BRENNTAG

ConnectingChemistry

ACES MADE SIMPLE

# ACES NORTH AMERICA

Building a Brighter, More Colorful World

Your resource for purchasing raw materials for **A**dhesives, **C**oatings, **E**lastomers, **S**ealants and Construction

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EDITION #01

# ACES NORTH AMERICA

## About Us

**Adhesives, Coatings, Elastomers, Sealants** and Construction; Brenntag ACES knows today's industrial and specialty chemicals market doesn't have to be so complicated – we aim to make all aspects of chemical distribution less complex for customers and suppliers.

As the global market leader, Brenntag North America's extensive network of locations delivers "best in class" service and value to customers and suppliers with more than 190 locations throughout the United States and Canada.

### Best-In-Class Practices

- Provides responsible distribution of raw materials & services
- Maintains integrity in our business transactions
- Creates long-lasting relationships with customers & suppliers
- Keeps in mind the best interests of our employees & the public
- Strives for zero accidents & incidents to be the safest chemical distributor

Whether you're looking for chemical-resistant raw materials, quick-drying paints, or you are a corrosion-resistant coatings supplier or a supplier of any other product falling under the ACES umbrella, Brenntag ACES has the research history, knowledge and experience to find the right products for your business.

Tell us your goals and we'll tell you the best way you can meet them, and we'll stick with you every step of the way.

## ACES Industry Service Requirements

Specialized services are provided to customers and suppliers to ensure a top quality experience when working with Brenntag ACES.

### Value-Added Services

- Bundling, Filling & Loading
- Centralized Purchasing & Billing
- Custom Blending & Diluting
- Company Owned & Operated Fleet
- Formulation Assistance
- Global Sourcing Network
- Inventory Management & Just-In-Time Delivery
- Online Order Tracking
- Operations Support
- Repackaging & Storage Solutions
- Solvent Reclamation
- Technical Training & Lab Support
- Waste Handling

## Focused Products

Brenntag ACES provides innovative technologies and a complete product portfolio supported by strong partnerships with leading chemical manufacturers.

From the most extensive product portfolio in the industry, our focused products include:

- Additives & Fillers
- Crosslinkers & Catalysts
- Low VOC Solutions/Solvents
- Minerals & Extenders
- Pigments
- Resins & Resin Modifiers
- Solvents
- Surfactants & Dispersants
- Thixotropes & Rheology Modifiers

### Markets Served

Every market we service gets the same commitment to high-quality, safe, reliable, cost-effective product delivery.

- Adhesives
- Appliances & Electronics
- Architecture
- Auto & Transportation
- Building, Construction, Civil Engineering & Craftsman On-Site Applications
- Coatings
- Elastomers
- Industrial Maintenance Coatings
- Inks
- Marine
- Paints
- Powder Coatings
- Sealants
- Wood, Woodworking & Joinery Cabinet Making

Use our resources, global supply chain and market knowledge to achieve your company's goals by reducing raw material costs and improving product performance.

## Dedicated Team of Sellers

When you choose Brenntag as your distributor, you're never on your own. We have experts in every type of business and industry that uses our products, and when we're on your team, that expertise is fully at your disposal.

Our dedicated ACES Sales and Marketing Team works closely with customers to help identify market needs. We are constantly striving to assist customers in bringing new products to market faster, in response to rapidly changing needs.

Whether involved with masonry, sealers, paints, caulks, sealants or other coating-reliant industries, we help keep customers steps ahead with technical solutions for just about any application, interior or exterior.

## Specialized Services

Sales is supported by a technical team having unparalleled experience, exceptional problem-solving skills and a vast knowledge of the ACES markets.

Our technicians share product and market expertise to keep you ahead of the curve on market trends, provide technical know-how for a wide range of markets and offer the following specialized services:

- Application Lab Assistance
- Extensive Technical Support
- Market Knowledge & Research
- Quality Management & Lab Analysis

### ACES Applications Laboratory

Our fully equipped Applications Laboratory focuses on ACES & Construction Industry formulations, while intending to promote new ideas and concepts as customers' demands evolve.

The primary goals of the ACES & Construction Applications Laboratory and Technical Support Team is to help solve customer problems, provide technical assistance and to develop starting formulas and blending solutions for the Adhesives, Coatings, Elastomers, Sealants and Construction Markets.

