

NORDOT® Adhesives



www.nordot.com

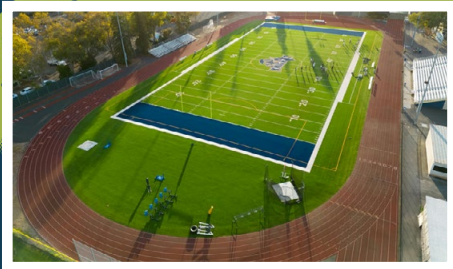
glue@nordot.com

908-233-6803



Faster, Stronger Installation Year-Round

Bond With Confidence, **NORDOT**® Adhesives



- Athletic Fields
- Parks & Recreational Surfaces
- Aquatic Surfaces
- Putting Greens
- Landscaping
- Gym Flooring

Changing Phases of **NORDOT**® Adhesives

“Green Strength” (grab/tack as opposed to oily/slippery) is the property that gives an adhesive the ability to hold two surfaces together when first contacted and before (still “green”) the adhesive develops its ultimate bonding properties when fully cured. High green strength adhesives are vital for outdoor installations because it helps overcome the tendency of surfaces like synthetic turf to separate, curl, bubble, lift, creep, slip and wrinkle during installation without resorting to excessive rolling and/or sand bagging due to turf temperature changes or wind.

NORDOT® High Green Strength Adhesives have five phases of development:

Phase #1: Negligible Grab

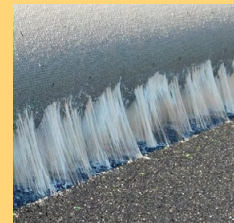
Film is wet and in the early stages of solvent evaporation



Very Early

Phase #2: Mild Grab

Tacky, long and weak adhesive “legs”



Low Green Strength

Phase #3: Moderate Grab

High tack, short and strong adhesive “legs”



Optimum Bonding Range

Phase #4: High Grab

Film almost dry when touched lightly, but has high strength and stubby adhesive “legs” when firmly pressed



Final Bonding Range



Different Types of Adhesives & Application Methods

NORDOT® Adhesives

one-part, solvent-based moisture-cured urethanes

Three extremely important adhesive properties for a successful and profitable outdoor installation are: reliable handling properties in variable or adverse weather conditions; outstanding high green strength (grab) during installation; and excellent durability after aging and weathering. All **NORDOT®** Outdoor Adhesives provide these essential properties, helping increase your productivity and your profits through faster, more efficient installation.

NORDOT® Adhesives Product Information

Adhesive Group

Newtonain

(Syrup-like) liquid in a 5-gallon pail with a pour spout



Thixotropic

(Mayonnaise-like) liquid in a 5-gallon open head pail



Airless Spray

(Spider-web spray pattern) in a 55-gallon drum



Adhesive Name

34D-2

Viscosity
350 - 600 cPs

34N-2

Viscosity
1500 - 2500 cPs

34N-4

Viscosity
1500 - 2500 cPs

34G

Viscosity
22000 - 29000 cPs

34R-4

(Super)
Viscosity
22000 - 29000 cPs

34S-3

(Plus)
Viscosity
500 - 900 cPs

34S-4

Viscosity
500 - 900 cPs

Used For

• Best for bonding surfaces ranging from smooth to lightly textured, when bottom surface is non-porous

• Best for bonding surfaces ranging from medium texture to rough, can also be used on smooth surfaces

• Mostly used for total glue downs of large areas, can also be used for seams and smaller projects

Handling Properties

• Syrup-like, pours and spreads easily
• Levels and flows
• Does not hold trowel ridges
• Can be applied easily by airless spray with negligible overspray

• Same properties as 34D-2
• Faster, higher green strength (tack) development than 34D-2 during install

• Same properties as 34D-2
• Faster, higher green strength (tack) development than 34D-2 or 34N-2 during install
• Lower odor and lower VOC than 34D-2 or 34N-2

• Mayonnaise-like, easy to apply and spread
• Holds trowel ridges, even on vertical surfaces

• Same properties as 34G
• Lower odor, lower VOC, faster green strength (tack) development in cold weather than 34G

• Applies easily by airless spray to cover large areas fast
• Negligible overspray and minimal airborne adhesive mist
• Unique 'spider web-like' spray pattern allows porous surfaces to remain water permeable.

