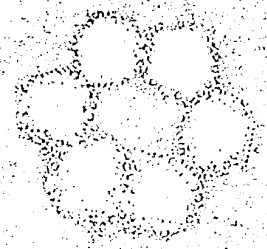
(Copies of this edn. have been recalled for correction)



PRODUCTS 1961

Monsanto

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MONSANTO CHEMICAL COMPANY

Monsanto Chemical Company is one of the largest chemical, plastics and petroleum products companies in America. The company is "basic" in phosphorus and phosphates, plastics, petroleum products and many organic chemicals . . . relying on no other company for raw materials. As a basic producer, supplies of chemicals, plastics and petroleum products from Monsanto are stable in price and the user is most assured of steady, dependable delivery.

Monsanto is organized into seven divisions, each operating in the production, sales and servicing of its own groups of products. These divisions are:

COVER DESIGN [illegible]

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the organic chemicals division

. . . with headquarters at St. Louis, Missouri, produces a wide array of chemicals for industry and agriculture. These include fine chemicals, chemical intermediates, plasticizers, agricultural chemicals, petroleum additives, resin materials, paper chemicals, functional fluids, aviation fluids, industrial fluids and rubber chemicals. The Organic Chemicals Division maintains complete research and development facilities and each department provides its customers with technical service on the products sold.

the inorganic chemicals division

. . . with headquarters at St. Louis, Missouri, maintains extensive research, manufacturing and marketing facilities to serve an increasingly broad spectrum of industry and agriculture. As the world's largest producer of elemental phosphorus, the Division markets such diverse phosphate materials as leavening agents, detergent "builders," food and feed additives. It also produces a full family of anionic and nonionic surface active agents; basic processing chemicals like sulfuric and muriatic acids; silica specialties serving paint and packaging, industrial floor wax and foundry customers; electronic chemicals including ultrapure silicon metal and intermetallic compounds. Serving agriculture are the Division's fertilizer manufacturing solutions and ready-to-use "Lion" brand nitrogen fertilizers: ammonium nitrate, urea and anhydrous ammonia.

the plastics division

. . . with headquarters at Springfield, Massachusetts, is one of the most diversified producers of resins and plastics in the country. The Plastics Division produces its own basic monomers for styrene, ethylene, vinyl and acrylonitrile polymers and copolymers and offers molders, coaters, extruders and fabricators a wide variety of plastics compositions. Among these are styrene-type plastics; phenolformaldehyde resins and plastics; melamines, cellulosics, polyethylene and vinyl butyral compositions for

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molding, coating, extruding, laminating and impregnating. Monsanto is a pioneer in compositions for safety glass inter-layer and a major supplier of polystyrene molding compounds.

the overseas division

. . . with headquarters at St. Louis, Missouri, markets all the company's products for export. All Monsanto products for overseas purchase can be obtained through this division.

the research and engineering division

. . . with headquarters at St. Louis, Missouri, offers engineering and construction facilities in the erection of vanadium-catalyst sulfuric acid plants (which can convert any primary or waste source of sulfur to acid) and De Nora Cell chlorine plants.

the lion oil company division

. . . with headquarters at El Dorado, Arkansas, engages in all phases of oil activity including exploration, production, research, manufacturing and marketing. The more than 90 Lion products include gasolines, Naturalube motor oils, paving and roofing asphalts, protective coatings and hydrocarbons for petrochemical manufacturing.

the domestic subsidiaries and affiliates division

. . . with headquarters at St. Louis, Missouri, administers Monsanto's interests in its domestic subsidiary, associated and affiliated companies.

Monsanto products are produced, sold and serviced from plants and sales offices located throughout the world. Subsidiary companies are located in Canada, Great Britain, Argentina, Australia, Japan, and Mexico.

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TRADE MARKS . . . The following index contains the major trademarks owned by Monsanto. The trade marks are enclosed by quotation marks. For some products, grade designations are listed. These are a trade the quotation marks.

In addition to the following index, Monsanto owns the trademark "Monsanto," and the black "M" design mark.

Trade-marks which are registered in the U. S. Patent Office are marked with an asterisk (*). Registered trade-marks must be identified when they appear in print. This can be done either by the statement that they are registered marks; by use of an asterisk after the trade-mark referring to the abbreviated notice, "Reg. U. S. Pat. Off.," or a footnote or the letter R enclosed within a circle, thus ®, following the mark.