Our "best in class" laboratory and staff are capable of:

- Comparative Test Panels
- Customer Joint Visits & Telecons
- Customer Sample Testing
- Formulation Support
- Starting Point Fomulations

Customers may contact us to discuss assistance from Brenntag in developing new formulas or assist in refining or reformulating existing formulas. This service helps chemists and formulators accelerate time to market of new products.

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BRENNTAG SPECIALTIES

# ACES - Adhesives / Coatings / Elastomers / Sealants / Ink:

## Resins / Intermediates:

**A&C Catalysts**
- Latent Curatives

**Achiewell**
- Cycloaliphatic Epoxy

**Allnex**
- Acrylic Polyols
- Alkyd Resins
- Castor Oil Polyols
- Epoxy Ester Resins
- Non Isocyanate 2K Resins
- Oil Modified Polyurethanes
- Polyester Resins
- Rheology Control Resins
- Waterborne Resins

**AOC**
- Polyester Resins
- Vinyl Ester Resins

**Aquaspersions**
- Polyvinyl Butyral Disper.

**Arnette**
- Polyaspartic Resins
- Oxazolidines / Aldimines
- Polymercaptans

**Ashland**
- Polymers / Copolymers
- Vinyl Monomers
- Acrylates

**BASF**
- PTMEG Polyols
- PEA Amines

**Braskem**
- Hydrocarbon Resins
- PIB Polybutenes

**BSI Branded**
- Epoxy Resins
- Epoxy Curing Agents
- Epoxy Resin Diluents

**Eastman**
- Polyvinyl Butyral Resins

**Gabriel**
- Phenoxy Resins and WB Dispersions

**Georgia Pacific**
- Phenolic Resins and WB Dispersions

**Jiangsu Samnu Group**
- UV Oligomers & Monomers

**Kumho**
- Epoxy Resins
- Styrenated Phenol

**Lanxess (Formerly Chemtura)**
- WB Polyurethane Disp.

**Olin**
- Epoxy Resins
- Epoxy Curing Agents

**PQ Corporation**
- Lithium Silicate

**Solenis**
- SMA / PAE Resins

**StanChem**
- Emulsion Polymers

**Wacker**
- Silicone Resins
- Heat Resistant Resins
- Vinyl Acetate Bead Resins
- Vinyl Chloride Resins
- Vinyl Chloride Emulsions
- VAE Emulsions
- Water Resistant Resins
- Surface Coating Resins

**Wanhua**
- MDI / TDI
- Polyether Polyols
- Polyurethane Dispersions
- Water Reducible Resins
- Acrylic Emulsions
- Butyl Acrylates
- Rheology Modifiers

## Resin Modifiers:

**BSI Branded**
- Tall Oil Fatty Acid - TOFA

## Crosslinkers and Catalysts:

**A&C Catalysts**
- Latent Curatives

**Akzo Nobel**
- Organic Peroxides

**Aquaspersions**
- Blocked Isocyanates

**BASF**
- PEA Amines
- Specialty Amines

**BSI Branded**
- Epoxy Curing Agents

**Dorf Ketal**
- Titanate Catalysts
- Zirconate Catalysts

**Olin**
- Epoxy Curing Agents

**PMC Organometallix**
- Tin Catalysts

**Polyaziridine LLC**
- Aziridine Crosslinker

## Thixotropes & Rheology Modifiers:

**American Colloid**
- Bentonites / Hectorites
- MAS / Organoclays

**Ashland**
- Cellulose Ethers
- Synthetic Modifiers

**PPG**
- Precip. Amorphous Silica

**Wacker**
- Fumed Silica

## Additives:

**Achiewell**
- Acid Scavengers (CER)
- Nonionic Surfactant

**Addivant**
- Antioxidants
- UV Light Absorbers
- Stabilizers
- Antiozonants

**Amspec**
- Antimony Trioxide

**Ashland**
- Defoamers
- Surfactants
- pH Neutralizing Agents

**Providing Solutions Through Technology…….**

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# ACES - Adhesives / Coatings / Elastomers / Sealants / Ink:

