



Oleochemicals product portfolio

Natural. Renewable. Sustainable.

Univar, through our Chemical Associates division, is a leading marketer, manufacturer, and distributor of a full line of fatty acids, fatty alcohols, and derivatives based on vegetable oils, tallow, and tall oil. We offer extensive expertise in custom blending and packaging of oleochemicals for use as critical building blocks in formulated products across a wide variety of industries and applications, including surfactants, paints and coatings, oilfield chemicals, lubricants and greases, rubber compounding, plastics, metalworking fluids, and personal care products.



Your single source for oleochemicals



Univar is committed to industry leadership in the supply of naturally derived chemicals that are sourced and manufactured to deliver the highest quality and value in meeting our customers' requirements. Our market and technical specialists utilize deep industry and technical knowledge to tailor products and services for numerous markets, including asphalt, candles, flavors, industrial lubricants, industrial cleaners, plastics, paints, paper, and rubber. In addition, through our extensive logistics network, we supply the correct products and quantities – from railcars to drums and bags – to meet your company's needs.

Univar products sold under the Chemical Associates' brand include:

- Coconut fatty acids
- Dimer and trimer acids
- Fatty alcohols
- Fractionated fatty acids
- Glycerine
- Glycerol esters
- Metallic stearates
- Methyl esters
- Oleic acids
- Palmitic acid
- Polyunsaturated fatty acids
- Ricinoleic acid
- Stearic acids
- Tall oil fatty acids
- Tallow fatty acids

Univar maintains strong business partnerships with the major oleochemical manufacturers around the globe, which ensures a consistent and steady flow of products that meet our specifications and the demands of the marketplace. Where product is not available domestically, our team of logistic experts efficiently sources products from Europe, Southeast Asia, India, and South America for our North American customers.

**For ordering information contact
Chemical Associates, a Division of Univar USA Inc. at:
1-800-347-2891
GoOleo@univarusa.com**

Coconut fatty acids

The Chemical Associates' range of coconut fatty acids include whole and stripped versions, distilled, partially hydrogenated, and fully hydrogenated products. Some of our coconut fatty acid products can be certified kosher and halal. Products are available in drums (lined steel, 400 lbs. net), and tank trucks.



Market/application	End use
Multiple	Derivatives/esters primarily converted via ethoxylation or amidization.
Paint and coatings	Chain terminators that provide formulation flexibility, faster reaction rates, and consistency in condensation reactions to make alkyd resins.
Household and industrial cleaning	Soaps used alone or in combination with other chemicals to formulate hard surface cleaners and detergents.
Personal care	Soaps used alone or in combination with other chemicals to formulate waterless hand cleaners.
Metalworking	Lubrication and load-carrying additives in metalworking fluids.

Fatty alcohols

Chemical Associate's natural fatty alcohols are produced from a number of vegetable oils including coconut, palm, palm kernel, and rapeseed, with carbon chains that are even-numbered, commonly ranging from C8 to C18. More than 80% of fatty alcohols are used as a derivative in the end use. Fatty alcohols are available in 44-lb. bags, as well as 1,100-lb. super sacks. Tank truck shipments and isotainers are available upon request.



Fatty alcohols (continued)

Market/application	End use
Adhesives, sealants, and elastomers	Plasticizers for PVC, ABS, and rubber manufacturing; PVC lubricant and mold release; polymer stabilizers; dispersion aid, defoamer, emulsifier.
Paint and coatings	Liquid solvents for lacquers.
Graphic arts	Liquid solvents for printing inks and dyes; defoamers for printing fluids.
Household and industrial cleaning	Liquid solvents and phosphates for hard surface degreasers; ethoxylates for detergents and hard surface cleaners; sulfates for dishwashing soaps; phosphates for hard surface cleaners.
Personal care	Sulfates for toothpaste and shampoo; esters, sulfates, ethoxylates for skin creams, body wash, sunscreen, mascara, hair colorants, makeup, lipstick, deodorants, shaving creams/gels, facial scrubs, self-tanning creams.
Metalworking	Defoamers and phosphates for metal working fluids.
Oil and gas	Esters and surfactants for drilling fluids.
Water treatment	Defoamers and surfactants.
Automotive	Engine lubricants.
Textiles	Emulsifiers, solubilizers.



Lauric acid and myristic acids

Univar offers the full line of fractionated fatty acid from C8- to C14-saturated molecules, including lauric acid (C12) and myristic acid (C14) derived from palm kernel oil or coconut oil. Specific products are available that can be certified food grade, kosher, and halal. Lauric and myristic acids are available in 25 kg. (55 lb.) bags, and are primarily sourced from Malaysia and Indonesia.

Market/application	End use
Multiple	Derivatives/esters used in a wide variety of surfactants due to their “foaming” properties.
Paint and coatings	Chain terminators that provide formulation flexibility, faster reaction rates, and consistency in condensation reactions to make alkyd resins.
Household and industrial cleaning	Hard surface cleaners and detergents.
Personal care	Emollient esters for lotions and creams; mid-cut fatty acids for liquid and bar soaps.
Metalworking	Lubrication and load-carrying additives in metalworking fluids.



