

NorthStar Elastomers

Norst® Polymers & Tirecycle™ Rubbers

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 polyisobutylene 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 polyisobutylene 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 boxes; 350 pound open head drums.

Quick Release boxes available. Drums are coated for clean, efficient unloading.

25 pound Quick Release boxes also available.

**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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