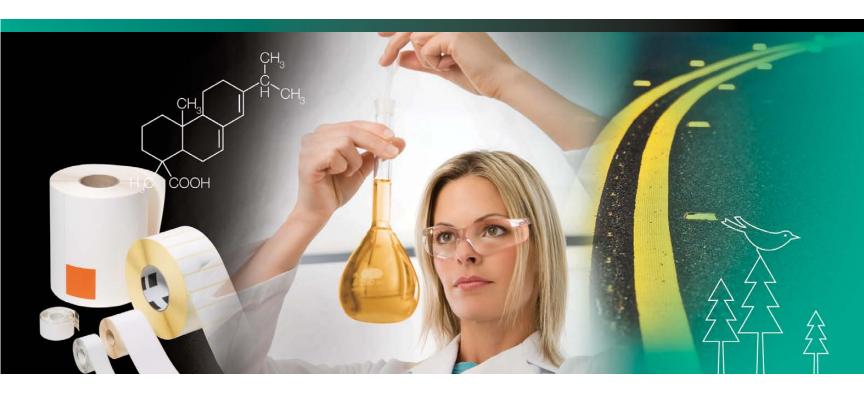


Adhesive and Pavement Marking Resins Product Guide

North America



Resins and resin dispersions for hot melt, pressure-sensitive and non-pressure-sensitive adhesives,

and coating resins for pavement marking.

Snowtack[®] tackifier dispersions

Capitalizing upon technology that dates back to the first stable colloidal resin emulsions produced during the 1920s, Lawter has developed a wide range of tackifying dispersions which are specifically designed to serve the needs of the adhesive and surface coating Industries.

Snowtack® tackifier resin dispersions are aqueous, solvent-free dispersions for the manufacture of pressure-sensitive adhesives based on acrylic, natural rubber or SBR emulsions. When formulated correctly, they provide an excellent balance of adhesion and cohesion to a wide range of substrates. Snowtacks can run on industry standard coaters at high speeds due to their excellent stability. Snowtack® is an environmentally friendly component for your adhesive. All Snowtack® grades are alkyl phenol ethoxylate (APE) free.

Markets and applications

Waterborne Pressure-sensitive Adhesives:

Paper label, filmic label and tape

Waterborne Adhesives:

- Automotive
- Building and construction



Pinerez[®] stabilized rosin esters, modified rosin esters, rosin acids and liquid rosin esters

Pinerez[®] tackifier resins are recommended to enhance the adhesive performance in hot-melt and solvent-based adhesive applications. They are stabilized, lightcolored resins with excellent viscosity stability, and have excellent compatibility with a range of polymers that are widely used in packaging and pressure-sensitive adhesives. These polymers include EVA, SIS, and SBS block copolymers, natural and synthetic rubber, and acrylics. Low VOC Pinerez products provide performance value in water-based, solvent-free flooring adhesives.

Markets and applications

- Hot melt adhesives
- Solvent-based adhesives
- Reactive PUR adhesives
- Construction adhesives
- Rubber compounding
- Sealants
- Depilatory waxes
- Chewing gum
- Water-based flooring adhesives
- Pavement markings

Burez[®] rosin soaps

Burez[®] soaps are based upon disproportionated and modified rosins, saponified with sodium or potassium hydroxide. All our soaps have good stability and excellent resistance to crystallization and are available in a range of differing solids and viscosities. The Burez range has been mainly designed for three specific applications: emulsion polymerization, organic pigment production and wet glue formulations.

Markets and applications

- Emulsifiers for the manufacture of SBR, Polychloroprene rubber, ABS, PVC, and other specialty rubbers
- Modifier/tackifier in wet glues
- Pigment coating
- Lubricant
- Plasticizer



As one of the world's leading producers of ink and adhesive resins, **Lawter** has over 70 years of experience in creating innovative solutions to our customers' application needs.