Stearic acid

Univar offers a full range of stearic acids produced from the hydrolysis of fats, such as beef tallow fat or natural vegetable oils such as palm stearine, palm kernel, or soybean. Products include rubber grade, and single-, double- and triple-pressed stearic acids, in addition to specialty high-purity grades. Stearic acids are available in 50- or 55-lb. bags, and 1,200-lb. and 2000-lb. super sacks. Super sack packaging weights depend on source of supply. Tank truck shipments are available upon request.

Market/application	End use
Multiple	Stearate esters and surfactants (chemical intermediate).
Adhesives, sealants, and elastomers	Activator accelerator in the vulcanization of rubber compounds, dispersing and processing aid; lubricant and process aid in plastic extrusion and molding operations; viscosity modifier, melting point control, paraffin replacement in hot melt adhesives.
Candles and waxes	Hardener, appearance enhancer, binder, and thickener.
Household and industrial cleaning	Surfactant for detergents.
Personal care	Emulsifier thickener and surfactant in various creams, lotions, shaving creams/gels, body washes and make-ups; surfactant in liquid and bar soaps.
Metalworking	Binder/process aid in buffing compounds and polishes, stamping, grinding, cutting, emulsifiers; lubricants for wire drawing.
Oil and gas	Viscosity modifier.
Automotive and industrial	Thickener and release aid for lubricants and greases.
Road paving and construction	Dispersant and flow aid for asphalt.
Electronics	Binder and process aid for electrodes.
Textiles	Sizing chemicals.

Tall oil fatty acid (TOFA)

Tall oil fatty acids are typically derived from crude tall oil (CTO) which is a byproduct of the Kraft Sulfate Paper Process. Fractional distillation of the CTO yields rosin acid, tall oil fatty acid, distilled tall oil, tall oil heads, and tall oil pitch. All CTO fractionators run for rosin with the other cuts being co-products. Univar reverse engineers our TOFA taking the pieces and parts and putting them back together to meet either industry or customer specifications. Univar's TOFA products are available in drums (lined steel, 400 lbs. net), steel-caged poly totes (2,100 lbs. net), and tank trucks.



Tall oil fatty acid (TOFA) (continued)

Market/application	End use
Multiple	Derivatives/esters with improved low-temperature properties than the other liquid fatty acids.
Adhesives, sealants, and elastomers	Raw material for the production of plastics additives and tin stabilizers; plasticizers in rubber to aid in processing and provide desired properties.
Paint and coatings	Chain terminators that provide formulation flexibility, faster reaction rates, and consistency in condensation reactions to make alkyd resins.
Household and industrial cleaning	Soaps used alone or in combination with other chemicals in formulating cleaners and detergents.
Personal care	Soaps used alone or in combination with other chemicals in formulating waterless hand cleaners.
Metalworking	Lubrication and load-carrying additives in metal working fluids; co-emulsifier with sodium sulfonate, providing film formation and emulsion stability.
Automotive	Low-sulfur additives for diesel fuels to provide additional lubricity and improved metal scavenging properties.
Oil and gas	Can be used in formulating drilling muds. Liquid carboxylic fatty acids provide better low-temperature storage properties and corrosion inhibition.

