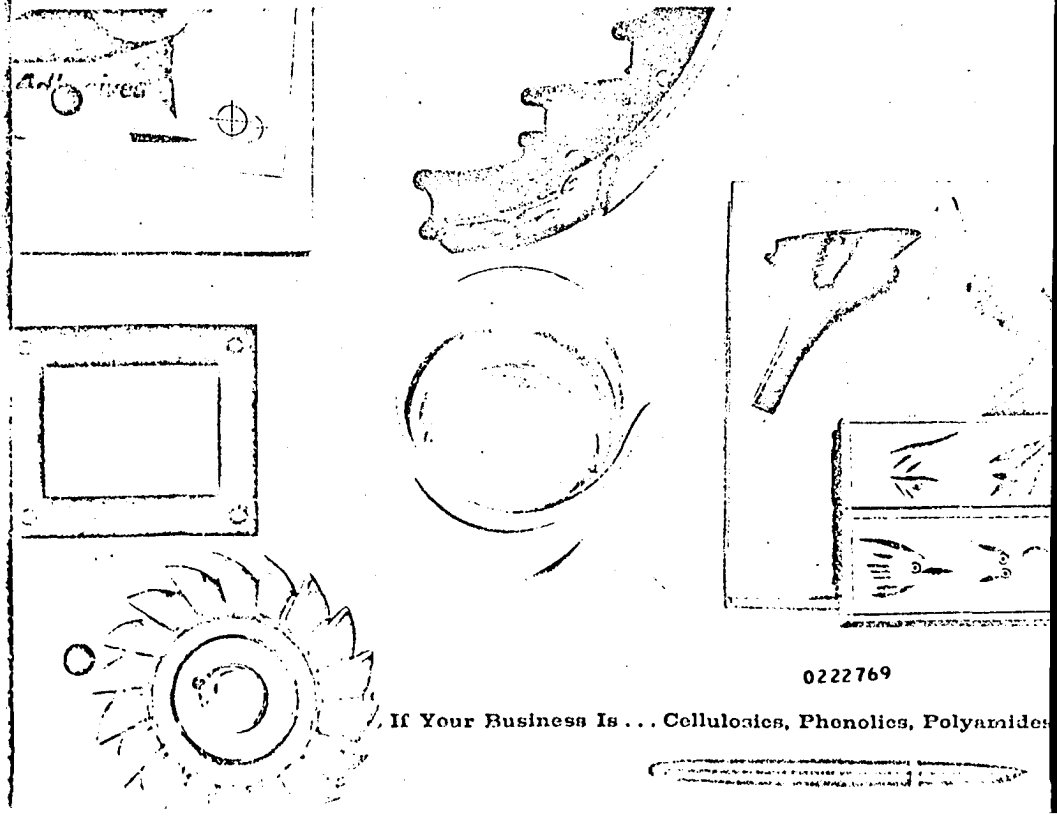
# Product-Building for Profits with Monsanto Plasticizers

Your choice of plasticizers can be equally or more important than your resin selection. The right plasticizer, or combination of plasticizers, can help speed up production and cut your manufacturing costs. And it can substantially improve the quality of finished products.

Monsanto is America's most diversified supplier of plasticizers . . . manufacturer of SEVEN BASIC TYPES including almost FIFTY different plasticizers . . . YOUR BEST SOURCE for the widest selection of raw materials.

To reduce your raw material costs, call on Monsanto for *mixed shipment of plasticizers at "bulk" prices.* And call on Monsanto for *expert technical guidance*—practical formulating know-how for vinyls, cellulosics, styrene, phenolics, melamines, ureas, epoxies.

FOR FORMULATING INFORMATION on new products—or on improving established formulations—be sure to contact your Monsanto representative immediately. He can offer you "Plasticizers Council Service"—established by Monsanto to help you solve formulating problems quickly and at maximum profit to you.