**BSI Branded**
- Stearates
- Ground / Unground ATH

**Koster Keunen**
- Waxes

**Momentive**
- Silanes
- Silicone Additives
- Surface Tension Mod.

**Nabaltec**
- Precipitated ATH
- Boehmite

**PPG**
- Flatting Agents
- Rheological Modifiers
- Anti-Corrosion Pigments

**Solenis**
- Misc. Additives

**Wacker**
- HDK® Fumed Silica

## Minerals and Extenders:

**Almatis**
- Calcined Alumina
- Tabular Alumina

**Barretts Minerals**
- Talc

**BSI Branded**
- Barytes
- Low Micron Talc

**Excalibar**
- Ground Barium Sulfate
- Calcium Carbonate

**ICL - Dead Sea Periclase**
- Magnesium Oxide

**Martin Minerals**
- Wet Ground Micro Mica

**Mississippi Lime**
- Calcium Hydroxide
- Calcium Oxide

**Pacer**
- Dry Ground Mica
- Potassium Feldspar

**Potters**
- Hollow and Glass Microspheres

**Solvay**
- Rare Earth Oxides

**SE Performance Minerals**
- Wet Ground Mica

**Specialty Minerals, Inc.**
- Ground Cal. Carb.
- Precipitated Cal. Carb.

**US Gypsum**
- Calcium Sulfate

**US Silica**
- Ground Silica

## Pigments and Colorants:

**Achiewell**
- Titanium Dioxide

**AOC**
- Pigment Dispersions

**Sun Chemical**
- Organic Pigments
- Pigment Preparations
- Special Effect Pigments
- Pearlescents / Metallics

**Tokai Carbon CB**
- Carbon Black

**Venator**
- Ultramarine Blue / Violet
- Manganese Violet
- Iron Oxide Pigments

**Yipin Pigments**
- Iron Oxides
- Chromium Oxides
- Zinc / Magnesium Ferrite

## Solvents:

**TBF Environmental**
- VOC Compliant Solvents

## Applications Lab:

Customers may contact us to discuss assistance from BSI in developing new formulas or assist in refining or reformulating existing formulas. This service may help the chemist or formulator accelerate time to market of new products. Our ACES and Construction labs are also capable of polymer synthesis to support new product development.

Formulators who are interested in learning more about the Labs, can contact their local Sales or Customer Service Representative.

**Markets Served:** Coatings for Architecture, Marine, Auto and Transportation, Wood, Industrial Maintenance, Civil Engineering and Powder Coatings, Inks, Sealants, Adhesives and Elastomers.


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Material Sciences Group



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BRENNTAG SPECIALTIES

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# ACES NORTH AMERICA

Product List

www.brenntagspecialties.com

# BUILDING A

## RESINS / INTERMEDIATES

- Acrylates / Acrylics
- Acrylic Polyol Resins
- Alkyd Resins - Conventional
  - Short Oil Non Drying / Oxidizing
  - Short Oil Chain Stopped
  - Medium Oil / Long Oil
  - Modified
- Amino Urethane (Polyaspartic) Resins
  - Blocked Cycloaliphatic Amine
  - Hindered Secondary Amino Resins
- Aminoplast Crosslinkers
  - Urea Formaldehyde
- Castor Oil Based Polyols
- Copolymer Alkyds
  - Styrenated
  - Vinyl Toluenated
  - Acrylic Modified
- Cycloaliphatic Epoxy Resins
  - CER-4221
- Epoxy Ester Resins
  - Non HAP's Available
- Epoxy Resins
  - Liquid /Solid / Semi-Solid
  - Novolac
  - Waterborne Emulsions
  - Waterborne
  - Bisphenol F
  - Cycloaliphatic
- Epoxy Hardeners
  - Aliphatic
  - Cycloaliphatic
  - Amidoamine
  - Polyamide
  - Diluent
  - Waterborne Polyamine
  - Tertiary Amine
  - Latent Curatives
  - Polyetheramines (PEA)
  - Polymercaptans
- Lithium Silicate
- Non Isocyanate 2K Resins
  - Acrylic
  - Polyester
- Oil Modified Polyurethanes
- Oxazolidines / Aldimines
- Phenolic Resins
  - Resins and Dispersions
- Phenoxy Resins
  - Resins and Dispersions
- Polyamide Epichlohydrin
  - PAE Resins
  - Polycup
- Polyester Resins
- Polymer Modifying Resins
  - Polybond®
- Polysiloxane Polymers
  - Glycidyl / Amino Functional
- Polyvinyl Butyral
  - Butvar Resins
  - Water Based Dispersions
- Rheology Control Resins
- Saturated Polyester Resins
- SMA Resins
  - Scripset
- VAE Dispersions (for Adhesives)
  - Polyvinyl Alcohol Protected Grades
  - Surfactant Protected Grades
- VAE Dispersions (for Coatings)
  - Vinyl Acetate-Ethylene (VAc-E)
  - Ethylene / Vinyl Chloride (E-VC)
  - Vinyl Acetate / Ethylene / Vinyl Chloride (VAc-E-VC)
- Vinyl Acetate Bead Resins
  - Homopolymer / Copolymer
- Vinyl Chloride Resins
  - Copolymer / Terpolymer
- Vinyl Ester Resins
- Vinyl Monomers
- Waterborne Acrylic Emulsions
- Waterborne Epoxies
- Waterborne Polyurethane Dispersions
  - Witcobond®
- Waterborne Self Crosslinking Acrylic Resins
- Water Reducible Alkyd Resins
- Water Repellent Resins
  - Solventborne / Waterborne / Powder

