



Vitel® 1901NSB-P

COPOLYESTER EXTRUSION RESIN

KEY FEATURES

- Good flexibility
- Extrudable
- Excellent adhesion modifier

DESCRIPTION

Vitel® 1901NSB-P is a semi-crystalline, thermoplastic, high molecular weight, linear saturated polyester resin. It is a very tough yet flexible polymer that exhibits a high tensile modulus. Also, the resin provides high cohesive strength in its applications and adheres well to a variety of substrates such as PET and PVC. Antimony is not used in the manufacturing of V1901NSB-P.

KEY BENEFITS

- FDA compliance for food packaging applications
- Good peel characteristics for lidding applications
- Antimony-free formula

SHELF LIFE

The shelf life of V1901NSB-P is 3 months when the resin is stored in original containers at temperatures between 5 and 35°C (41 and 95°F). To extend shelf life use cold storage below 4°C (39°F).

APPLICATION TECHNIQUES

V1901NSB-P can be used on all dry laminating machines, with smooth or rotogravure rollers.

When applying V1901NSB-P to substrate via extrusion, cool thoroughly before wind-up to reduce blocking. Observe the following general extrusion conditions: dry resin at 68°C (154°F) for 4-5 hours before use, run feed throat cooling, heat zone 1 to 166°C (330°F), heat die to 204°C (400°F). Extrusion conditions depend heavily on the specific process and extruder screw design.



LIDDING HEAT SEAL

FLEXIBLE CIRCUITRY LAMINATING

TYPICAL PHYSICAL PROPERTIES

Description	Results
Color / Form	Off-White Pellets
CIE Lab Color	L* 90 (min.) b* 10 (max.)
Odor / Taste	None / None
Specific Gravity	1.23
Intrinsic Viscosity	0.92 dl/g
Acid Number	0 - 2
Hydroxyl Number	1 - 3
Glass Transition	-4°C
Molecular Weight	Mn: 44,500 Mw: 79,000 Mz: 117,000 PDI: 1.72 (polystyrene ref.)

OTHER TYPICAL PROPERTIES

Description	Result
Softening Point (ASTM E 28-67)	289°F (143°C)
Minimum Heat Seal	151°F / 66°C (Amorphous) 264°F / 129°C (Crystalline)

To apply in solution form, V1901NSB-P requires stronger solvents for complete solubility (due to the crystallinity of the polymer). Solvents that can be used to dissolve the resin are 1,3 dioxolane, chlorinated solvents, and THF.

The minimum coat weight recommended is 2 g/m² dry. Optimum adhesion is obtained with an application weight of approximately 3 g/m². For aggressive requirements, the coating weight needs to be increased to 4 g/m² or higher.

DILUTION

Dilution may be done with 1,3 dioxolane, THF, or stronger solvents. The adhesive system should be processed at a solids content of approximately 15-20% when applied via gravure. Ideal coating viscosity is between 75 – 115 cP.

SOLUTION POT LIFE

The pot life stability of V1901NSB-P in solution is very good. If the container is well sealed, the solution will keep for at least 6 months at room temperature storage. Uncatalyzed solution has a tendency to gel. Gel can be reversed through agitation and/or heat. When used in conjunction with a curative, the pot life will vary. It is not recommended to hold the reactive solution for more than 8 hours before application.

DRYING

Drying conditions must be adjusted to the substrate, application weight and line speed in order to avoid the retention of solvents. The dried and fully cured adhesive film will be transparent and neutral in odor.

ACTIVATION TEMPERATURE

The minimum recommended activation temperature is 129°C (264°F), but the recommended temperature is 143°C (289°F).

FOOD LEGISLATION

V1901NSB-P complies with the positive lists of many internationally accepted guidelines for the production of articles intended to come into direct and indirect contact with foodstuff. Please contact your Bostik Representative with the specific application.

HEALTH & SAFETY PRECAUTIONS

Like all synthetic resins, V1901NSB-P can retain or develop static charge due to its handling. Precautions against a static discharge should be taken. Use caution near flammable vapors.

Melt Flow Index, 2160 g load at 190°C (ASTM D 1238-86)	27 g/10 min (Dried) 54 g/10 min (50% RH) 60 g/10 min (95% RH)
Melt Viscosity (ASTM D 3236-88)	3,120 Ps @ 175°C 1,120 Ps @ 200°C 460 Ps @ 225°C
Shore Hardness D, 25°C(ASTM D 2240-86)	35
Shore Hardness A, 25°C(ASTM D 2240-86)	88
Tensile Strength (ASTM D 638-89, Type I, Injection Molded)	800 psi (crosshead speed 2 in/min)
Elongation at Break (ASTM D 638-89, Type I, Injection Molded)	60%
Oxygen Diffusion (ASTM D3985-81)	180 cc/100 sq in/24 hour/1atm/1 mil
NOTE:	Thermal, mechanical, barrier and electrical data carried over from Shell production.

The Safety Data Sheet should be consulted for proper handling, clean up and spill containment before use. Keep containers covered to minimize contamination.

LIMITED WARRANTY

The Limited Warranty for this product can be found at www.bostik-us.com/resource-center/warranties or by calling 1-800-726-7845 (choose option 2, then option 2 again). To the maximum extent allowed by law, Bostik disclaims all other express or implied warranties, including without limitation warranties of merchantability and fitness for a particular purpose. Unless otherwise stated in the limited warranty, the sole remedy for breach of warranty is replacement of the product or refund of the buyer's purchase price. Bostik disclaims any liability for direct, incidental, consequential, or special damages to the maximum extent allowed by law. Disclaimers of implied warranties may not be applicable to certain classes of buyers and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. It is the buyer's obligation to test the suitability of the product for an intended use prior to using it. The Limited Warranty extends only to the original purchaser and is not transferable or assignable. Any claim for a defective product must be filed within 30 days of discovery of a problem, and must be submitted with written proof of purchase.

BOSTIK HOTLINE

Smart help
1-800-726-7845

Bostik, Inc.
11320 W. Watertown Plank Road
Wauwatosa, WI 53226
www.bostik-us.com



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