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"Flectol"* H (Polymerized 1, 2-dihydro-2, 2, 4-trimethylquinoline)	Organic	47
"Santoflex"* AW (6-ethoxy-1, 2-dihydro-2, 2, 4-trimethylquinoline)	Organic	47
"Santoflex"* DD (6-Dodecyl-1, 2-dihydro-2, 2, 4-trimethylquinoline)	Organic	47
"Santoflex"* 75 (Mixture of N, N'-diphenyl-p-phenylenediamine (DPPD) 75%, and 6-dodecyl-1, 2-dihydro-2, 2, 4-trimethylquinoline (Santoflex DD), 25%)	Organic	47
"Santovar"* A (2, 5-di-tert-amyl hydroquinone)	Organic	47
"Santowhite"* Crystals (4, 4'-thiobis-(6-tert-butyl-m-cresol))	Organic	47
"Santowhite"* L (Essentially thiobis-(6-sec-amyl-o-cresol))	Organic	47
"Santowhite"* NH (Reaction product of 6-tert-butyl-m-cresol and SCl2)	Organic	47
"Santowhite"* Powder (4, 4'-butylidenebis (6-tert-butyl-m-cresol))	Organic	47
SPECIAL MATERIALS		
"Sulfasan"* R (4, 4'-dithiodimorpholine)	Organic	47
"Plastopar"* (N-Methyl-N, 4-dinitrosoaniline (33⅓%) plus Whitetex Clay (66⅔%))	Organic	47
"Insoluble Sulfur 60"*	Organic	47
Odors and Deodorants	Organic	48

SPECIALTY PRODUCTS

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ADHESIVES		
Casein and Soybean Adhesives	Plastics	48
Phenolic and Resorcinol Resins	Plastics	48
Urea and Melamine Resins	Plastics	48
ANTI-FOAMING AGENTS		
Defoamer "PC-1214"*	Organic	48
ANTIOXIDANTS		
"Santoquin"* (6 Ethoxy 1, 2-Dihydro 2, 2, 4-Trimethyl Quinoline)	Organic	48
"Sopanox"* ortho-Tolyl Biguanide	Organic	48
CURING AGENTS		
Catalysts	Plastics	49
FLAVORINGS		
"Vanillin Monsanto"* (Vanillin U.S.P.; also known as methylprotocatechuic aldehyde and 3-methoxy-4-hydroxybenzaldehyde)	Organic	49
"Ethavan"* (Ethyl Vanillin)	Organic	49
FILLERS/BODYING AGENTS		
"Santocel"* Silica Aerogel for Industrial Applications	Inorganic	49
"Santocel"* Silica Aerogel for Thermal Insulation	Inorganic	49
"Syton"* AS-30 Colloidal Silica	Inorganic	49
"Syton"* C-30 and C-30 Colloidal Silica	Inorganic	49
"Syton"* DS and DS-30 Colloidal Silica	Inorganic	50
"Syton"* Pand P-30 Colloidal Silica	Inorganic	50
"Syton"* W-200 Colloidal Silica	Inorganic	50
FUNCTIONAL FLUIDS		
"Aroclor"* Polychlorinated Polyphenyls	Organic	50
"Coolanol 45"* Dielectric Coolant for Electronic Equipment	Organic	50
"Pydraul F-9"* Functional Fluid	Organic	50
"Pydraul 60"* Functional Fluid	Organic	50
"Pydraul 150"* Functional Fluid	Organic	51
"Pydraul 625"* Functional Fluid	Organic	51
"Pydraul A-200"* Functional Fluid	Organic	51
"Pydraul AC"* Functional Fluid	Organic	51
"Skydrol 500A"* Fire Resistant Jet Aircraft Hydraulic Fluid	Organic	51
"Skydrol 7000"* Fire Resistant Aircraft Hydraulic Fluid	Organic	51
GERMICIDES/FUNGICIDES/DISINFECTANTS		
"Actamer"* (2, 2'-Dihydroxy-3, 5, 6-dichlorophenol)	Organic	51
Chloramine-T, N.F. (Also known as N-sodium-N-chloro-para-toluenesulfonamide)	Organic	51
"Monsanto Penta"* (Pentachlorophenol, Technical)	Organic	51
"Santobrite"* Sodium Pentachlorophenate, Technical	Organic	52
"Santophen"* 1 Germicide (ortho-benzyl-parachlorophenol)	Organic	52
"Santophen"* 1 Solution (75% Santophen 1, 25% isopropanol)	Organic	52
TCC (3, 4, 4'-Trichlorocarbanilide)	Organic	52
ODORANTS		
"Santomask"* H Odor-Masking Agent	Organic	52
"Coumarin Monsanto"* (Coumarin, N.F.)	Organic	52
"Vanillin Monsanto"* (Vanillin U.S.P.; also known as methylprotocatechuic aldehyde and 3-methoxy-4-hydroxy-benzaldehyde)	Organic	52
Methyl Salicylate U.S.P. (Synthetic)	Organic	53
PAINT/COATING VEHICLES		
"Santomask"* H Odor-Masking Agent	Organic	53
"Benthal"* Alkyd Resin Intermediate	Organic	53
"D.P. Solution"* (Dibutylamine Pyrophosphate)	Inorganic	53
"Mertone"* WB-4 Precoat for Reproduction Papers	Inorganic	53
SIZING AGENTS, PAPER		
"Merstze"* Paper Sizing Agent	Organic	53
SWEETENERS		
Saccharin, U.S.P. (Also known as saccharin insoluble, and ortho-sulfobenzimide)	Organic	53
Saccharin, Sodium, U.S.P. (Also known as soluble saccharin and sodium ortho-sulfobenzimide)	Organic	54
TANNING AGENTS		
"Santotan"* KR Basic Chrome Sulfate	Inorganic	54
Zinc Oxide, Technical	Inorganic	54

