



PRODUCTS

0557533

LEXOLDMON004938

TRADEMARKS. The word Monsanto and the Monsanto block M are Monsanto's registered trademarks and are registered in the U. S. Patent Office. The following index contains other trademarks owned by Monsanto. Trademarks which are registered in the U. S. Patent Office are marked with an asterisk (*).

ALPHABETICAL PRODUCT INDEX

A

A-1 Thiocarbamide (Rubber Chemical).....	43
A-32* (Rubber Chemical).....	42
Accelerator H (Rubber Chemical).....	42
Acetate, Vinyl.....	42
Acetophenetidin U.S.P.....	19
Acetylene.....	42
Acids and Anhydrides (Carboxylic).....	14 and 15
ACL.....	23 and 41
Acrylonitrile.....	23 and 41
Actamer*.....	46
Adhesives.....	44
Adipic Acid.....	14 and 34
Agricultural Chemicals.....	7-10
Aircraft Hydraulic Fluids.....	11 and 12
Alcohol, Methyl.....	54
Alkylate 122 (Dodecyl Benzene).....	17, 48 and 54
Alkylate 199 (Alkyl Benzene).....	54
Alkophos* (Aluminum Acid Phosphates).....	27
Alkyl Acid Phosphates.....	27
Alkyl Aryl Phosphate (Santizer* 141).....	40
Alkyl Aryl Sulfonates (Santomere*).....	21 and 53
Alkyl Benzene (Dodecylbenzene).....	24
Alkyl Benzene (Tridecylbenzene).....	24 and 54
Alkyl Phenol (Dodecylphenol).....	21, 24 and 54
Alkyl Phenol (Nonylphenol).....	21, 24 and 54
Alkylamine C-12 (Dodecylamine).....	16
Aluminum Acid Phosphates (Alkophos*).....	27
Aluminum Chloride Solution 32% H ₂ O.....	13
Aluminum Sulfate Commercial Dry.....	50
Aluminum Sulfate Commercial Liquid.....	51
Aluminum Sulfate Iron Free.....	51
a-Methyl Styrene.....	15-17

Amines	15-17
Ammonia, Anhydrous.....	8
Ammonia, Aqueous.....	8
Ammonium Nitrate Fertilizer E-2* Pellets.....	8
Ammonium Nitrate Fertilizer Pellets.....	8
Ammonium Nitrate 37% Solution.....	8
Ammonium Phosphate, di.....	25
Ammonium Phosphate, ethyl.....	25
Ammonium Phosphate, mono.....	25
Ammonium Phosphate, triethyl.....	25
Anhydrous Monocalcium Phosphate (Ty-Ran*).....	25
Anionic Surface Active Agents	53
Anisidine (ortho).....	15
Anisidine (para).....	16
Anti-Caking Flow Conditioners	45
Anti-Foaming Agents	45
Antioxidants	46
Anti-Slip and Anti-Soil Agents	45 and 46
Arcelor* Compounds.....	35
Arcelor* Fluids.....	11
Arcelor* Polychlorinated Polyphenyls.....	17
Aromatic, Heavy Solvent.....	17
Aromatic Tars, Petroleum Residuals.....	19
Aspirin.....	9
Avindex*.....	9
Avindex* BW.....	9

B

Bantex* (Zinc MBT) Rubber Chemicals.....	41
Battery Acid (Electrolyte).....	13
Benthaf* Alkyl Resin Intermediate.....	49

*Registered Trademark Monsanto Chemical Company

This product was added too late to include detailed product copy. For information write:

MONSANTO CHEMICAL COMPANY
Monsanto Service, P. O. Box 117
P. O. Box 117, St. Louis, Mo.

Benzene.....	15
Benzoin Acid.....	15
Benzyl Benzate.....	16
Benzyl Chloride.....	18
Benzyl Chloride, Stabilized.....	18
Biphenyl (Diphenyl and Phenylbenzene).....	23
Bisphenol A.....	20
Bisphenol A—Hydrogenated.....	24
Bleaching Compounds	54
Bone Ash.....	49
Brush-Blitz.....	10
Brush Killers	10
Brush-O-Cide.....	10
Butadiene.....	10
Butene-2.....	10
Butenes, Mixed.....	10
Butyl Benzyl Phthalate (Santizer* 160).....	38
Butyl Decyl Phthalate (Santizer* 603).....	38
Butyl Phthalate Butyl Glycolate (Santizer* B-16).....	40

