

# Milliken® Specialty Chemicals and Intermediates

A broad chemistry portfolio with flexible manufacturing capabilities to produce unique products and custom solutions.

## Innovation and Manufacturing Excellence

For more than 50 years, Milliken & Company has been developing and manufacturing specialty products for our industrial partners. We pride ourselves on working closely with customers to deliver unique products and solutions that fit their needs and exceed their expectations. Milliken's laboratory facility uses the latest research tools and prepares product sample for customer testing, optimization and qualification. Our manufacturing facilities offer flexible capabilities over a broad range of equipment, with a fully dedicated pilot plant staff and equipment for scale up.



## Unparalleled Customer Service

- Dedicated chemists for scale-up of new products
- Dedicated laboratory assets for alkoxylation trials and new product development
- Customer focused supply chain team
  - Meet packaging needs from 1 gallon to FTL
  - Sourcing of components for specific formulations
  - Custom manufacturing and blending capabilities

## Best-in-Class Equipment

- Alkoxylation reactors ranging from 100 gallons to 6,500 gallons
- Solids separation and filtration equipment
- Hot oil, steam, tempered water, cooling water and chilled water utilities

## Manufacturing & Environmental Expertise

- ISO 9001 and 14001 certified
- On-site biological wastewater treatment
- Direct rail access

## Chemistry Types

### Alkoxylation

- Ethylene Oxide
- Propylene Oxide

### Quaternization

- Diethyl Sulfate

### Esterfication

### Phosphation

- Phosphoric Anhydride
- Phosphorus Oxychloride

### Sulfation

- Sulfamic Acid

### Anhydrides





# Specialty Chemicals and Intermediates

## Alkoxyates, Esters, Anhydrides, and Custom Products

### Alcohol Alkoxyates (EO, PO, Combination)

Ethanol Alkoxyates  
Butanol Alkoxyates  
n-Decyl Alcohol Alkoxyates  
Isodecyl Alcohol Alkoxyates  
Lauryl Alcohol Alkoxyates  
Tridecyl Alcohol Alkoxyates  
C12-C14 Alcohol Alkoxyates  
Stearyl Alcohol Alkoxyates

### Fatty Acid Alkoxyates (EO, PO, Combination)

Coconut Fatty Acid Alkoxyates  
Tall Oil Fatty Acid Alkoxyates  
Neodecanoic Fatty Acid Alkoxyates

### Triglyceride Alkoxyates (EO, PO, Combination)

Castor Oil Alkoxyates  
Hydrogenated Castor Oil Alkoxyates

### EO-PO Copolymers

Butanol Initiated Random Copolymers  
Random Copolymers  
Block Copolymers

### Polyethylene Glycols

PEGs 100-6000

### Polypropylene Glycols

PPG 400-2000

### Specialty Branched Alkoxyates (EO, PO, Combination)

Glycerine Alkoxyates  
Trimethylolpropane Alkoxyates  
Pentaerythritol Alkoxyates  
Dipentaerythritol Alkoxyates  
Sorbitol Alkoxyates  
Sucrose Alkoxyates

### Phenol Alkoxyates (EO, PO, Combination)

Bisphenol A Alkoxyates  
Bisphenol A Alkoxyates, Sulfated  
Bisphenol A Alkoxyates, Phosphated  
Distyrylphenol Alkoxyates  
Distyrylphenol Alkoxyates, Phosphated  
Nonylphenol Alkoxyates  
p-Cumylphenol Alkoxyates

### Specialty Polyol

Hydrogenated Bisphenol A (HBPA)

### Other Alkoxyates (EO, PO, Combination)

1,4 Cyclohexanedimethanol Alkoxyates  
1,6 Hexanediol Alkoxyates  
Tetrahydrofurfuryl Alcohol Alkoxyates  
2-Methoxyethanol Alkoxyates  
Triethanolamine Alkoxyates

### Anhydrides

Dodeceny Succinic Anhydride (DDSA)\*  
Octadeceny Succinic Anhydride (ODSA)\*  
Octenyl Succinic Anhydride (OSA)  
Hexahydrophthalic Anhydride (HHPA)

### Specialty Esters

Alkyl PEG Pelargonate  
2-Octyldodecanol Pelargonate  
Castor Oil Ethoxylate Dittalate  
Hydrogenated Castor Oil  
Ethoxylate Tricocoate



**Please contact your Milliken representative for any additional information.**

PLEASE NOTE: As each customer's use of our product may be different, information we provide, including without limitation, recommendations, test results, samples, care/labeling/processing instructions or marketing advice, is provided in good faith but without warranty and without accepting any responsibility/liability. Each customer must test and be responsible for its own specific use, further processing, labeling, marketing, etc. All sales are exclusively subject to our standard terms of sale posted at [www.milliken.com/terms](http://www.milliken.com/terms) (all additional/different terms are rejected) unless explicitly agreed otherwise in a signed writing.

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