## CROSSLINKERS & CATALYSTS

- Amines
  - Baxxodur®
- Aziridine Crosslinker
- Organic Peroxides
  - Ketone Peroxides
  - MEKP Peroxide Blends
  - Hydroperoxides
  - Benzoyl Peroxides
  - Perketals
  - Peroxyesters
  - Peroxydicarbonates
- PAE Resins
  - Polycup Crosslinkers
- Tin Catalysts
  - Fascat®
- Titanate / Zirconate Catalysts
  - Tyzor®

## MARKETS SERVED

Coatings for Architecture, Marine, Auto and Transportation, Wood, Industrial Maintenance, Civil Engineering and Powder Coatings, Inks, Sealants, Adhesives and Elastomers.

# BRIGHTER WORLD

## RESIN MODIFIERS & INTERMEDIATES

- Tall Oil Fatty Acid

## THIXOTROPES & RHEOLOGY MODIFIERS

- Cellulose Ethers
  - Water and Organo-Soluble Polymers
  - Synthetic Modifiers
- Fumed Silica
  - Hydrophilic
  - Hydrophobic
- Rheology Additives
  - Organoclays
- Thickening Agents
  - Precipitated Amorphous Silica
  - Bentonite / Hectorite

## ADDITIVES

- Acid Scavengers
  - Cycloaliphatic Epoxy Resin
- Antioxidants / Antiozonants
- Defoamers
  - Oil / Silicone Based
- Flatting Agents
  - Wax Treated / Non-Treated
- Flame Retardants
  - Precipitated ATH
  - Ground / Unground / White ATH
- pH Neutralizing Agents
- Silanes
  - Aqueous / Non Aqueous
- Silicone Additives
  - Silicone - Polyether Block Copolymers
  - Trisiloxanes
  - Reactive Silicone Additives
- Stearates
  - Aluminum / Calcium / Zinc
- Styrenated Phenol
- Surfactants
  - Phosphate Esters
- UV Absorbers / Stabilizers
- Waxes

## PIGMENTS

- Anti-Corrosion Pigments
  - Inhibisil™
- Carbon Black
  - Standard Grades
- Chromium Oxides
  - Green Shades
- Iron Oxides
  - Micronized
  - Red / Yellow / Black
- Manganese Violet Pigments
  - Mid Shade
- Organic Pigments
  - Pigments for Coatings
  - Pigments for Merchant Inks
  - Metallics
  - Special Effect
  - Pearlescent
- Pigment Preparations
  - For Coatings
  - For Inks
- Ultramarine Pigments
  - Ultramarine Blue
  - Ultramarine Violet

## MINERALS AND EXTENDERS

- Alumina
  - Calcined / Tabular
- Barium Sulfate - Ground (Natural)
  - High Brightness
  - Standard Grade
- Calcined Kaolin
- Calcium Carbonate
  - Ground / Precipitated
- Calcium Hydroxide / Oxide
- Calcium Sulfate
  - Anhydrous / Dihydrate
- Diatomaceous Earth
  - Amorphous Silica
- Feldspar
- Magnesium Oxide
  - Low / Medium / High Activity Levels
- Micas
  - Wet Ground
  - Premium Wet Ground
- Microspheres
  - Glass / Ceramic
  - Hollow / Solid
- Rare Earth Oxides
- Silica - Ground
  - Fine / Coarse Grades
- Talc - Magnesium Silicate
  - Low Micron
  - General Purpose
  - Paint and Construction
- Zinc Oxide

## SOLVENTS

- VOC Exempt Solvent Blends

# Contact


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Edition #07

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BRENNTAG

# RESIN TERMINOLOGY

## How well do you know your resin terminology?

**Resin:** Resins are primary binders in Adhesives, Coatings, Elastomers, and Sealants (ACES), providing adhesion and substrate protection.

