MONSANTO
CHEMICALS ... PLASTICS

FOR YOUR INFORMATION

Every month Monsanto publishes these pages of pertinent information which may be helpful to you. This issue discusses:

Mildew Proofing	Eliplite S-5
Ortho-Nitrochlorobenzene	Flatulence Paints
Sulfuric Acid Plant	Biological Resistance
Plasticizers	Sodium Tripoly Phosphate
Corrosion-preventing Paper	Tetra Sodium Pyrophosphate
Dessert Recipes	Phosphoric Acid

Additional information on any of these subjects will be provided by any Monsanto Sales Office in response to your request by coupon or letter.

Putting the right qualities in adhesives for bags, bottles or books

The trend is away from the old-fashioned glue pot. It's toward the modern adhesives that give efficient bonding between widely varied materials and meet the needs of high-speed machines for labeling, sealing or fabricating.

You can select the qualities you want in adhesives for bags, bottles or books by choosing a Monsanto Plasticizer. In the large family of Monsanto Plasticizers you'll find one or more to exactly fit your needs whether you're making hot-melt, tacky, nontoxic or heat-sensitive adhesives.

Monsanto Plasticizers serve in adhesives based on polyvinyl acetate, polyvinyl chloride, zein, casein, polyvinyl butyral, styrene, ethyl cellulose and polyvinylidene chloride.

When your customers call for adhesives to meet their special needs, investigate the qualities you can attain by using Monsanto Plasticizers. For information on the use of Monsanto Plasticizers, which are available for prompt delivery, contact the nearest Monsanto Sales Office or mail coupon.

MONSANTO PLASTICIZERS FOR QUALITY ADHESIVES

For Tacky Adhesives:
- Ortho-Nitrobiphenyl
- Dimethyl Phthalate
- Dibutyl Phthalate
- Santicizer* 140
- Santicizer 160
- Santolite* MHP
- Santolite MS (80%)
- Tricresyl Phosphate
- Triphenyl Phosphate

For Heat-Sensitive Adhesives:
- Diphenyl Phthalate
- Santicizer 1-H
- Santicizer 3
- Santicizer 9

For Hot-Melt Adhesives:
- Dibutyl Phthalate
- Diphenyl Phthalate
- Santicizer 160
- Santicizer 8
- Santicizer M-17

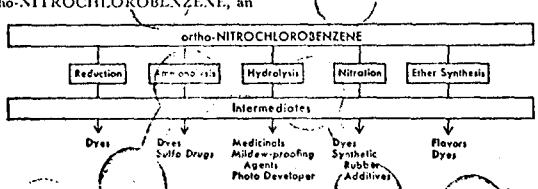
For Nontoxic Adhesives:
- Santicizer 141
- Santicizer B-16
- Santicizer E-15



Research Chemists' Corner

You may find something new here

In your research to find new products or improve your present line, it may be worth your while to take a long look at Monsanto ortho-NITROCHLOROBENZENE, an extremely versatile intermediate. The following chart illustrates its possibilities in industry:



Ortho-NITROCHLOROBENZENE has the following physical properties:

Molecular weight	157.56
Standard form	Crystalline mass
Color	Greenish yellow
Crystallizing point	31.7° C. Min.

There may be many additional uses for this versatile product. Qualified chemists who are interested in doing some research with ortho-NITROCHLOROBENZENE can get samples by contacting the nearest Monsanto Sales Office or by mailing the coupon.

Is "The Mrs." worried about the length of your belt?

You don't have to give up sweets just because your waistline is getting to the point where your wife is worried about the length of your belt. Just have her make desserts sweetened with Monsanto Saccharin. She doesn't know how? Well, mail the coupon and we'll send you a copy of the Monsanto recipe book. It contains nearly a score of recipes for delicious dishes sweetened with nonfattening saccharin.



Monsanto laboratories develop method of mildew-proofing vinyls

Monsanto Research has developed a new method of incorporating Milmer* 1 into vinyl coatings. The process, which is easy to use, permits the inclusion of Milmer 1 without crocking or blooming in calendered, plastisol, organosol and solvent coatings. It may be put into the coatings, the fabric or both.

Milmer 1 is effective in controlling mildew in both supported and non-supported vinyls.

Large quantities of Milmer 1 now go into coated fabrics for military use. It is employed in vinyl-coated duck and complies with many government specifications, including: MIL-F-4143, MIL-D-10860, KK-L-136B, 24-C-20, MIL-P-3003, MIL-F-6107, MIL-D-10799, MIL-T-10168A, MIL-P-10404, and MIL-C-5462A.

Peacetime uses of Milmer 1 in coated fabrics include tents, tarpaulins, upholstery, collapsible boats, collapsible tanks, irrigation dams and numerous others.

If you are interested in preventing mildew in vinyl coatings, sheeting or insulation, investigate the Monsanto method of using Milmer 1. You can get complete details from the nearest Monsanto Sales Office or by mailing the coupon.

Protection for metal parts

In the past, machine guns and metal parts of other military equipment shipped to Korea have been protected in transit by a heavy coating of grease. Removal of this grease has been one of the most tiresome of details . . . a detail no longer necessary, thanks to chemistry. A patented wrapper, in which Monsanto Dicyclohexylamine is used, prevents corrosion. For sources of supply, mail the coupon.

Monsanto planning to build 250-ton sulfuric acid plant

Working with Tide Water Associated Oil Company, Monsanto is planning construction of a jointly owned, 250-ton sulfuric acid plant at Avon, California. The plant

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...y the Monsanto-Ross-Wilde ...recovering water-white acid from ...eum sludge acids.