Our global network of manufacturing plants gives us the ability to serve customers around the world. And with products formulated to meet thousands of diverse end-use applications, we are experts in serving a wide variety of industries.

With so many customers counting on us, our sales and production teams are backed by technical service and support that sets the industry standard. In an increasingly competitive world, you can count on Lawter to find a cost-effective and innovative solution to your industrial bonding and binding needs.



Lawter is a leading global supplier of resins and resin dispersions for adhesives. Our resin derivatives are also used in applications such as pigments, rubber intermediates, aroma chemicals and chewing gum.

Global presence

Lawter's customers enjoy the benefits of global manufacturing and regional support. Our main production sites are located in:

- Maastricht (The Netherlands)
- Baxley, Georgia (USA)
- Concordia (Argentina)
- Mount Maunganui (New Zealand)
- Fengkai (China)

Production alliances around the globe, including locations such as China and Korea, further enhance our ability to serve our customers.

Technical support

Your products are important to us. With technical service labs located in key regions of the world, Lawter is able to work closely with customers to achieve product excellence and value.

Our knowledge of resin chemistry paired with our customers' expertise has led to some exciting new products, including our latest waterborne tackifier systems.

Research and development

We work in close cooperation with our customers to improve their results and help create value. This collaboration achieves the required results.

We have a proud history of creating innovative and successful solutions to meet the exact requirements in all the industries we serve. Combining our knowledge of resin chemistry and our customers' expertise in their field of excellence has been the impulse for the creation of new resin types, like our latest waterborne tackifier systems. Customized products are developed by working under mutually confidential conditions. We also have product development centers located in all key regions.

Renewable raw material sources

Many of our raw materials are derived from renewable sources such as the rosin tapped from pine trees or from the pulpmaking process for the paper industry.



| Snowtack® Tackifi | ier Dispei | rsions | | | | | | | | |
|------------------------------|-----------------------|----------------------|-----|------------|--------------------------------------|-------------------------------|-------------------------|-------------------------|--------------------------------|--|
| | Dispersion Properties | | | | | | | rties | | |
| | Solids (%) | Viscosity (mPa.s) | Æ | Stabilizer | Particle Size (mean) (microns) | Sieve Residue at 100 (ppm) | Acid Value (mgKOH/g) | Softening Point (°C) | Glass Transition Point (°C) | Application Comments |
| Rosin Acids | | | | | | | | | | |
| SNOWTACK® 765A | 50 | 500 | 7.5 | anionic | <0.5 | <100 | >100 | 64 | 12 | General purpose acid grade tackifier to boost adhesion when formulated with acrylic and SBR PSA polymers. |
| SNOWTACK® 775A | 52 | 650 | 7.5 | anionic | <0.5 | <100 | >100 | 76 | 21 | Higher softening point acid grade tackifier giving higher cohesive strength when formulated with acrylic and SBR PSA polymers. |
| Rosin Esters | | | | | | | | | | |
| SNOWTACK® SE780G | 55 | 300 | 9.0 | polymeric | <0.6 | <100 | <20 | 83 | 34 | Provides excellent cohesive strength, adhesion and water resistance for PSA tape and label applications. |
| SNOWTACK® 880G | 57 | 300 | 9.0 | polymeric | <0.6 | <100 | <20 | 85 | 36 | A hybrid tackifier designed to improve adhesion to apolar substrates with 2EHA acrylic and SBR PSA polymers. |
| SNOWTACK [®] SE724G | 51 | 400 | 9.0 | polymeric | <1.0 | <100 | <25 | 37 | -8 | Modifying resin dispersion for low temperature applications and improved low energy substrate adhesion. |
| SNOWTACK® 100G | 57 | 300 | 9.0 | polymeric | <0.6 | <50 | <20 | 99 | 60 | High softening point tackifier for PSA adhesives, for tape applications and labels requiring good mandrel performance. |
| Hydrogenated Ros | sin Esters | s | | | | | | | | · |
| SNOWTACK® FH95G | 57 | 300 | 9.0 | polymeric | <0.75 | <100 | <25 | 94 | 45 | Fully hydrogenated resin dispersion based on wood rosin for applications where better compatibility and UV resistance is required. Suitable for use with acrylic and SBR systems. |