C

Caffeine.....	20
Calcium Phosphates	25
Calcium Pyrophosphate.....	25
Calcium Silicate (Slag).....	14
Carbolic Acid (Phenol).....	21
Carbon Dioxide.....	13
Casein and Soybean Adhesives.....	44
Catalysts	49
Caustic Potash.....	14
Cellulose Acetate (Vupak*).....	34
Cellulosic Resins/Plastics	34
Chemical Specialty Catalysts	47
Chloramine-T, N.F.....	18 and 46
Chloroaniline, meta.....	16
Chloroaniline, ortho.....	16
Chloroaniline, para.....	16
Chloroaniline, ortho, para.....	20
Chlorophenol, para.....	20
Chlorosulfonic Acid.....	21
Coal Tar Resins	34
Colloidal Silicas (Sylon*).....	45 and 46
Compressor Lubricant (Hydral* AC).....	12
Coolanol* 35.....	11
Coolanol* 45.....	11 and 12
Coumarin.....	49
Cresyl Diphenyl Phosphate (Gasoline Grade).....	27
Crop-Guard.....	9
Curing Agents	48
Cyclohexanol.....	24
Cyclohexylamine.....	16

D

2,4-D Amine.....	9
2,4-D Butyl Ester.....	9
2,4-D Butyl Ester Concentrate.....	9
2,4-D Ester Aerial Emulsifiable.....	9
2,4-D Granular.....	9
2,4-D Isopropyl Ester.....	9
2,4-D Low Volatile Ester.....	9
2,4-D 2,4,5-T Butyl Ester.....	10
2,4-D 2,4,5-T Low Volatile Ester.....	10
DBSA—Dodecylbenzene Sulfonic Acid.....	21 and 53
DBSA-94.....	22 and 53
Defoamer PC-1344.....	45
Defoamer PG-1344.....	28, 45 and 50
Detergent Intermediates	54
Di Ammonium Phosphate.....	25
Dibutyl Fumarate.....	34
Dibutyl Maleate.....	34
Dibutyl Phthalate.....	36
Dibutylamine Pyrophosphate (D.P. Solution*).....	50
Dicalcium Phosphate Anhydrous.....	25
Dicalcium Phosphate Dihydrate.....	25
Dicalcium Phosphate, Feed Grade.....	7 and 25

0557534

3,4-Dichloroaniline (3,4-DCA)	16
Dichlorobenzene, ortho	18
2,4-Dichlorophenol	20
Dicyclohexyl Phthalate (DCHP)	36
Dicyclohexylamine	36
Dielectric Coilant for Electronic Equipment	11 and 12
(Coolant)* (5)	36
Diethyl Phthalate	36
Di-2-Ethylhexyl Adipate (DOA)	35
Di-2-Ethylhexyl Phthalate (DOP)	36
Dihydroxy Diphenyl Sulfone	20
Diisooctyl Adipate (DIDA)	36
Diisooctyl Phthalate (DIDP)	36
Diisooctyl Phthalate (DIOP)	37
Diisopropyl Benzene†	27
Dimethyl Phthalate	37
Di-N-Octyl, N-Decyl Adipate (DNODA)	36
Diphenyl (diphenyl or Phenylbenzene)	23
Diphenyl Phthalate	37
Diphenylguanidine Phthalate (Guantal)*	42
Rubber Chemical	42
Disodium Phosphate, Anhydrous	26
Disodium Phosphate, Dihydrate	26
Dodecylamine	16
Dodecylbenzene (Alkyl Benzene)	24
Dodecylphenol-Alkyl Phenol	21, 24 and 54
Domes (Geospace Utility Shelter)	7
DPG (Diphenylguanidine)	42
D.P. Solution* (Dibutylamine Pyrophosphate)	50
DX-840 Resins	35
Dyrol* (Paint Brush Preserver)	37

E

E-2* Pellets (Ammonium Nitrate Fertilizer)	8
El-Sky* (Rubber Chemical)	41
Elstopar* (Rubber Chemical)	44
Electronic Materials	11
Elvax (Ethyl Vanillin)	17 and 48
Ethyl Ammonium Phosphate	25
Ethyl Benzene†	22
Ethyl PCT	22
Ethyl Phthalyl Ethyl Glycolate (Santizer* E-15)	39
Evores* Sodium Acid Pyrophosphate	26
Extruding and Calendaring Material (Lustrex*)	31