Tallow derived oleic acid

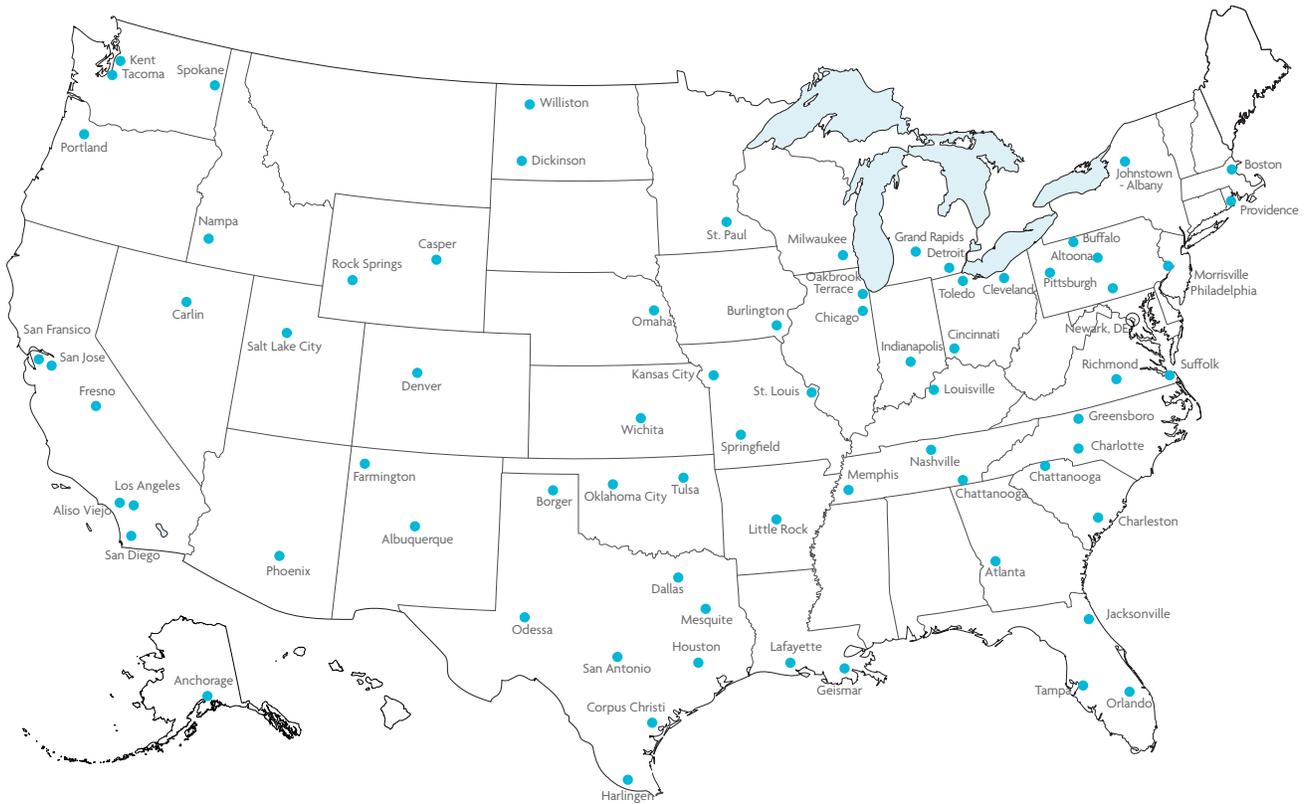
Univar offers a full line of oleic acids sold under the Chemical Associates' brand derived from tallow (beef fat) and is commonly referenced as BFT (bleachable fancy tallow). BFT is a by-product of the rendering houses and is a large globally traded commodity. This material is the precursor for both oleic acid and triple-pressed stearic acid. The oleic acid is separated from stearic acid by either a solvent separation process or a dry-frac process. Univar's oleic acids are available in drums (lined steel, 400 lbs. net), steel-caged poly totes (2,400 lbs. net), and tank trucks.



Market/application	End use
Multiple	Derivatives/esters used in a variety of applications.
Adhesives, sealants, and elastomers	Raw material for the production of plastics additives and tin stabilizers; plasticizers in rubber to aid in processing and provide desired properties in tires, mechanical goods, and bladders.
Household and industrial cleaning	Soaps used alone or in combination with other chemicals in formulating hard surface cleaners and detergents.
Personal care	Soaps used alone or in combination with other chemicals in formulating waterless hand cleaners.
Metalworking	Lubrication and load-carrying additives in metal working fluids; co-emulsifier with sodium sulfonate, providing film formation and emulsion stability; polyol esters of Oleic Acid are also used in high-temperature applications.
Automotive	A naturally low-sulfur additive for diesel fuels to provide additional lubricity and improved metal scavenging properties.
Oil and gas	Can be used in formulating drilling muds. Liquid carboxylic fatty acids provide better low-temperature storage properties and corrosion inhibition.

The Univar difference

Univar operates one of the most extensive global sourcing and distribution networks in the world. In the U.S., our network includes more than 90 facilities strategically located to provide fast turnaround and local service. Through our scale, geographic reach, and diversified distribution channels, customers can gain a competitive advantage from enhanced growth and cost-savings opportunities.



About Univar Founded in 1924, Univar is a global distributor of specialty and basic chemicals from more than 8,000 producers worldwide. Univar operates more than 700 distribution facilities throughout North America, Western Europe, the Asia-Pacific region, and Latin America, supported by a global network of sales and technical professionals. With a broad portfolio of products and value-added services, and deep technical and market expertise, Univar delivers the tailored solutions customers need through one of the most extensive chemical distribution networks in the world. Univar is Chemistry DeliveredSM.

© 2015. Univar USA Inc. All rights reserved. UNIVAR, the hexagon, and other identified trademarks are the property of Univar Inc., Univar USA Inc. or affiliated companies. All other trademarks not owned by Univar Inc., Univar USA Inc. or affiliated companies that appear in this material are the property of their respective owners. The information contained herein can be changed without notice and you should contact the manufacturer to confirm. Read and follow the Safety Data Sheet ("SDS") for your health. All information is based on data obtained from the manufacturer or other recognized technical sources. Univar USA Inc. ("Univar") provides this information "as is" and makes no representation or warranty, express, or implied, concerning the accuracy or sufficiency of the information and disclaims all implied warranties. Univar is not liable for any damages resulting from the use or non-use of the information and each Univar affiliate is responsible for its own actions. All transactions involving this Product are subject to Univar's standard Terms and Conditions, available at www.univar.com or upon request. IN-1008-1015



Univar
3075 Highland Pkwy, Suite 200
Downers Grove, IL 60515
www.univar.com