• Same properties as 34S-3 (Plus)
• Lower odor, lower VOC than 34S-3 (Plus)
• Faster green strength (tack) development than 34S-3 (Plus)

Spread Rates by Application Methods

Glue Box

Cannot be used with glue box (too thin, doesn't hold trowel ridges)

~40 - 60 linear ft / gal on 12" wide seaming tape (~200 - 300 sf / pail)

N/A

Trowel/ seam tape

~50 - 75 linear ft / gal. on 12" wide non-porous seaming tape (~250 - 375 sf / pail)

~40 - 60 linear ft / gal on 12" wide seam tape with 1/8 trowel (~200 - 300 sf / pail)

~60 linear ft / gal on 12" wide seaming tape (~3,300 linear ft. / drum)

Squeegee

~50 - 75 sf / gal.; (~250 - 375 sf / pail)

~40 - 60 linear ft / gal (~200 - 300 sf / pail). Bonding two smooth surfaces, ~50 - 70 sf / gal. (~250 - 350 sf / pail)

Airless spray on elayer, porous pad

~60 sf / gal. (~3,300 sf / drum)

N/A

N/A

~60 sf / gal. (~3,300 linear ft. / drum)

Airless spray on concrete

~75 sf / gal. (~4,125 sf / drum)

N/A

N/A

~75 sf / gal. (~4,125 linear ft. / drum)

Note: Spread rates are conservative and approximate (~) "Trowel size: if unsure, start with 1/8", adjust if necessary

Removing glue from surface when wet: xylene, acetone, lacquer thinner. Test colorfastness first! When dry: lightly file, sandpaper, scraper, power sander. Use caution!

The information and statements contained here in are believed to be correct. However, since we have no control over method of the application, conditions during application, environment where used, or surfaces to which our products are applied, there is no warranty expressed or implied. The buyer should first determine if the product is fit for their particular purpose. Purchase of material is not permission or recommendation to use in violation of patents or laws. Prerequisite for sale of our products is that the buyer purchases at their own risk and with no liability to us.

Newtonian Adhesives

#34D-2, #34N-2, #34N-4

For Bonding surfaces ranging from smooth to lightly texture, when bottom surface is non-porous.

- Syrup like, pours easily
 - Levels and flows
- Does not hold trowel ridges
- In 5-gallon pails with a pour spout
- Transferrable to smaller containers



Newtonian Adhesives

#34D-2, #34N-2, #34N-4

NORDOT® Adhesive #34D-2

Tech Sheet # 554-A

Description: NORDOT® Adhesive #34D-2 is a one-part, high “green strength” (grab), curing urethane that contains solvent. It is a Newtonian liquid that is packaged in both five-gallon closed-head pails with a pour spout and also in closed-head 55-gallon drums. It can be applied by airless spray, squeegee, roller and trowel. NORDOT® Adhesive #34D-2 has a light syrup-like consistency; is easy to use; has superior fresh and salt water resistance and long-term exterior durability.

Applications: Used to install large synthetic turf football, soccer, baseball and multi-sports fields; pre-fabricated urethane/rubber surfaces; and tennis court surfaces. Also, for smaller total glue-down installations such as: playgrounds; putting greens; tee-lines; batting cages; batting halos; etc. Miscellaneous uses include water slides and pools; lounging and landscape turf areas; and around airport runways.

Properties (not a specification):

Non-volatile	59% - 62%
Volatile	38% - 41%
VOC (Theoretical)	383 g/l
NCO (Isocyanate content)	3.12% - 3.63%
Brookfield Viscosity	350 - 600 cPs (2 @ 20 RPM @ 25°C)
Application temperature range	From below freezing to hot desert temperatures (any temperature in which the installer can work)

NORDOT® Adhesive #34N-2, #34N-4

Tech Sheet # 555-A

Description: NORDOT® Adhesives #34N-2 and #34N-4 are one-part, solvent containing curing urethanes with extraordinarily high green strength. They are Newtonian liquids that are packaged in five gallon closed-head pails with a pour spout. They can be applied by squeegee, roller and trowel. They have a light syrup-like consistency; are easy to use; have superior exterior durability; and outstanding fresh water and salt water resistance.

Both NORDOT® Adhesives #34N-2 and #34N-4 have basically the same end properties after cure, with the difference being that NORDOT® Adhesive #34N-4 has less odor when being applied; its green strength (grab, tack, grip) develops faster; and *it is VOC compliant under SCAQMD Rule 1168 for outdoor installations.

Applications: Used to install large synthetic turf football, soccer, baseball and multi-sport fields; pre-fabricated urethane/rubber surfaces; and tennis court surfaces. Also, for smaller total glue-down installations such as: playgrounds; putting greens; tee-lines; batting cages; batting halos; etc. Miscellaneous uses include water slides and pools; lounging and landscape turf areas; around airport runways, and more.

Properties (not a specification):

Non-volatile	64% - 66%
Volatile	34% - 36%
VOC (Theoretical)	#34N-2 = 346 g/l #34N-4 = 101 g/l*
NCO (Isocyanate content)	3.07% – 3.63%
Brookfield Viscosity	1,500 - 2,500 cPs (3 @ 20 RPM @ 25°C)
Application temperature range	From below freezing to hot desert temperatures (any temperature in which the installer can work)

Thixotropic Adhesives

#34G, #34R-4(Super)

For Bonding surfaces ranging from smooth to rough, but mostly used for bonding surfaces that range from medium texture to rough.

