

# NorthStar Elastomers

Norst® Butylated Adhesives, Sealants, Coatings

## TECHNICAL DATA SHEET

**Product Name:** Norst® PB-402-24  
Norst® PB-403-34  
Norst® PB-404-44

### Product Description

**Norst® PB-402-24:** Is a highly modified polybutylene polymer that exhibits high tack and cold flow over a very wide temperature range (-70°F to 450°F, with variants stable to 650°F and 800°F). It is impermeable to water or oxygen. It has good tensile and bond strength, high film strength, permanent tackiness, excellent aging/weather resistance, low stain, low electrical conductivity. It is odorless, colorless, and highly stable. Chemical resistance is comparable to other polyisobutylene polymers. ***PB-402-24 can be used as a high performance additive in any non-aqueous system where high tack and elasticity are needed.***

### Typical Properties

**Staudinger Index:** 48.5 ml/g

**Viscosity Range:** NSE lab - historic  
820,000 to 860,000 cps      212°F (100 C)  
332,000 to 372,000 cps      300°F (149 C)  
240,000 to 280,000 cps      350°F (177 C)  
*Viscometer Type: Brookfield HBT, # 6 spindle, 20 RPM*

**Molecular Mass:** Avg Mass (Mw)      78,753  
Avg Number (Mn)      1941  
Z Avg Mass (Mz)      334,524  
Dispersity      40.6

**Density:** 0.91 g/cc      (at 20 C)

**Modulus:** Storage (G') 1.533E+004 Pa      (at 25 C)  
Loss (G'') 6.356E+003 Pa

**Glass Transition:** -77 C ± 1 C      (Tg by DSC at 20 C/Min)

**Penetration Range:** 150-299      (cone penetrometer, 150 gm weight, 5 seconds at 77°F)

**Volatility:** 0.17 wt %      (% at 105 C for 2 hr, g/100g)

**Classification:** Proprietary polybutylene polymer. 100% solids.  
Available at 50%-70% solids in mineral spirits.

**Color:** Light gray to light amber

## Uses

**Adhesives:** High tack and elasticity in PSA adhesives; water and gas proof barrier in sealing tapes; cold flow properties make it ideal for use in "self-healing" barrier products. Variants functional at very high temperatures, **Norst® PB-403-34** up to 650°F ( 343 °C), **Norst® PB-404-44** up to 800°F (427°C).

**Sealants:** Waterproof and gas proof barrier; excellent tack and elasticity for sealants and mastics; cold flow over a wide temperature range in "self-healing" products; good internal cohesive strength.

## Products

Industrial and nonwoven adhesives, barrier tapes, electrical insulation and cable filler, construction mastics and caulks, window and door sealants, waterproofing compounds, pipeline protection, roofing membranes, bitumen modification, etc.

## Substrates and Systems – Chemistry Non-Polar

**Core structure:** Distinctly branched aliphatic which gives excellent chemical, weather and oxidation resistance, stability and low color. Best functioning in butyls, EPM/EPDM, microcrystalline wax, asphalt and, polypropylene, HDPE, LDPE, polyisobutylene, etc.

**Diluents and carriers:** Aliphatic and naphthenic solvents work very well.

Suitable for solvent-based composition hot melt adhesive and sealant applications, and can be formulated with other polymers, resins, fillers, pigments, oils, thickeners, waxes and stabilizers to obtain a desired balance of properties. Avoid strong oxidizers.

NorthStar Elastomers provides broad product modification opportunities through blending of custom polymers to modify tack, elasticity, temperature stability, etc.

**Polar polymers:** (Such as urethanes, acrylics, polyesters and polyamides) are generally incompatible. Avoid polar solvents.

## Packaging

45 pound Quick Release boxes; 350 pound Quick Release, open head drums.

**KEEP OUT OF REACH OF CHILDREN  
FOR PROFESSIONAL OR INDUSTRIAL USE ONLY  
USE ONLY WITH APPROVED EQUIPMENT**

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**Technically Integrated Recycle™**

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