



Cargill

Cargill Bioindustrial
Industrial Solutions Middle East,
Turkey & North Africa

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Cargill Bioindustrial

Innovation is what we do

1. Expert

Our specialized expertise in agriculture-based chemistry allows us to create better performing industrial solutions for our customers.

WHO WE ARE

For over 60 years, Cargill Bioindustrial has focused solely on the application needs of targeted industrial customers around the world. Our proprietary technologies are found in an ever-widening range of categories such as dielectric fluids, asphalt, oilfield, construction, flooring, flexible foams, consumer goods, paints, coatings, lubricants and crop protection.

2. Value

Our performance-first approach has inherent functional and financial advantages delivering lower total cost of ownership benefits.

REAL WORLD SOLUTIONS EQUAL BOTTOM-LINE VALUE

We understand agriculture-based chemistry. Since the 1950's, we have been reliably selecting, modifying and reacting various materials to create specific, innovative industrial technologies that meet the performance requirements our customers demand and the total cost savings they need.

3. Global

Our core Cargill DNA brings world-wide reach and supply chain expertise to provide consistent, reliable supply and enhanced price stability.

WHY CARGILL?

For 150 years and operating in nearly 70 countries, Cargill has leveraged its global supply chain and logistics expertise to provide solutions in 4 segments: agriculture, food, financial and industrial. As part of Cargill, Cargill Bioindustrial uses that unique experience to benefit its industrial customers.

4. Partner

Our fundamental belief is that mutual bottom-line business success is made possible by strong customer collaboration and partnership.

THE WIN-WIN APPROACH

Our customers count on Cargill Bioindustrial to provide the expertise and chemistries required to meet their toughest challenges, whatever they may be: process, technology or supply chain. We believe by involving our customers in the process and embracing truly entrepreneurial thinking, we create innovative, new-to-the-market solutions.

Innovative solutions. High-performing products.

Anova™ Asphalt and oilfield solutions • BiOH® Polyols • Envirotemp™ FR3™ dielectric fluid • Oxi-Cure® coalescing agents
Agri-Pure® and Agri-PureGold® oils • Altor Polyaspartic Esters • NatureWax® vegetable waxes

Diverse markets. Game-changing results.

Asphalt Solutions • Candle Making • Paint & Coatings & Ink • Lubricants • Textile • Foams & Flooring • Binders & Adhesives • Feed • Food
Paper Making • Corrugating • PVC & Rubber • Construction • Home Care • Stationery • Drilling & Oilfield Solutions • Dielectric Fluids

Cargill Bioindustrial Solutions are what we make.

Our long history of problem-solving has created more than just innovative products, but winning results for our customers. What challenge can we solve for you?



ENVIROTEMP™ FR3™ DIELECTRIC FLUID

- FR3™ fluid has unique insulation life extension and high temperature capabilities enabling transformers to increase load capacity by up to 20% without sacrificing asset life or reliability.
- These features offer cost efficiencies and performance enhancements for our customers. They have the flexibility to increase their load capability with existing assets or reduce their footprint with the same load capability. This renewable, biodegradable fluid also has a 360°C fire point helping to reduce fire and environmental risks.



CHARGE+ CATIONIC STARCHES:

- Charge+ starches are developed especially for use as a wet end additive in the paper industry. The attraction of the cationic starch and the anionic cellulose fibers results high retention of starch, fibers and other additives in the furnish while providing stronger bonding properties. These cationic starches carry a full positive charge at all pH levels and enable to be used under acid, neutral or alkaline conditions.



ANOVA™ ASPHALT SOLUTIONS

- Our portfolio of Anova™ asphalt products help build and maintain better roads. For example, our rheology modifiers improve low temperature performance while expanding the useful grade temperature interval. Our rejuvenators restore properties of asphalt lost to aging, enabling increased use of recycled asphalt and shingles in pavements.



C5700 CROSS-LINKED STARCH:

- For greater wet-bond strength in corrugating, Cargill has developed a starch designed to reach a higher peak viscosity at its gelatinization temperature. Adhesives prepared with C5700 cross-linked starch have an improved rheological profile for excellent application on corrugating rolls, superior wet-bond strength (tack) and minimal glue consumption.