F

Farm Chemicals	7-11
Feed Supplements	7 and 8
Ferrophosphorus (Iron Phosphide)	28
Fertilizers	8 and 9
Field-Clean	9
Flattig Agents	48
Flavorings	17 and 48
Flectol* H (Rubber Chemical)	43
Formaldehyde	24
Formaldehyde Resins	35
Frut Spar (Stop Sealer)	10
Fuel Oil Additives (Santolene*)	29
Fumaric Acid	15
Functional Fluids	11, 12 and 13
Fungicides	9

G

Gallium Arsenide (Electronic Grade)	11
Gear Oil Additives (Santobond*)	30
Geospace Utility Shelter (Domes)	7
Glassy Sodium Phosphate (Gulf)	27
Guantal* (Diphenylguanidine Phthalate) Rubber Chemical	42

*Registered Trademark Monsanto Chemical Company

†This product was added too late to include detailed product copy. For information write:

MONSANTO CHEMICAL COMPANY
Marketing Service Dept.

800 So. Main Street, P.O. Box 68, Mo.

H

H Acid	15
Halogen-Containing Compounds 17, 18 and 19	
HB-20* Partially Hydrogenated Alkyl-Aryl Hydrocarbon	37 and 41
HB-40* Partially Hydrogenated Terphenyl	37
Heavy Aromatic Solvent	37
Heavy Chemicals	13 and 14
Herbicide Oil No. 1	9
Herbicide Oil Nos. 6 and 7	9
Herbicides	9 and 10
H. T. Monocalcium Phosphate (Spray Dried)	25
Hydraulic Fluids	11 and 12
Hydrochloric Acid (Hydro Acid)	14
Hydrogenated Bisphenol A	24

I

Indium Arsenide—Electronic Grade	11
Indium Phosphate—Electronic Grade	11
Insecticides	10
Insoluble Sulfur 60	44
Iron Phosphide (Ferrophosphorus)	28
Isobutene†	31
Isocetyl Isocetyl Phthalate (Santizer* 602)	38

L

Lamphack	50
Lustran* Molding and Extruding Compound	30
Lustrex* Extruding and Calendaring Material	31
Lustrex* Styrene Molding Compound	30
Lytion* Surface Coating Resin	31
Lytion* Synthetic	31
Lytion* Textile Resin	31

M

Maleic Anhydride	15, 35 and 50
MCP Amine	9
Melamine Formaldehyde (Serpente* 320)	51
Melamine Resins	33
Melamine-Urea Resins	44
Mersize* (Paper Sizing Agent)	51
Mertax* (MITY 2-methyl-2-propanol)	42
Mertone* WB-1 Precoat for Reproduction Papers	50
Meta-Chloroaniline	16
Metal Processing Compounds	49
Methanol	24
Methacrylene Fumarate (Thenylpyramine Fumarate)	20
Methacrylene Hydrochloride (Thenylpyramine Hydrochloride)	20
Methionine Hydroxy Analogue (MHA)*	7
Methyl Alcohol†	28 and 29
Methyl Diphenyl Phosphate (Therane MDP)	10
Methyl Parathion	22
Methyl PCT	39
Methyl Phthalyl Ethyl Glycolate (Santizer* M-17)	17
Methyl Salicylate	49
Methyl Salicylate U.S.P.	17 and 48
Methyl Salicylate U.S.P. Synthetic	22
Methyl Styrene-ol	14
Methyl Toluenesulfonate	37
Mixed Acid (Nitramine Acid)	25
Mod-Epoxy	15
Mono Ammonium Phosphate	15
Mono Thionol* (Rubber Chemical)	15
Monochlorophthalic Anhydride	14
Monomers for Synthetic Rubber	14
Monosodium Phosphate	26
Monosodium Phosphate	7 and 26
Monsanto Penta* Pentachlorophenol Technical	19, 47 and 52
Monsanto Polyethylene* Extruding and Calendaring Material	42

0557535

Monsanto Polyethylene* Molding Compounds.....	32
Montair* Lubricants.....	37
Montur* Synthetic Emulsions.....	34
Muriatic Acid (Hydrochloric Acid).....	14

N

Naphthalene*.....	49
NH ₃ * 80 and 85 (Non-Fuming Brightener).....	49
Niran*—Parathion.....	10
Nitric Acid.....	14
Nitroaniline—ortho.....	16
Nitrochlorobenzene—ortho.....	18
Nitrochlorobenzene—para.....	18
Nitrogen Fertilizer Solutions.....	8
Nitrophenol—para.....	21
Nonionic Surface Active Agents	53 and 54
Nonylphenol—Alkyl Phenol.....	21, 24 and 54
Nutrium*.....	8