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If Your Business Is . . . Cellulosics, Phenolics, Polyamides

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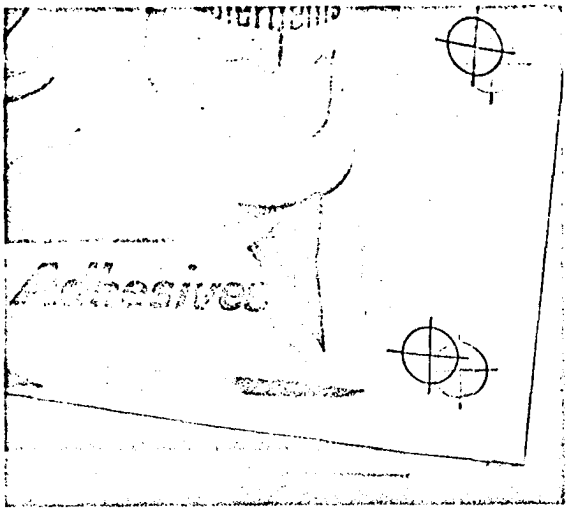
# *You can build product quality, reduce costs with . . .*

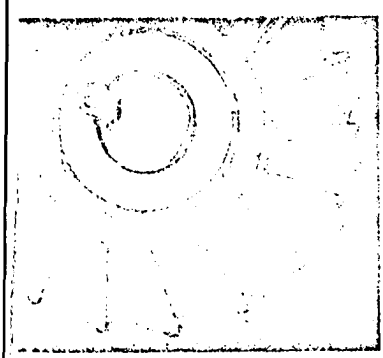
## *for Cellulosics . . .*

### Higher Dimensional Stability for Acetate Sheeting

**High dimensional stability** is a must for acetate sheets used for preparing color-separation overlays for printing. If the sheets change dimensions before or during the making of engravings, final reproduction on the printed page will turn out "blurred"—or, as printers put it, "out of register." And remaking engravings can be both annoying and costly.

Santicizer M-17 is a *quality* plasticizer for cellulose acetate. Volatility is *low*—moisture resistance is *high*. These are main features contributing to excellent dimensional stability in the finished sheeting.





### Lower-Cost Ethyl Cellulose Hot-Melt Coatings

**Aroclor plasticizers** (chlorinated polyphenyls) reduce *both* formulating and manufacturing costs for ethyl cellulose processors. They are excellent low-cost "extenders" for the higher-cost resins. And their high compatibility with ethyl cellulose speeds up processing.

You can use the liquid-form Aroclors to build high *flexibility* in hot-melt coatings. The solid-form Aroclors increase *strength* and *hardness*.

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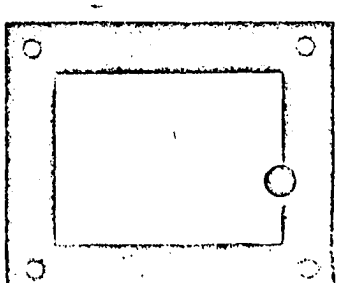
### "Shatterproof" Punching Laminates

**Santicizer 160** in phenolic laminating formulations helps build laminates that "take to" punching easier. It speeds up the punching operation, eliminates shattering around the punch holes, assures cleaner cuts. You turn out laminates that *win more customer approval.*

*Punched laminates courtesy of Century Electric Company.*



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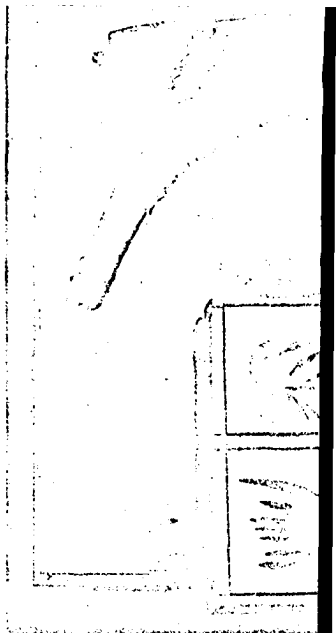
# . . *Monsanto Plasticizers*



### Special Properties for Nitrocellulose Specialty Coatings

**Monsanto offers** a wide selection of plasticizers for controlling cost and performance of nitrocellulose coatings. Here are a few examples:

**Higher Scuff Resistance** . . . Aroclor 1254 builds *hardness* and *toughness* in nitrocellulose films—especially important in heel lacquers that must keep their good looks even when exposed to hard knocks, continual scuffing and abrasion.