OXI-CURE™ COALESCING AGENTS

- Our low VOC Oxi-Cure coalescing agents have been specially designed to help our paint and coatings customers achieve low VOC levels in their coating formulations and provide superior film forming.



- Our BiOH® polyols for memory foam mattresses reduce heat transfer in foams by as much as 25% while enabling manufacturers to incorporate as much as 50% renewable content*.

*of finished foam weight



NATUREWAX® VEGETABLE CANDLE WAXES

- NatureWax® vegetable-based wax blends support increased fragrance loading, exhibit better glass appearance, and are made from renewable sources for premium wax blends, natural additives, and container and pillar candle making applications.

Products at a Glance

Our technologies are found in a broad range of industrial categories. The products listed represent the foundation of our offering, not the full scope of our capabilities. Please talk to your Cargill representative to find out how we can work with you on creating solutions that best fit your business needs.

Asphalt Solutions



We have a complete line of asphalt solutions to help you build and maintain the perfect road.

Anova™ Asphalt Solutions is a full line of rejuvenators, modifiers, warm-mix additives, anti-strip additives, and emulsifiers. We not only have unique renewable chemistries to create new-to-the-world products, we have a fully functional asphalt binder analysis and applications lab to simulate real-life conditions such as aging, traffic loading, and environmental conditions. In addition, we provide technical support and formulation services.

Product Group	Product Name	Description
Green Diluent	Cargill 4160 Diluent	Low VOC diluent for cold mix asphalt.
Asphalt Emulsifier	Anova™ 1654 Emulsifier	Anova emulsifiers are, liquid emulsifiers designed for use in a variety of asphalt emulsions, for construction and preservation applications
Prime Coat	BioAstar Prime Coat	Vegetable based prime coat replaces Kerosene in cut-back formulations and offers an odorless application.
Rejuvenator	Anova™ 1815	High performance rejuvenator for recycled bituminous material and aged pavement surfaces.
Rejuvenator	Anova™ 1845	High performance Rejuvenator for use in rejuvenating pavement preservation and emulsion applications.
Rejuvenator	Anova™ 1900	Pavement surface-applied rejuvenator, ideal for preventive seal coating of pavement surfaces.
Warm Mix Additive	Anova™ 1501	High-performance liquid warm mix additive to reduce pavement application temperature and aid in compaction.

Candle Making



With Cargill’s deep background in vegetable-candle waxes and technical expertise in modifying those chemistries to achieve specific performance characteristics, we collaborate with candlemakers solve complex product challenges to give them a competitive edge while still optimizing supply chain operations.

Product Group	Product Name	Description	Drop Point (°C)	Needle Penetration (dmm)	Congeval Point (°C)	Color (Lovibond)
Container Blend	NatureWax® C-1	A blend of hydrogenated vegetable glycerides. Designed for pull-away and fat bloom resistance.	51 - 54	40 - 50	37.8 - 43.3	1.5 Max Red
Container Blend	NatureWax® C-3	Proprietary blend of hydrogenated vegetable glycerides and non-hazardous ingredients. Designed for full glass adhesion with fat bloom resistance.	51 - 54	40 - 50	45.6 - 48.9	2.0 Max Red
Container Blend	NatureWax® C-3s	Vegetable-based, ready-to-use wax blend developed for full glass adhesion and fat bloom resistance. Also suitable as a softener for pillar candles.	51 - 54	40 - 50	43 - 47	2.0 Max Red
Container Blend	NatureWax® C-6	Proprietary blend of hydrogenated vegetable glycerides and non-hazardous ingredients. Designed for full glass adhesion and creamy texture with fat bloom resistance.	51 - 54	40 - 50	45.6 - 48.9	2.0 Max Red
Container Blend	NatureWax® Coconut 2	Blends of hydrogenated vegetable glycerides with low melting & good adhesion.	42 - 44	31 - 33	31.1 - 33.3	1.5 Max Red
Container Blend	NatureWax® Elite-200	Robust blend for one-pour, high fragrance loading, superior fat bloom resistance and full pull-away.	52 - 57	49 - 54	48.9 - 54.4	Off White
Container Blend	NatureWax® Elite-211	Vegetable-based wax blend developed primarily for use in container candles with high fragrance loading, where it offers a robust blend for one-pour, full pull away and superior fat bloom resistance.	52 - 57	49 - 54	50 - 55	Off White
Pillar Blend	NatureWax® Elite-300	Robust blend for smooth and textured finishes with high fragrance and dye compatibility.	54 - 60	52 - 57	51.7 - 57.2	Pale Yellow
Additive	NatureWax® Coconut 1	Hydrogenated coconut glycerides to increase oil/creamy textures.	32 - 39	21 - 28	21.1 - 27.8	2.0 Max Red
Additive	NatureWax® CA-1	Additive to increase fragrance compatibility/stability.	60 - 65	5 - 15	57 - 62	Off White