O

Odorants	49
Oil Additives (Santolube*).....	29 and 30
Olifos* Glassy Sodium Phosphate.....	27
Oleum.....	13
Opalon* Vinyl Chloride Extrudate & Calcium Hydroxide Material.....	31
Opalon* Vinyl Chloride Molding Compounds.....	31
Ortho-Anisidine.....	15
Ortho-Chloroaniline.....	16
Ortho-Chlorophenol.....	20
Ortho-Dichlorobenzene.....	18
Ortho-Nitroaniline.....	16
Ortho-Nitrochlorobenzene.....	18
Ortho-Phenetidine.....	17
Ortho-Tolyl Hexanide (Sopanox)*.....	46
Orthophosphoric Acid (Phosphoric Acid).....	7 and 14
OS-45* Type III High Temp. Aircraft Hydraulic Fluid.....	11 and 12
OS-45* Type IV High Temp. Aircraft Hydraulic Fluid.....	11 and 12

P

Paint/Coating Ingredients	49 and 50
Paper Chemicals	50 and 51
Paper Sizing Agent (Mersize*).....	51
para-Anisidine.....	16
para-Chloroaniline.....	16
para-Chlorophenol.....	20
para-Dichlorobenzene (Santochlor*).....	10 and 19
para-Nitroaniline.....	16
para-Nitrochlorobenzene.....	18
para-Nitrophenol.....	21
para-Phenetidine.....	17
para-Toluenesulfonamide.....	22
para-Toluenesulfonyl Chloride.....	22
Parathion—Niran*.....	10
PC-1241.....	45
PC-1341.....	28, 45 and 50
Pentachloronitrobenzene (PCNB).....	9
Pentachlorophenol, Technical (Monsanto Penta*).....	19, 47 and 52
Pentones, Mixed*.....	27
Petrofos* Sodium Tripolyphosphate.....	27
Petroleum Residuals, Aromatic Tars*.....	28, 29 and 30
Petroleum Additives	28, 29 and 30
Pharmaceuticals	19 and 20
Phenacetin (Acetophenetidin U. S. P.).....	19
Phenetidine—ortho.....	17
Phenetidine—para.....	17
Phenol (Carbolic Acid).....	21
Phenolic and Resorcinol Resins.....	44
Phenolic Resins (Resinox)*.....	33
Phenolic Varnishes (Resinox)*.....	33
Phenolphthalein.....	20
Phenolsulfonic Acid.....	21
Phenylbenzene (Diphenyl).....	23

*Registered Trademark Monsanto Chemical Company

(This product was added too late to include detailed product copy. For information write:

MONSANTO CHEMICAL COMPANY
Marketing Services Dept.
800 No. Lindbergh Blvd., St. Louis 66, Mo.

Phosphate Feed Solution.....	7
Phosphate Fertilizer Solution.....	8
Phospholeum*.....	9 and 26
Phosphoric Acid (75, 80 and 85%).....	7 and 14
Phosphoric Acid (Orthophosphoric Acid).....	7 and 14
Phosphoric Anhydride (Phosphorus Pentoxide).....	11 and 28
Phosphorus Elemental.....	28
Phosphorus Oxysulfide.....	28
Phosphorus Pentasulfide.....	28
Phosphorus Pentoxide (Phosphoric Anhydride).....	11 and 28
Phosphorus Trichloride.....	28
Phostane XDP (Methyl Diphenyl Phosphate).....	23 and 29
Phthalic Anhydride.....	15, 35 and 50
Phthalyl Chloride.....	19
Plasticizers	35-38
Plastics/Resins/Plasticizers	30-41
Polyethylenes	32
Potassium Phosphates	26
Preservatives — Feed, Grain and Fruit	10
Propylene*.....	12
Pydraul* AC Compressor Lubricant.....	12
Pydraul* Hydraulic Fluids.....	12 and 14
Pv-Run* Anhydrous Monocalcium Phosphate.....	25

