely as desired and can lead to early joint failure.

Joint Width

When using NB-6000, the designed joint width must be at least twice the total anticipated joint movement. For example, if the total anticipated movement in an expansion joint in which NB-6000 is to be installed is 1/4" (6 mm), the designed joint width must be at least 1/2" (12 mm). The designer may want to consider additional width to accommodate construction tolerances. Large panels or lites should allow a minimum width of 1/4" (6 mm) for the sealant bead, mostly to allow for a proper installation (very small/narrow beads become difficult to install and can accommodate less movement). Glazing of plastic or larger-sized metal panels may require larger than usual joint widths due to the greater movement potential (higher coefficients of thermal expansion) . Consult with Alstone Technical Services for recommendations on large or unusual applications.

Butt Jointing

A thin installation of sealant can better accommodate more movement than a deep installation, as the deeper bead will result in additional stress being imposed on both the sealant and the bonding surfaces during joint movement.

The recommended sealant profile is as follows:

- Joint is hourglass shaped with the depth of the sealant over the crown of the backer rod to be no thinner than 1/8" (3 mm) and no thicker than 3/8" (10 mm), and
- a minimum of 1/4" (6 mm) of adhesive bonding contact must be made to all surfaces to which the sealant is to adhere.

When used in joints exceeding 2" (5 cm) in width the recommended sealant profile is as follows:

- Joint is hourglass shaped with the depth of the sealant over the crown of the backer rod to be no thinner than 1/4" (6 mm) and no thicker than 3/8" (10 mm), and
- a minimum of 3/8" (10 mm) of adhesive bonding contact must be made to all surfaces to which the sealant is to adhere.

Joint Backer Materials

Backer materials, typically the backer rod, provides the following benefits to aide in the correct application of NB-6000:

- 1.) Controls and provide the desired sealant depth.
- 2.) Creates a formed joint cavity that allows for the desired hourglass sealant shape.
- 3.) Provides a firm backup that helps attain full wetting of the substrates when the sealant is tooled.
- 4.) Acts as a bond breaker to eliminate adhesion on the backside of a joint (three-sided adhesion).

A non-gassing polyethylene, polyolefin or a polyurethane foam rod is the recommended back-up material for use with NB-6000. If the joint is too shallow to allow foam rod, use a polyethylene tape (as a bond breaker to eliminate three-sided adhesion). On porous substrate applications, a closed cell backer rod is recommended (open cell backer materials absorb and hold water which can affect long-term sealant adhesion on these materials). The Backer rod should be 25-50% greater (confirm with manufacturer of backer rod as to type selected) than the width of the joint, thereby providing continuous pressure against the joint walls; and expanding and contracting with the joint movement without pushing the sealant out of the joint during the compression cycle or falling away during the extension cycle. Rubber backup materials may stain the sealant and are not recommended, unless tested and verified for compatibility.

Surface Preparation Porous Materials (concrete, masonry, brick, stone, etc.)

- Joints must be clean, dry and sound prior to application of the sealant. All contaminants, impurities, or other adhesion inhibitors (such as moisture/frost, oils, concrete form release agents, old sealants, asphalt and other surface treatments, etc.) must be removed from the surfaces to which the sealant is intended to adhere.
- Clean where necessary by wire brush, mechanical abrading, grinding, sanding, saw cutting, blast cleaning (sand or water), or a combination of these methods to provide a stable clean surface for sealant application.

- Remove dust and other remaining loose particles with a soft bristle brush or by using an oil-free air blow.
- Polished stone surfaces and smooth sawn edges can be cleaned using a solvent dampened rag (allow sufficient time for solvent to evaporate prior to application of the sealant). When handling solvents, refer to manufacturer's MSDS for information on handling, safety and personal protective equipment.
- Cleaning of surfaces should be done within 1 to 2 hours of when the sealant is to be applied.
- Since porous materials can absorb and retain moisture, it is important to confirm that substrates are dry prior to application of the sealant.

Priming

NB-6000 attains primerless adhesion to most of the construction materials. However, some materials with variable surface characteristics may require the use of a primer to help obtain durable long-term adhesion. Prior to use, trial applications should be made to check adhesion to the specific materials to be used on the project.

Masking

Where appropriate, the use of masking tape is recommended to ensure a neat job and to protect adjoining surfaces from over-application of sealant. Masking tape can prevent contact of sealant with adjoining surfaces that otherwise would be permanently marred or damaged by such contact or by cleaning methods required to remove the sealant. When tooling, use care not to spread the sealant over the face of the substrates adjacent to the joint or masking as the sealant can be extremely difficult to remove on rough or porous substrates. Do not allow masking tape to touch clean surfaces to which the sealant is to adhere (adhesive on masking tape can interfere with adhesion of sealant). Masking tape should be removed immediately after tooling the sealant and before the sealant begins to cure (tooling time).

Non-Porous Materials (glass, metals, plastics, ceramics, etc.)

- Clean by using a two-rag wipe technique — wet one rag with solvent and wipe the surface with it, then use the second rag to wipe the wet solvent from the surface BEFORE it evaporates (allowing the solvent to dry on the surface without immediately wiping with a second cloth can negate the cleaning procedure because the contaminants may simply be re-deposited as the solvent dries). In all cases where used, solvents should be wiped dry with a clean, white cloth or other lint-free wiping material. Change the cleaning rags frequently, as they become dirty. It is easier to see the dirt accumulating on the rag if white rags are used. Do not dip used cleaning rags into the cleaning solvent as this can contaminate the solvent (cleaning with contaminated solvent can result in sealant adhesion issues). Always use clean solvent-resistant containers for solvent use and storage.

- Isopropyl Alcohol (IPA) is a commonly-used solvent and has proven useful for most non-porous substrates encountered in architectural construction applications. Xylene and Toluene have also been found useful on many substrates. When handling solvents, refer to manufacturer's MSDS for information on handling, safety and personal protective equipment.
- Architectural coatings, paints and plastics should be cleaned with a solvent approved by the manufacturer of the product or which does not harm or alter the finish. Cleaning of surfaces should be done within 1 to 2 hours of when the sealant is to be applied.

Important

- For safety issues kindly refer to the product MSDS.
- The technical details of the product are not meant for specification writers.
- NB-6000 can be applied at surface temperatures of +5°C to +46°C.