Paint & Coatings & Ink



Cargill is a leader in providing renewable vegetable oils and additives for the paint and coatings industry. In addition to industry standard products, our focus on innovation allows us to create customized solutions to fit your business needs. Our expertise in agriculture-based chemistries allows us to create better performing industrial solutions for our customers. We operate under a philosophy of performance-driven innovation, delivering lower total cost of ownership benefits. We collaborate with customers to create innovative, new-to-the-market solutions.

Our ingredient expertise includes linseed oil, soybean oil, sunflower oil, canola oil, Oxi-Cure® low-VOC oils and coalescing agents, Agri-Pure Gold® vegetable oils, ethanol, polyamides, amidoamines, amines, mannich bases, reactive diluents, and polyurea.

Product Group	Product Name	Description
Vegetable Fatty Acid	Alem 115	Distilled sunflower oil fatty acid for alkyd production
Vegetable Fatty Acid	Alem 110	Distilled soybean oil fatty acid for alkyd production
Vegetable Fatty Acid	Alem 140	Distilled coconut oil fatty acid for high performance alkyd production
Coalescing Agent	Oxi-Cure® 2000	Improves coalescence of water-based paint films; incorporated into the coating for no VOCs. Virtually no odor compared to other commonly used higher VOC coalescents.
Glycerin	Technical Glycerine	Technical grade with Kosher, for non-food purposes
Vegetable Base Oil	Alem 02 R	Refined, bleached, deodorized (RBD) sunflower oil
Vegetable Base Oil	Alem 10 R	Refined, bleached, deodorized (RBD) soybean oil



The functional fluids and lubricants market is where functionality and environmental profile must be balanced against cost, without compromising on performance. Our natural oils can be formulated to function with characteristics typically found in synthetic-based fluids.

Fats & Fatty Acids

The functional fluids and lubricants market is where functionality and environmental profile must be balanced against cost, without compromising on performance. Our vegetable fats&fatty acids can be formulated to function with characteristics typically found in mineral-based fluids.

Product Group	Product Name	Description
Vegetable Fatty Acid	Alem 314	Oleic acid for lubricants and greases
Vegetable Fatty Acid	Alem 115	Distilled sunflower oil fatty acid for lubricants and greases
Vegetable Fatty Acid	Alem 140	Distilled coconut oil fatty acid for lubricants and greases
Hydrogenated Fatty Acid	Agri Pure 835	Hydrogenated vegetable fatty acid for lubricants and greases
Hydrogenated Oil	HCO 90	Fully hydrogenated castor oil for lubricants and greases
Vegetable Base Oil	Alem 06 RBD PO	Refined, bleached, deodorized (RBD) palm oil
Vegetable Base Oil	Alem 02 R	Refined, bleached, deodorized (RBD) sunflower oil
Vegetable Base Oil	Alem 36 R	Refined, bleached, deodorized (RBD) rapeseed oil

Synthetic Esters

Agri-Pure® synthetic esthers are naturally derived base oils used by lubricant manufacturers in applications ranging from hydraulic fluids to engine oils. Processed from renewable agricultural sources, Agri-Pure® products are environmentally friendly. And, they can be formulated to function with the characteristics typically found only in expensive synthetic-based fluids.