R

R-2 Crystals (Rubber Chemical).....	42
Randox*.....	9
Randox* T.....	9
Resinene*.....	33
Resinene* Melamine.....	33
Resin Oils, Petroleum.....	33
Resinox*.....	33
Resinox* Liquid Phenolic Resins.....	33
Resinox* Phenolic (Lump and Resins Compound).....	33
Resinox* Phenolic Varnishes.....	33
Resloom* E-50.....	33 and 52
Resloom* Essentially Monomeric Melamine.....	33
Resorcinol and Phenolic Resins.....	44
Rorue*.....	9
Rubber Chemicals	41-44
RZ-50A* (Rubber Chemical).....	42
RZ-50B* (Rubber Chemical).....	42

S

Saccharin.....	48 and 51
Saccharin, U. S. P.....	48 and 51
Saccharin, Sodium.....	7
Saccharin, Sodium U. S. P.....	48 and 52
Safex* Vinyl Butyral.....	32
Sulfuric Acid.....	15
Salt Cake (Sodium Sulfate, Anhydrous, Technical).....	13
Santificer 1-H Plasticizer.....	22 and 39
Santificer 3 Plasticizer.....	23 and 39
Santificer 5 Plasticizer.....	23 and 39
Santificer 9 Plasticizer.....	39
Santificer E-15 Plasticizer.....	39
Santificer B-16 Plasticizer.....	40
Santificer M-17 Plasticizer.....	40
Santificer 140 Plasticizer.....	40
Santificer 131 Plasticizer.....	40
Santificer 160 Plasticizer.....	38
Santificer 165 Plasticizer.....	40
Santificer 213 Plasticizer.....	40
Santificer 214 Plasticizer.....	40
Santificer 400 Plasticizer.....	40
Santificer 602 Plasticizer.....	38
Santificer 603 Plasticizer.....	38
Santificer 610 Plasticizer.....	41
Santificer 631 Plasticizer.....	41
Santificer 636 Plasticizer.....	41
Santobrite* (Sodium Pentachlorophenate, Technical).....	47
Santocel* (Silica Aerecel for Industrial Applications).....	45
Santocel* (Silica Aerecel for Thermal Insulation).....	45
Santochlor* (para-Dichlorobenzene).....	10 and 19

0557536

Santocure® (Rubber Chemical).....	41
Santocure® 25 (Rubber Chemical).....	41
Santocure® N5 (Rubber Chemical).....	41
Santoflex® AW (Rubber Chemical).....	43
Santoflex® DD (Rubber Chemical).....	43
Santoflex® 75 (Rubber Chemical).....	43
Santoflex®.....	43
Santoflex® C (Fuel Oil Additive).....	29
Santoflex® FC (Fuel Oil Additive).....	29
Santoflex® II-LV (Fuel Oil Additive).....	29
Santoflex® J (Fuel Oil Additive).....	29
Santolite® MHP.....	23
Santolite® MHP Industrial Resin.....	34
Santolite® MS 89% Industrial Resin.....	23 and 34
Santolube® 70 (Oil Additive).....	29
Santolube® 203-C (Oil Additive).....	29
Santolube® 313 (Oil Additive).....	29
Santolube® 392 (Oil Additive).....	29
Santolube® 393 (Oil Additive) Zinc Diakyl Dithiophosphate.....	29
Santolube® 394-C (Oil Additive).....	29
Santolube® 395-X (Oil Additive).....	29
Santolube® 401 (Oil Additive).....	30
Santolube® 410 (Oil Additive).....	30
Santomask® II Odor-Masking Agent.....	49 and 50
Santonox® Alkyl Aryl Sulfonates.....	21 and 53
Santonox®.....	23 and 47
Santonox® R.....	38
Santophen® 1 Germicide.....	19 and 47
Santophen® 1 Solution.....	19 and 47
Santopold® 22-R1—Gear Oil Additive.....	30
Santopold® 23-R1—Gear Oil Additive.....	30
Santopold® 33—Gear Oil Additive.....	30
Santopold® 35—Gear Oil Additive.....	30
Santopold® S—Gear Oil Additive.....	30
Santopour® C—Oil Additive.....	30
Santoquin® and Santoquin® Mixture No. 6.....	7 and 46
Santosulf®—Sodium Sulfite Anhydrous Technical.....	13
Santotran® KR Basic Chrome Sulfate.....	52
Santovar® A (Rubber Chemical).....	43
Santowhite® Crystals (Rubber Chemical).....	43
Santowhite® L (Rubber Chemical).....	43
Santowhite® NK (Rubber Chemical).....	43
Santowhite® Powder (Rubber Chemical).....	43
Scriptet®.....	51
Scriptet® 330—Melamine Formaldehyde.....	51
Scriptet® 400—Urea-Formaldehyde.....	51
Silica Acetox for Industrial Applications (Santocel®).....	45
Silica Aerogel for Thermal Insulation (Santocel®).....	45
Silicon—Electronic Grade.....	11
Skydrol® 500-A (Fire Resistant Jet Aircraft Hydraulic Fluid).....	12
Skydrol® 7000 (Fire Resistant Aircraft Hydraulic Fluid).....	12
Slaz, Calcium Silicate.....	14
Sodium Acid Pyrophosphate (Exergic®).....	26
Sodium Benzozate.....	24
Sodium Disulfate (Nitro Cake).....	13
Sodium Disulfite Anhydrous.....	51
Sodium Hexametaphosphate.....	27
Sodium meta-Nitrobenzene Sulfonate.....	23
Sodium Pentachlorophenate, Technical (Santobrite®).....	47
Sodium Salicylate, U.S.P.....	20
Sodium Sulfite Anhydrous Technical.....	13
Sodium Sulfite Anhydrous.....	51
Sodium Tripolyphosphate.....	27
Sopanol®—ortho Tolylic Ricinamide.....	46
Soybean and Casein Adhesives.....	24
Sq Phosphate.....	27
Stabilized Methyl Parathion.....	10
Sterox® AJ—A-I-100.....	53
Sterox® AP—AP-100.....	53
Sterox® CD.....	53
Sterox® DP.....	53
Sterox® DJ.....	53
Sterox® NJ.....	53
Sterox® NL.....	54
Sterox® SK.....	54
Sterox® No. 6.....	54
Stop-Seal® Fruit Spray.....	10
Styrene Molding Compound (Lustrex®).....	30
Styrene Monomer.....	24 and 41
Styrene®, Vinyl Styrene.....	31, 32 and 52