...efinery wastes, sludge and hydrogen sulfide will be piped from the adjacent Tide Water Associated Oil Company refinery. Most of the sulfuric acid produced will be piped back to the refinery where it will be used in processing aviation gasoline and other petroleum products. Any surplus will be sold to West Coast industries.

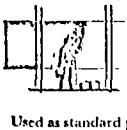
The Monsanto-Ross-Wilde process is a flexible, low-temperature method of recovering acid from refinery wastes. It recovers a high percentage of acid in the petroleum sludge, forming a gas that is higher in sulfur content than that obtained by burning elemental sulfur which now is in short supply.

If you are interested in constructing a similar plant, you may consult Monsanto Engineers without cost or obligation. For complete details, mail the coupon.

AROCLORS

IN PLENTIFUL SUPPLY

Additional capacity, now completed, makes the AROCLORS* (chlorinated biphenyl and chlorinated polyphenyls) freely available . . . Some uses of the AROCLORS are included on this page —Technical Bulletins are available dealing with structural and application data. See coupon for listing.



Pliolite S-5 and AROCLORS

Used as standard plasticizers and resin extenders, the AROCLORS contribute fast-drying properties to Pliolite S-5—provide excellent protection against acids and alkali, moisture and other common corrosive influences. Widely applied to protective and decorative coatings for concrete and steel structures, railway tank cars, concrete floors and walls, stucco construction, wood and metal marine equipment.



Maintenance paints and AROCLORS... Other applications

The destructive action of water, acids, alkali and other corrosive influences are effectively resisted by metal-surface paints that are formulated with AROCLORS. These Monsanto chlorinated biphenyl and chlorinated polyphenyls also contribute nonflammability, superior adhesion, high gloss. In addition, the AROCLORS possess *good electrical properties . . .* Besides their application to paints, the AROCLORS are used in formulating modified and synthetic rubber coatings, lacquers, hot metal strip coatings, vinyl protective coatings, adhesives, fire-resistant coatings, wood-sealer formulations, marine paints.



Biological resistance and AROCLORS

In recent tests, Monsanto AROCLORS exhibited distinct resistance to fungi and bacteria. The presence of this resistance in AROCLORS indicates that further study of these commonly used plasticizers can prove highly interesting wherever various types of organism attacks are encountered. Excellent repellency of termites and other soil mites is another AROCLOR feature.

ASK FOR AROCLOR LITERATURE

Contact any Monsanto District Sales Office, or write direct, for any of the following Technical Bulletins — No. P-115, "THE AROCLORS" . . . No. P-124, "AROCLORS as used in chlorinated rubber" . . . No. P-126, "AROCLORS as used in Pliolite S-5" . . . No. P-131, "AROCLORS as co-plasticizers for polyvinylchloride."



Sequestering action and water-softening power of Monsanto Phosphates

The sequestering action of Monsanto phosphates—inactivation of calcium and magnesium water hardness—is a significant property of both Monsanto Sodium Tripoly Phosphate (STP) and Tetra Sodium Pyrophosphate (TSPP) . . . In detergent and cleaning operations, these Sodium Phosphates combine with the calcium and magnesium ions present in hard water. They form complexes with these ions — the complexes remain soluble in water, but will not react with other substances to form insoluble precipitates . . . They have the ability to regenerate or re-dissolve insoluble calcium and magnesium soaps. This property is of value where clothes containing a residue of insoluble curds are agitated in a solution of STP or TSPP. Fabrics are restored to their original clean condition.



Peptizing value of Monsanto Phosphates

An outstanding property of Monsanto TSPP is its peptizing value—that is, the ability to keep small particles of solids suspended in a water solution. This suspension action *prevents the re-deposition* of removed soil during the cleaning and rinsing cycle.

MONSANTO PHOSPHORIC ACID

Monsanto supplies phosphoric acid of high purity in concentrations of 75% and 85% H_3PO_4. 75% phosphoric acid is available in tank cars, stainless steel drums, barrels and carboys and meets Food Grade specifications. 85% phosphoric acid is available in stainless steel drums and carboys and meets N. F. specifications.

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MONSANTO CHEMICAL COMPANY, 1700 S. Second Street, St. Louis 4, Missouri. District Sales Offices: Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle. In Canada, Monsanto Canada Limited, Montreal.

*Reg. U. S. Pat. Off.

MONSANTO

SERVING INDUSTRY...WHICH SERVES MANKIND

SEND INFORMATION: ☐ Plasticizers for Adhesives. ☐ Mildew-proofing vinyls. ☐ Sulfuric acid plant designs. ☐ Corrosion-preventing paper.

SEND LITERATURE: ☐ Saccharin recipe book. Technical Bulletins ☐ No. P-115, "THE AROCLORS" ☐ No. P-124, "AROCLORS as used in chlorinated rubber." ☐ No. P-126, "AROCLORS as used in Pliolite S-5" ☐ No. P-131, "AROCLORS as co-plasticizers for polyvinylchloride."

SEND SAMPLE: ☐ Ortho-Nitrochlorobenzene.

MONSANTO CHEMICAL COMPANY
1700 South Second Street, St. Louis 4, Missouri

Please send, without cost or obligation, information, literature or samples as indicated at left.

Name.....Title.....

Company.....

Street.....

City.....Zone....State.....

mistry, May; Chemical Week, May 10; Chemical & Engineering News, May 26, 1952.

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