Product Group	Product Name	Description	Saponification Value, mg KOH/g	Viscosity, 40°C, mm2/s	Cloud Point, °C	Flash Point, °C
Synthetic Ester	Agri Pure® 456 Fluid	TMPTO (Trimethylolpropantriolate)	165 - 200	41,4 - 50,6	Max. -30	Min. 300
Synthetic Ester	Agri Pure® 456 Fluid ID	TMPTO (Trimethylolpropantriolate)	165 - 200	43 - 46	Max. -30	Min. 300
Synthetic Ester	Agri Pure® EHO	2 ethyl hexyloleate	135 - 165	7,2 - 9,0	Max. -15	Min. 180



Our Hydrogenated Vegetable Oils, RBD oils, Distilled Fatty acids and Synthetic esters are used in Textile Auxiliary products as renewable raw materials.

Product Group	Product Name	Description
Hydrogenated Oil	Alem 07 RH S	Fully hydrogenated palm stearin, used softener production.
Vegetable Base Oil	Alem 07 R	Refined, bleached, deodorized (RBD) palm oil
Vegetable Base Oil	Alem 06 RBD PO	Refined, bleached, deodorized (RBD) palm oil
Vegetable Fatty Acid	Alem 140	Distilled coconut oil fatty acid used used in textile auxiliary formulations.
Vegetable Fatty Acid	Alem 314	Oleic acid used in textile auxiliary formulations.
Synthetic Ester	Agri Pure EHO	2 ethyl hexyl oleate, used in textile auxiliary formulations as surfactant/co-surfactant.
Emulsifier	Alem 621 HPY S	Mono and diglycerides of fatty acids with 45% mono content used as emulsifier in textile auxiliary formulations.

Industrial starches are versatile input used in many applications including the warp sizing in textile industry. A specific native or modified starch is selected depending on application, conditions and properties desired.

Product Group	Product Name	Description
Industrial Starch	C0010	Native starch solution for warp sizing application.
Industrial Starch	C9400	Low viscosity modified starch, best solution for warp sizing in denim.
Industrial Starch	C9600	Lower viscosity modified starch specifically for yarn dying in denim fabric.
Industrial Starch	C9800	Lowest viscosity modified starch for producing one-shot-mix products. Best solution for denim, shirt, fine yarn shirt and towel manufacturing.
Industrial Starch	CMS	Sizing agent which does not require enzyme for removal.
Industrial Starch	CMS-LV	Low viscosity sizing agent which does not require enzyme for removal.



BiOH[®] soy-based polyols and polymers deliver optimal performance for polyurethane-based products while increasing renewable content.

BiOH[®] polyols and polymers are soy-based, industrial ingredients for polyurethane products such as flexible foam used in upholstered furniture, mattresses, pillows, carpet cushion and automotive seats, and in binder systems, such as carpet backing. Traditional polyurethane foam is derived from petroleum based chemicals. BiOH[®] products can replace a portion of the petrochemicals in polyurethane applications. In certain cases, BiOH[®] polyols and polymers outperform traditional polyurethanes, offering customers product innovation opportunities.

Product Group	Product Name	Description	Viscosity cP @ 25°C	OH Number	OH Functionality
Soy-Based-Polyols	BiOH [®] 1105	Hydroxyl functionalized vegetable oil	3.300	355	Estimated 3.0
Soy-Based-Polyols	BiOH [®] 2100	Hydroxyl functionalized vegetable oil	10.000	230	5.0
Soy-Based-Polyols	BiOH [®] 2828	Hydroxyl functionalized vegetable oil	502	29	0.6
Soy-Based-Polyols	BiOH [®] 3800	Hydroxyl functionalized vegetable oil	3.900	200	4.2
Soy-Based-Polyols	BiOH [®] 4100	Hydroxyl functionalized vegetable oil	2.400	56	1.1
Soy-Based-Polyols	BiOH [®] 4150	Hydroxyl functionalized vegetable oil	900	40	0.8
Soy-Based-Polyols	BiOH [®] 5000	Hydroxyl functionalized vegetable oil	3.200	56	1.7
Soy-Based-Polyols	BiOH [®] 5100	Hydroxyl functionalized vegetable oil	820	40	1.0
Soy-Based-Polyols	BiOH [®] 5300	Hydroxyl functionalized vegetable oil	5.500	117	3.1
Soy-Based-Polyols	BiOH [®] 5450	Hydroxyl functionalized vegetable oil	3.300	158	3.0
Soy-Based-Polyols	BiOH [®] 6205	Hydroxyl functionalized vegetable oil	233	70	1.3
Soy-Based-Polyols	BiOH [®] 6305	Hydroxyl functionalized vegetable oil	720	112	2.0
Soy-Based-Polyols	BiOH [®] 6405	Hydroxyl functionalized vegetable oil	1.700	135	2.5
Soy-Based-Polyols	BiOH [®] 7050	Primary hydroxyl functionalized vegetable oil	3.840	56	Estimated 1.5
Soy-Based-Polyols	BiOH [®] 7100	Primary hydroxyl functionalized vegetable oil	1.700	90	Estimated 1.5