Sulfuran® R (Rubber Chemical).....	43
5-Sulfosalicylic Acid, Technical.....	15
Sulfur Dioxide, Liquid.....	14
Sulfuric Acid and Slurries.....	13
Surface Coating Resins (Istrex®).....	31
Syton® AS-200 (Colloidal Silica).....	45
Syton® C-30 and 290 (Colloidal Silica).....	46
Syton® DS and DS-200 (Colloidal Silica).....	46
Syton® P and P-200 (Colloidal Silica).....	46
Syton® W-200 (Colloidal Silica).....	46

T

2,4,5-T Ester.....	10
2,4,5-T Low Volatile Ester.....	10
Tanning Agents.....	52
TCO 64.4 Trichlorocarbunilide.....	19 and 17
Tertbutyl-Butyramine.....	16
Tetrapotassium Pyrophosphate.....	27
Tetrasodium Pyrophosphate.....	27
Textile Chemicals.....	52
Textile Resin (Istrex®).....	31
Thienylamine Fumarate (Methaprilene Fumarate).....	20
Thienylamine Hydrochloride (Methaprilene Hydrochloride).....	20
Thiodex® (MBTS) Rubber Chemical.....	42
Thiodex® (MBT) Rubber Chemical.....	42
Thiodex® (Rubber Chemical).....	42
Toluene.....	22
Toluenesulfonamide—para.....	22
Toluenesulfonic Acid.....	22
Toluenesulfonyl Chloride—para.....	22
TPSA—Tetrapropenylsuccinic Anhydride.....	15
Tricalcium Phosphate.....	8, 25 and 45
Tricresyl Phosphate.....	38
Tridecylbenzene (Alkyl Benzene).....	24 and 54
Triethylammonium Phosphate.....	25
Triphenyl Phosphate.....	38
Triphenyl Phosphite.....	28
Tripotassium Phosphate.....	26
Trisodium Phosphate, Anhydrous.....	27
Trisodium Phosphate, Crystalline.....	27
Tri-Uni-Sol.....	8

U

Ultrac® Vinyl Chloride (Flexible Film & Sheetings).....	32
Ultrac® Vinyl Chloride (Rigid Sheets).....	32
Urea, Feed Grade Coated Microprills.....	8
Urea, Fertilizer Grade Coated Pellets.....	9
Urea, Fertilizer Grade Uncoated Pellets.....	9
Urea-Formaldehyde-Scriptet® 400.....	51
Urea, Industrial Grade Uncoated Pellets.....	35
Urea and Melamine Resins.....	41