SURFACE ACTIVE AGENTS, DETERGENTS and ACL PRODUCTS

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ANIONIC SURFACE ACTIVE AGENTS		
DDBSA (Dodecylbenzene Sulfonic Acid)	Inorganic	54
DDBSA-94	Inorganic	54
"Santomerse"* Alkyl Aryl Sulfonates	Inorganic	54
NONIONIC SURFACE ACTIVE AGENTS		
"Sterox"* AJ	Inorganic	55
"Sterox"* AJ-100	Inorganic	55
"Sterox"* AP	Inorganic	55
"Sterox"* AP-100	Inorganic	55
"Sterox"* CD	Inorganic	55
"Sterox"* DF	Inorganic	55
"Sterox"* DJ	Inorganic	55
"Sterox"* NJ	Inorganic	55
"Sterox"* NL	Inorganic	55
"Sterox"* SK	Inorganic	55
"Sterox"* No. 6	Inorganic	55
BLEACHING COMPOUNDS		
"ACL"*	Inorganic	55

When product literature is indicated as available, address requests to:

MONSANTO CHEMICAL COMPANY
Department C
800 North Lindbergh Boulevard
St. Louis 66, Missouri

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GENERAL INFORMATION: Colloidal dispersion of silica in water. Will freeze at 32 F, and the silica is precipitated from the dilute.

USES: Anti-blocking agent in water for latex. Gives control agent in water for latex. Increases wet strength of rubber latex fibers. Increases wet strength of latex film and thread. Surface hardens water base compounding resins. Suspending agent for pigments in water systems. Mold lubricant. Binder for precision casting molds. Flame retarding agent for water-based paints.

SHIPPING INFORMATION: Colloidal Silica, liquid (NB: Freezes 30°F. Keep from freezing). 550-lb. drums.

"SYTON" DS AND DS-200 COLLOIDAL SILICA

INORGANIC DIVISION—LITERATURE AVAILABLE

GENERAL INFORMATION: Extremely fine colloidal aqueous dispersions of silica. In textile spinning: controls the slippage between fibers, thereby increasing tensile strength of spun yarns, permitting less twist in some cases, or fewer breaks during spinning and weaving. In textile finishing: controls slippage in woven rayons, gives dry worsted-like hand, delusters in higher concentrations.

USES: Spinning, wet processing and finishing textiles.

SHIPPING INFORMATION: Colloidal Silica, liquid (NB: Freezes 32°F. Keep from freezing). 550-lb. drums.

"SYTON" P AND P-200 COLLOIDAL SILICA

INORGANIC DIVISION—LITERATURE AVAILABLE

GENERAL INFORMATION: The application of an extremely fine colloidal aqueous dispersion of silica applied either by spray or roller to multiwall paper bags or most any type of paperboard boxes will materially reduce slippage between the coated surfaces. "Syton" P is proving to be the most effective anti-skid agent.

USES: For use on paper containers to make slip-resistant coatings.

SHIPPING INFORMATION: Colloidal Silica, liquid (NB: Freezes 32°F. Keep from freezing). 550-lb. drums.

"SYTON" W-200 COLLOIDAL SILICA

INORGANIC DIVISION—LITERATURE AVAILABLE

GENERAL INFORMATION: "Syton" W-200 is an extremely fine colloidal aqueous silica dispersion and is used in wax emulsions primarily to give anti-slip properties to the wax applications.

USES: For use as an anti-slip agent in wax emulsion polishing compounds.

SHIPPING INFORMATION: Colloidal Silica, liquid (NB: Freezes 32°F. Keep from freezing). 550-lb. drums.

"AROCLOR" POLYCHLORINATED POLYPHENYLS

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquids, resins or solids.

PROPERTIES: Chlorinated aromatic hydrocarbons varying from water-white mobile liquids and pale yellow viscous oils to light amber resins and opaque crystalline solids. Refractive indices above 1.625. In general are stable on long heating at 150°C.; not affected by boiling with sodium hydroxide solution. (The light oils can be distilled at atmospheric pressure without appreciable decomposition and the viscous oils and resins distill readily under vacuum.) Viscous oils and resins almost odorless and tasteless at ordinary temperatures.