Cargill's deep expertise in agriculture-based chemistry has led to our adhesive innovations that draw on natural sources for bonding strength, versatility and staying power. Cargill continues to develop and customize non-toxic adhesive ingredients from renewable resources, such as corn products for applications as varied as paper bags, corrugated board, wallpaper, lamination, pharmaceutical preparations, furniture and plywood.

Product Group	Product Name	Description	Moisture	pH
Industrial Starch	C0010	Granular native starch with high binding power when gelatinized.	13% max	5-7

Product Group	Product Name	Description	Dry Substance	pH	Density
Maltodextrins	MD18 - 21700	Glucose polymeric chains with a molecular weight between that of starch and glucose syrup.	69-71	3,5 - 6,0	1,35

Product Group	Product Name	Description	Dry Substance	Dextrose Equivalent (DE)	SO2	Color	Density
Industrial Glucose Syrups	G40 - 21805	Glucose syrup	80-81	38-44	9,9 max	80 min	1,42
Dextrose	G95 - 22770	Glucose syrup	74-76	97 min	9,9 max	5 max	1,37



Cargill helps its customers meet new challenges with cost-effective products and services that meet even the toughest requirements. With more than 100 professionals around the globe dedicated to serving the paper industry, we’re positioned to develop increasingly smart solutions and high-quality products for wet-end, surface treatment, and board coating applications.

Product Group	Product Name	Description	Degree of Substitution (Nitrogen % DS)
Wet-End Paper Making Starch	Charge + 99	Low level cationic starch	0.24 - 0.29
Wet-End Paper Making Starch	Charge + 120	Medium level cationic starch	0.49 - 0.55

Product Group	Product Name	Description
Surface Treatment Starch	C9400	Viscosity modified corn starch (modification level: 1)
Surface Treatment Starch	C9600	Viscosity modified corn starch (modification level: 2)
Surface Treatment Starch	C9800	Viscosity modified corn starch (modification level: 3)
Surface Treatment Starch	C9900	Viscosity modified corn starch (modification level: 4)

Product Group	Product Name	Description	Moisture	pH	Solubility
Coating Starch	C*iCoat 07520	Cold water soluble bio-polymer with high binding power	6-9	5-7	60% min



Cargill has been involved in the corrugating industry since the beginning. Since starch was first used as an adhesive, Cargill has provided innovative industrial starch solutions to the corrugated board industry. Our skilled specialists and sales force are poised to help customers find the most effective adhesives and glue preparation system to achieve a superior paper bonding and corrugated board quality.

Product Group	Product Name	Description
Industrial Starch	C5700	Crosslinked starch with high binding performance
Industrial Starch	C0010	Granular native starch, when heated in an aqueous environment, gelatinizes to produce a viscous colloidal solution with high binding power



For the construction industry, producing eco-friendly products is part of doing business today. And as always, quality construction depends on quality materials. Manufacturers are challenged with meeting demands for new, environmentally friendly materials without impacting product functionality, quality and cost.

Product Group	Product Name	Description
Industrial Starches	C9800	Viscosity modified starch for plasterboard application.