- Mayonnaise-like, easy to spread
- Holds trowel ridges, even on vertical surfaces
- In 5-gallon open head pails



Thixotropic Adhesives

#34G, #34R-4(Super)

NORDOT® Adhesives #34G, #34R-4(Super) Tech Sheet # 553-C

Description: **NORDOT®** Adhesives #34G and #34R-4(Super) are one-part, solvent containing, high “green strength” (grab, tack, grip), thixotropic curing urethanes. They are packaged in openhead five-gallon pails and have a light, mayonnaise-type consistency; are easy to use; hold trowel ridges, even on vertical surfaces; have superior fresh and salt water resistance and long-term exterior durability.

NORDOT® Adhesives #34G and #34R-4(Super) have basically the same end properties after cure, with the difference being as follows:

- 1) #34R-4(Super) has less odor than #34G when being applied;
- 2) #34R-4(Super) develops its green strength faster and higher than #34G, which is often beneficial for cold weather installations;
- 3) *#34R-4(Super) is VOC-complaint under SCAQMD Rule 1168 for outdoor installations.

Applications: Often applied to 12 inch wide tape for bonding turf seams together on large loose-laid synthetic turf installations such as football, soccer, baseball, multi-sport fields; playgrounds; etc. Also, for the total glue-down of smaller installations such as putting greens; batting cages; batting halos, tee-lines; and pre-fabricated urethane / rubber surfaces. Additionally, used to make floor mats and golf mats, plus applications where superior fresh and salt water resistance is required, such as pools; water slides; boat docks; and other marine applications.

Properties (not a specification):

Non-volatile	58% - 64%
Volatile	36% - 42%
VOC (Theoretical)	#34G = 360 g/l #34R-4(Super) = 99 g/l*
NCO (Isocyanate content)	2.7% - 3.35%
Brookfield Viscosity	22,000 - 29,000 cPs (6 @ 10 RPM @ 25°C)
Application temperature range	From below freezing to hot desert temperatures (any temperature in which the installer can work)

Airless Spray Adhesives

#34S-3(Plus), #34S-4, #34D-2

The 55-gallon drums #34S-3(Plus) and #34S-4 are mostly for total glue down and larger projects.

The 5-gallon pails #34D-2 are mainly used for seams, smaller projects and repairs.

Unique 'spider web-like' spray pattern 'stands up' to allow water permeable surfaces to remain porous

Applied easily by airless spray with negligible overspray



Airless Spray Adhesives

#34S-3(Plus) & #34S-4

NORDOT Adhesives #34S-3(Plus), #34S-4 Tech Sheet # 556-A

Description: **NORDOT**® Adhesives #34S-3(Plus) and #34S-4 are one-part, solvent containing, high “green strength” (grab) curing urethanes. They are packaged in closed-head 55-gallon drums and are excellent for airless spraying directly from the drum. Both have negligible overspray; minimal airborne adhesive mist; plus water drainable surfaces glued down by them still remain porous. This is achieved because they spray like a “spider web” and do not flow into or clog the pores of the surface when sprayed. This spray property is valuable on porous surfaces such as “popcorn asphalt”, elastic layer, shock pad with holes, etc. Hence, when a total glue-down of a water drainable sub-surface and top surface are bonded together with **NORDOT**® Adhesives #34S-3(Plus) or #34S-4, the whole system remains water permeable. This is a benefit for some synthetic turf athletic fields, rubber/urethane running tracks, playground surfaces, etc. Their extraordinarily high green strength makes them very useful for bonding long seams and total glue-downs, even in adverse weather. They are easy to use and have superior fresh and salt water resistance and exterior durability.

NORDOT® outdoor Adhesives #34S-3(Plus) and #34S-4 have basically the same properties after they cure. The difference is in handling because **NORDOT**® Adhesive #34S-4 has a lower odor; its green strength develops faster and it is *VOC compliant under SCAQMD Rule 1168 for outdoor installations.

Applications: Used for pre-fabrication and/or installation of synthetic turf athletic fields for field hockey, football, soccer, baseball, and other single- or multi-sport fields. Also used for areas around airport runways to reduce bird traffic; on playgrounds; golf courses; putting greens; tee-lines; golf mats; batting cages and halos; tennis courts; pre-fabricated urethane and rubber surfaces; pools; water slides; lounging and landscape areas; landfills; and on other athletic and recreational surfaces.

Properties (not a specification):

Non-volatile	62% - 64%
Volatile	36% - 38%
VOC (Theoretical)	#34S-3(Plus) = 329 g/l #34S-4 = 87 g/l*
NCO (Isocyanate content)	3.42% - 3.98%
Brookfield Viscosity	500 - 900 cPs (3 @ 20 RPM @ 25°C)
Application temperature range	From below freezing to hot desert temperatures (any temperature in which the installer can work)

Applies To All Technical Sheets

The information and statements contained here in are believed to be correct. However, since we have no control over method of the application, conditions during application, environment where used, or surfaces to which our products are applied, there is no warranty expressed or implied. The buyer should first determine if the product is fit for their particular purpose. Purchase of material is not permission or recommendation to use in violation of patents or laws. Prerequisite for sale of our products is that the buyer purchases at their own risk and with no liability to us.