GENERAL INFORMATION: Most "Aroclor" materials flux readily with resinous and pitch-like materials to give products having a decreased fire hazard. Viscous oils and resins do not support combustion when heated alone even at their boiling points - temperatures above 300°C.) All have excellent electrical characteristics, high dielectric strength and resistivity, low power factor; certain of the liquids have a high dielectric constant as compared with mineral oils. The oils and resins easily soluble in most common organic solvents and drying oils. Hard crystalline materials are, in general, less soluble in these solvents. The more volatile liquids and the lower chlorinated polyphenyls and solids are thermoplastic, apparently undergo no further condensation on prolonged heating at 150°C. and produce compounds which remain soluble in the solvents. Oxidation of hardening takes place. The oils are stable to rather low temperatures, to 250°C. or 300°C. Less than 0.01 gm. per sq. in. of surface per month.

USES: Liquid "Aroclors" are used as dielectrics for condensers or capacitors and transformers. Solid "Aroclors" are used to impregnate carbon to reduce arcing when combined with other plastic materials, the "Aroclors" are excellent sealers or impregnating agents for all types of electrical apparatus, wire coatings and tapes. "Aroclors" are used as plasticizers and resins in lacquers, including nitrocellulose, ethyl cellulose and cellulose acetate butyrate types. Used in varnish resins and oils and as plasticizers and resins in synthetics for rubber-base paints, including chlorinated rubber, styrene, butadiene and vinyls. In those protective coatings for metal, masonry and wood, "Aroclors" prevent action, resistance against moisture, acids, alkalies or other corrosive influences and also improve electrical insulating properties, durability and reduce flammability. They function as binders in waterproofing compounds, wood preservative formulations, caulking compounds and putty. Employed in synthetic sizing materials and cellulose products impregnated or laminated with asphaltic materials, the "Aroclors" plasticize the asphalt, reduce flammability and increase durability. For printing inks; in pressure sensitive tapes, gloss waxes and process wax products. Used widely in synthetic adhesives including ethyl cellulose, styrene, vinyls and rubber-base materials. "Aroclors" improve adhesion and resistance against corrosive influences. Selected liquid "Aroclors" are used as nonflammable hydraulic fluids for die-casting machines. They are used as actuating media for thermostats. "Aroclors" are useful in cutting oils as extreme pressure lubricants, as high-temperature lubricants and as grinding fluids. "Aroclor" 1248 is employed as a nonflammable, liquid-phase, heat-transfer medium for continuous operation in closed systems at temperatures up to 300 C. and at normal atmospheric pressure.

SHIPPING INFORMATION: Resin, Synthetic NOIDN without filler. 600-lb. steel drums; 200-lb. net fiber drums.

"COOLANOL 45" DIELECTRIC COOLANT FOR ELECTRONIC EQUIPMENT

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

PROPERTIES: A clear, amber liquid with dielectric, heat transfer and hydraulic properties—over a −65°F. to 400°F. temperature range.

USES: Dielectric coolant for both airborne and ground environmental electronic equipment. Also utilized in hydraulic applications in electronic equipment.

SHIPPING INFORMATION: Chemicals NOIDN, 1-qt. cans; 1-gal. cans; 5-gal. cans; 54-gal. drums.

"PYDRAUL F-9" FUNCTIONAL FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—245 SUS, 210°F.—45 SUS; moisture—0.20% max.; neutralization number (acid)—0.15 max.; sp. gr. at 25°/25°C.—1.075-1.095.

PROPERTIES: A light, amber, cloudy liquid; straight synthetic fire resistant fluid with excellent lubricity and pumping characteristics; non-corrosive, extremely stable to both heat and air; recoverable by filtration; designed for long service life.

USES: Fire resistant hydraulic fluid in die-casting machines, hydraulic presses, automatic welding machines and similar applications requiring a medium viscosity fluid.

SHIPPING INFORMATION: Hydraulic system fluids other than petroleum. 55-gal. steel drums and 5-gal. cans.

"PYDRAUL 60" FUNCTIONAL FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—60 SUS, 210°F.—34 SUS; moisture—0.25% max.; neutralization number (acid)—0.15 max.; sp. gr. at 25°/25°C.—1.089-1.094.

PROPERTIES: A clear blue, oily, straight synthetic fire resistant hydraulic fluid with excellent lubricating and pumping characteristics; highly resistant to mechanical shear and breakdown; inert to common metals of construction; an excellent fluid for low temperature operations.

USES: A fire resistant hydraulic fluid in systems requiring extremely low viscosity. Low viscosity is excellent for high speed pumps and systems [illegible] temperature applications. Suited for [illegible]

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