| Pinerez® Tackifier Resins for North America | | | | | | | | |
|---|--|-------------------------------|-------------------------|-------------------------|--|--|--|--|
| RESIN | Ring & Ball Softening Point (°C) | Gardner Colour (50% Soln.) | Acid Value (mgKOH/g) | Viscosity (mPa.s) | Application Comments | | | |
| PINEREZ® 7024 | | 7 | 9 | 4500 | Improves adhesion in flooring adhesives and solvent based adhesives. | | | |
| PINEREZ® 2490 | 90 | 5 | 14 | | Improves tack and adhesion in a wide range of hot melt and solvent based adhesives. | | | |
| PINEREZ [®] 9089 | 148 | 10 | | | Improves tack in hot melt adhesives and acts as a cure accelerator in rubber based adhesives. | | | |
| Burez [®] Rosin Soaps | | | | | | | | |
| | Solids (%) | Acid Value (mgKOH/g) | Abietic acid (%) | Dehydro Abietate (%) | Application Comments | | | |
| BUREZ® K80-500D | 80 | 12 | not detectable | 42 | Emulsifier for emulsion process SBR, ABS and CR. Tackifier for bottle label adhesives. Used in pigment resination. | | | |

| Pavement Marking | | | | | | | | | |
|-----------------------------|---|--|----------------------------------|-------------------------------|---------------|---|--|--|--|
| Maleic Modified Rosin Ester | | | | | | | | | |
| Coating Resins | Applications | Features and Benefits | Bio-Renewable Content (+/-2%) | Ring & Ball Melt Point -°C | Acid Value | Viscosity | | | |
| FILTREZ [™] 339 A | Lacquer coatings, specialty coatings, thermoplastic applications. | Soluble in low aromatic solvents. | 90 | 135 | 42 max | J (3.3") Gardner Holdt EE at 25°C, (60% NV Toluene) | | | |
| FILTREZ [™] 3305 A | Lacquer coatings, specialty coatings, thermoplastic applications. | Requires less liquid plasticizer in finished applications. | 94 | 105 | 45 max | 95 centipoise - Neat, Brookfield Thermocell @ 410°F | | | |
| FILTREZ [™] 3310 A | Lacquer coatings, specialty coatings, thermoplastic applications. | High viscosity for more viscous applications such as thermoplastic. | 92 | 118 | 42 max | 320 centipoise - Neat, Brookfield Thermocell @ 410°F | | | |
| FILTREZ™ 3320 A | Lacquer coatings, specialty coatings, thermoplastic applications. | Soluble in low aromatic solvents. | 91 | 122 | 60 | D (1.6") Gardner Holdt EE at 25°C, (60% NV Toluene) | | | |
| Rosin Ester | | | | | | | | | |
| PINEREZ [®] 2306 | Specialty coatings and thermoplastic applications. | Stablized rosin for excellent color and heat stability. Excellent adhesion to a variety of substrates. | 85 | 100 | 20 max | N/A | | | |
| Modified Rosin Ester | | | | | | | | | |
| PINEREZ® 2307 | Specialty coatings and thermoplastic applications. | Stablized rosin for excellent color stability. Excellent adhesion. High bio-renewable content. | 94 | 102 | 25 max | 105 centipoise at 410°F (210°C) | | | |
| PINEREZ [®] 2308 | Specialty coatings and thermoplastic applications. | Stablized rosin for excellent color and heat stability. Excellent adhesion to a variety of substrates. High bio-renewable content. | 93 | 106 | 25 max | 115 centipoise at 410°F (210°C) | | | |

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