**Solvent/Cosolvent:** Solvents/cosolvents dissolve resins and coalesces film formation to the substrate.

**Substrate:** Substrates are surfaces being coated or adhered to which require external protection by the binder resin system.

**Solids:** Solids are what remain to form a protective film when a solvent evaporates, providing surface protection. This includes solute, pigments, and fillers.

**Pigment:** Pigments are dry coloring matter, usually insoluble powders mixed with water, oil, or another base to produce paint and similar products. They add to the overall solids of a system.

**Filler:** Fillers are typically powdered materials of lower cost used to provide reinforcement and physical properties in a certain physical medium, such as a surface coating or substrate.

**Tg:** Tg is the abbreviation for “glass transition temperature”. An essential physical property. Temperature region where the resin polymer transitions from a hard, glassy material to a soft, rubbery material.

**Thermoplastic Resin:** Thermoplastic resings are polymers that become pliable or moldable above a specific temperature and solidify upon cooling, typically having a high Molecular Weight (MW).

**Gloss:** Gloss is a reflectance value defined as shine or luster on a smooth surface. *(Typically the lower the sheen, the easier to clean.)*

### Typical Gloss Terminology

| Full Gloss | Gloss | Semi-Gloss | Low Sheen | Flat |
|---|---|---|---|---|
| 85 - 100% | 60 - 84% | 20 - 59% | 5 - 19% | 0 - 4% |

# Types of Resins Sold by Brenntag

| PRODUCT | DESCRIPTION |
|---|---|
| **Waterborne Acrylic** | Waterborne acrylic resins are the most common waterborne resin, used in a wide variety of applications ranging from commercial/residential paints to industrial coatings to elastomeric coatings and sealants. Resin systems vary based on monomers used in copolymer or terpolymer design and the molecular weight of the end-polymer. |
| **Waterborne Vinyl-Acrylics** | Vinyl acrylic latexes are dependable vehicles for a wide range of architectural coatings. They enable formulation at low or zero VOC without compromising performance, and are well suited for blending with 100% acrylic latexes to optimize cost-performance. |
| **Waterborne Stryene-Acrylics** | Styrene acrylic latexes provide excellent adhesion, water resistance, and gloss development in applications such as porch and deck enamels, interior/exterior high gloss enamels, metal coatings, and traffic paints. |
| **Waterborne Vinyl-Versatate Modified Acrylics** | Branched vinyl ester/versatate monomers provide enhanced properties such as exterior durability and hydrophobicity. Versatate modified acrylics deliver superior performance for a variety of exterior applications, such as coating masonry or wood. |
| **Waterborne Polyvinyl Acetate (PVA)** | VA Homopolymers are ideally suited for interior paints. These cost effective dispersion products offer high pigment binding capacity, leading to paints with high cohesion and therefore high scrub resistance performance. |
| **Epoxy Resins** | Epoxy resins offer extremely good corrosion resistance, chemical resistance (acids, bases, solvents), excellent adhesion to metals, good thermal resistance, and low shrinkage. Epoxy resins are thermosetting resins reacted (crosslinked) either with themselves or with a wide range of co-reactants including polyfunctional amines, acids (and acid anhydrides). These co-reactants are often referred to as hardeners or curatives, and the cross-linking reaction is referred to as curing. |
| **Epoxy Hardeners** | Availability of versatile reactant curing chemistries to tune properties (flexibility, curing properties, waterborne formulations) of thermoset epoxy resins. |
| **Hydrocarbon Resins** | A hydrocarbon resin is a C5/C9 aromatic hydrocarbon used in industrial applications. It has a tackifying effect and is suitable for use in paint, printing ink, adhesives, rubber, and other areas where tackiness is required. |

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EDITION #02