**Flame Retardance** . . . Monsanto phosphate plasticizers such as Santicizer 140 contribute higher flame retardance to nitrocellulose coatings. This is important in many home and industrial uses.

**Better Adhesion . . . Better Looks** . . . Santolite MHP not only increases *adhesion*—it also improves *brilliance* and *gloss*. Its high *moisture resistance* helps eliminate danger of "water-spotting" of the finish.

You can use Santolite MHP to increase *solids content* of lacquers without changing viscosity. Your customers will like this feature—it means that they can apply heavier films in fewer coats—a real cost-saver.



## *for Phenolics . . .*

### More Uniform Dispersing of Fillers

**Santicizer 9 features high solvation.** In phenolics, it helps disperse fillers (like asbestos) more uniformly. In compression or transfer molding formulations, it improves *flow* and cuts down molding cycles. Results: better product quality and lower costs.

## *for Polyamides . . .*

**Quality "Extender" for Nylon** . . When you "extend" nylon (or other polyamides) with Santicizer 8, you get much more than reduced raw material costs. *Santicizer 8 reduces the melting points of polyamides.* This is especially important in injection molding because it cuts molding costs. And Santicizer 8 increases *flexibility* and *toughness* in polyamides.

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# Monsanto Plasticizers

**Phthalates**
Dibutyl phthalate
Diethyl phthalate
Dimethyl phthalate
Diphenyl phthalate
Dioctyl phthalate
Diisooctyl phthalate
Di-n-octyl-n-decyl phthalate
Diisodecyl phthalate
Santicizer* 160
Santicizer 213
Santicizer 214
Santicizer 602
Santicizer 603
Santicizer 606
Santicizer 611
Santicizer 613

**Adipates**
Diisodecyl adipate
Dioctyl adipate

**Phosphates**
Tricresyl phosphate
Triphenyl phosphate
Santicizer 140
Santicizer 141

**Phthalyl Glycolates**
Santicizer E-15
Santicizer B-16
Santicizer M-17

**Sulfonamides**
Santicizer 1-H
Santicizer 3
Santicizer 8
Santicizer 9

**Sulfonamide Resins**
Santolite* MHP
Santolite MS-80%

*Reg. U. S. Pat. Off.

**Specialties**
HB-40*
HB-20*
Santowax* R
Aroclor* 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Aroclor 2565
Aroclor 4465
Aroclor 5442
Aroclor 5460

## Building a "new" formulation, re-evaluating an "old" formulation?

... Fill out the "Plasticizers Council" card (below) and send it to Monsanto. Your inquiry will receive immediate attention from Monsanto Research and Technical Service teams.

MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, Dept. PL-4, Box 478, St. Louis 1, Missouri

MONSANTO

**Please fill in all information that applies to your operation**

**Base resin now using (including brand name)**_____

**Fabrication method:**
Extrusion_____ Calendering_____
Injection Molding_____ Fabric Coating_____
Plastisol_____ Surface Coating_____
Adhesive_____ Other (please indicate)_____

**Brief description of end-product and production method**

_____

_____

_____

**Important end-product properties**

Specific gravity_____
Tensile strength_____
Elongation_____
Volatility, % weight_____
% plas._____

Low temp. flex and method_____
Light stability____hrs. Weatherometer
____hrs. Fadeometer
Special properties_____
Raw material cost_____¢ lb.

Shore hardness_____
100% modulus_____
Heat stability_____minutes at_____°C.

**General notes**_____

_____

_____

I would like to have more information on reducing costs through purchasing plasticizers in bulk or combined shipments. I currently purchase the following plasticizers:_____

_____

NAME_____ TITLE_____
FIRM_____
ADDRESS_____

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