Home Care



Most people depend on a range of cleaning and maintenance products to maintain their homes. And more and more people are becoming aware that ingredients that make up those products can have an impact on the human and environmental health. The manufacturers we work with carefully are balancing effectiveness and cost-efficiency with the increasing demand by consumers for more environmentally friendly products that are better for people and the planet.

Product Group	Product Name	Description
Emulsifier	Alem 621 HPY	Mono and diglycerides of fatty acids, used as emulsifier in cosmetic applications
Emulsifier	Alem 622 SE	Mono and diglycerides of fatty acids, used as emulsifier in cosmetic applications with self emulsifying property
Distilled Fatty Acid	Alem 115	Distilled sunflower oil fatty acid for liquid soap production
Distilled Fatty Acid	Alem 140	Distilled coconut oil fatty acid for soap&detergent production
Distilled Fatty Acid	Alem 314	Oleic acid for various cosmetic&detergent applications
Hydrogenated Oil	Alem 02 RH	Fully hydrogenated vegetable oil
Hydrogenated Oil	Agri Pure 155	Fully hydrogenated vegetable oil
Hydrogenated Oil	Agri Pure 113	Partially hydrogenated vegetable oil
Hydrogenated fatty acids	Agri Pure 835	Ignition products to provide the fuel and binder function for wood-based fire-lighters, BBQ lighters and fire logs

Stationery



Our Hydrogenated Vegetable Oils and RBD oils are used in stationery products as renewable raw materials.

Product Group	Product Name	Description	Melting Point (°C)
Hydrogenated Oil	Alem 02 RH	Fully hydrogenated vegetable oil for crayon and play dough production	63 - 70 °C
Hydrogenated Oil	Alem 07 RH	Fully hydrogenated vegetable oil for crayon and play dough production	57 - 60 °C
Hydrogenated Oil	Alem 06 HPO	Fully hydrogenated vegetable oil for crayon and play dough production	58 - 60 °C
Hydrogenated Fat	HCO 90	Fully hydrogenated vegetable fat for crayon and play dough production	85 - 88 °C
Vegetable Base Oil	Alem 07 R	Refined, bleached, deodorized (RBD) vegetable oil	-

Drilling & Oilfield Solutions



Drilling Solutions

These are 100% natural polyglycerols that provide a variety of functional benefits in drilling mud formulations, particularly shale inhibition. They are available in various degrees of polymerization to allow the formulator to zero in on the exact performance requirement. Polyglycerols can also be used as a component feedstock to make esters, emulsifiers and other derivatives.

Product Group	Product Name	Description
Polyglycerols	Oxi-Cure® 510 TP	Polyglcerol used as shale inhibitor in drilling mud formulations
Polyglycerols	Oxi-Cure® 510 W	Polyglcerol used as shale inhibitor in drilling mud formulations

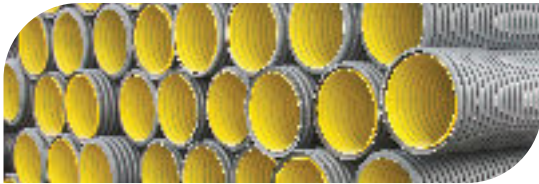
Oilfield Solutions

Anova™ Oilfield Solutions are used in crude oil drilling, production and transport.

Product Group	Product Name	Description
Imidazoline	Anovalmidazoline™ 9250	Imidazoline for use in oilfield applications
Foamer	Anova™ 9700 Foamer	A highly effective acid foamer used in cleaning products as a detergent and wetting agent, or in oilfield applications to produce foam in high brine and temperature conditions.

Product Group	Product Name	Description	Viscosity
Lubricant	Anova™ 9575 Lubricant	Proprietary ester	380cP @ 25°C
Lubricant	Anova™ 9510 Lubricant	Proprietary ester	2,180cSt @ 40°C

PVC & Rubber



Vegetable oils have an important role in the effective dispersion of silica and other inorganic fillers in rubber tire production. The improved performance of the tire is especially marked at low temperatures, and the oils are therefore used mainly in winter tire formulations. Vegetable oils can replace mineral oil-based plasticizers in rubber goods, where they also bring significant advantages in terms of human and environmental safety, and may allow new end-of-life recycle options for SBR rubber-based products.

Product Group	Product Name	Description
Hydrogenated Oil	Alem 07 RH S	Fully hydrogenated palm oil
Hydrogenated Oil	Alem 06 HPO	Fully hydrogenated palm oil
Hydrogenated Oil	HCO 90	Fully hydrogenated castor oil
Emulsifier	Alem 621 HPY S	Mono and diglycerides of fatty acids with 45% mono content used as emulsifier in engineering plastics
Hydrogenated Fatty Acid	Agri-Pure 835	Hydrogenated vegetable fatty acid
Hydrogenated Fatty Acid	Agri-Pure 18xx	Stearic acid
Vegetable Fatty Acid	Alem 140	Distilled coco fatty acid
Vegetable Fatty Acid	Alem 314	Oleic acid
Vegetable Fatty Acid	Alem 115	Distilled sunflower oil fatty acid

Dielectric Fluids



Envirotemp™ dielectric ester fluids are used in power and distribution transformers. These fluids have a high flash and fire point which improves fire safety and can protect the insulation paper to extend transformer life. With their high temperature capability, Envirotemp™ ester fluids provide the flexibility for organizations to either increase load capability (up to 20%) with the same size transformer or maintain the same load capability through a smaller sized transformer.

Product Group	Product Name	Description
Natural Ester	Envirotemp™ FR3™	Made from renewable vegetable oils. 360°C fire point. Biodegradable. Non-toxic and non-hazardous in soil and water, carbon neutral. Ideally suited for power and distribution transformers through 420kV.
Synthetic Ester	Envirotemp™ 200	Excellent thermal and lubricity properties. Ideally suited for free-breathing transformers and traction transgormers. Biodegradable.



We offer food emulsifiers and additives for confectionery, gum-base, halva, margarines, bakery, chocolate & ice-cream manufacturing.

Product Group	Product Name	Description
Hydrogenated Oil	Alem 07-RH G	Fully hydrogenated palm oil for confectionery, gum base and fats&oils.
Food Emulsifier	Alem 621-HPY G	Mono and diglycerides of fatty acids with 45% mono content, used as emulsifier in confectionery and gum base.
Food Emulsifier	Alem 660 HM	Mono and diglycerides of fatty acids with 60% mono content, used as emulsifier in confectionery, gum base and ice-cream.
Hydrogenated Oil	Alem 02-RH G	Fully hydrogenated sunflower oil for gum base and fats&oils.
Food Emulsifier	Alem 676 PGPR-S	Polyglycerol polyricinoleate (PGPR), used with lecithin to reduce the viscoity and yield value in chocolate and compound production.
Food Emulsifier	Alem 652 UL	Mono and diglycerides of fatty acids used as lecithin replacer in bakery, chocolate and fats&oils production.
Food Emulsifier	Alem 636 NP	Non-palm based mono and diglycerides of fatty acids with 55% mono content, used as emulsifier in gum base, confectionery and ice-cream.
Food Emulsifier	Alem 675 PGE	Polyglycerol ester, special food emulsifier, used as aeration agent in cakes, bread.
Food Emulsifier	Alem 672a ACTM	Acetic acid esters of mono and diglycerides , emulsifier for margarines, ghee and gum base production.



Locally produced feed solutions for ruminants & poultry.

Product Group	Product Name	Description
Ruminant	Hyprofat Excel	By-pass fat for ruminants as energy source that improves milk yield and helps to improve or maintain fertility rates.
Ruminant	Grolux PF 50	By-pass fat for ruminants as energy source that improves milk yield and helps to improve or maintain fertility rates.
Ruminant	Glucopower	Glucopower is a perfect combination of energy and vitamin-mineral supplement, alternative energy source and healthy product for fresh cows, used as liver supporter.
Poultry	Grolux Laurik	Mid Chain Fatty Acids are growth promoter for poultry, excellent energy source and enhance the health and growth performance, ensuring a maximum meat yield. Grolux Laurik improves animal performance, feed conversion ratio (FCR), improves body weight gain and amino acid digestibility. It also improves pellet quality.

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