V

Vanadium Sulfuric Acid Catalyst.....	47
Vanillin.....	17, 48 and 49
Vegadex®.....	9
Vinyl Acetate.....	31
Vinyl Butyral (Saflex®).....	32
Vinyl Chloride Extruding & Calendering Material (Opalon®).....	31
Vinyl Chloride (Flexible Film & Sheetings) Ultrac®.....	32
Vinyl Chloride Molding Compound (Opalon®).....	31
Vinyl Chloride Monomer.....	19
Vinyl Chloride (Rigid Sheets) Ultrac®.....	32
Vinyl Styrene (Stymer®).....	31, 32 and 52
Vuepak® Cellulose Acetate.....	34

W

Wood Preservative..... (Monsanto Penta®).....	52
Weed Killers.....	9

X

Xylenol.....	10
--------------	----

Z

Zinc Oxide, Technical.....	52
----------------------------	----

*Registered Trademark Monsanto Chemical Company

†This product was added too late to include detailed product copy. For information only.

MONSANTO CHEMICAL COMPANY

Marketing Services Dept.

801 So. Lindbergh Blvd., St. Louis 68, Mo.

0557537

ELECTRONIC MATERIALS

COOLANOL® 35

ORGANIC DIVISION

Coolanol 35 is a coolant-dielectric fluid for cooling electronic equipment in ground, shipboard and airborne applications. Chemically and operationally similar to Coolanol 45, Coolanol 35 is especially suited for low-temperature applications, with an operating range of -80° to 100° F.

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 NOIBN. 1-qt. cans: 1-gal. cans; 5-gal. cans; 54-gal. drums.

GALLIUM ARSENIDE *Electronic Grade*

INORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Polycrystal ingots with semi-circular cross section approximately 3.0 centimeters wide and weighing several hundred grams.

PURITY: Available in various ranges of carrier concentrations, resistivities, mobilities and Hall coefficients. Also available doped to various levels and as gradient freeze, Czochralski, and float-zone single crystal.

USES: Ultra-high purity gallium arsenide for use in the manufacture of electronic semi-conductor devices such as rectifiers, transistors, standard diodes and tunnel diodes.

SHIPPING INFORMATION: Special containers according to form and quantity. Individual ingots packaged in polyethylene sleeves with data sheet.

INDIUM ARSENIDE—ELECTRONIC GRADE

INORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Polycrystal ingots with rectangular cross section approximately 1.5 x 2.0 centimeters and weighing several hundred grams.

PURITY: Available in various ranges of carrier concentrations, resistivities, mobilities and Hall coefficients.

USES: Ultra-high purity indium arsenide for use in the manufacture of electronic semi-conductor devices such as Hall generators, standard diodes and tunnel diodes.

SHIPPING INFORMATION: Special containers according to form and quantity. Individual ingots packaged in polyethylene sleeves with data sheet.

INDIUM PHOSPHIDE *Electronic Grade*

INORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Polycrystal ingots with semi-circular cross section approximately 2.0 centimeters wide and weighing approximately 50 grams.

PURITY: Available in various ranges of carrier concentrations, resistivities, mobilities and Hall coefficients.

USES: Ultra-high purity indium phosphide for use in the manufacture of electronic semi-conductor devices such as rectifiers, transistors, standard diodes and tunnel diodes.

SHIPPING INFORMATION: Special containers according to form and quantity. Individual ingots packaged in polyethylene sleeves with data sheet.

OS-45* TYPE III HIGH TEMPERATURE AIRCRAFT HYDRAULIC FLUID.

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid

PROPERTIES: A clear, amber liquid with outstanding hydraulic properties over a -65° F. to 100° F. temperature range.

USES: High temperature hydraulic fluid for both airborne and ground environmental application.

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

OS-45* TYPE IV HIGH TEMPERATURE AIRCRAFT HYDRAULIC FLUID.

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid

PROPERTIES: A clear, amber liquid with outstanding hydraulic properties over a -65° F. to 150° F. temperature range.

USES: High temperature hydraulic fluid for both airborne and ground environmental applications.

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

SILICON—ELECTRONIC GRADE

INORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Single-crystal cylindrical rods. Polycrystal rods or chunks. Sheets or laminated wafers.

PURITY: Less than 0.2 parts per billion base boron content.

GENERAL INFORMATION: Ultra-high purity silicon for use in the manufacture of electronic semi-conductor devices such as diodes, rectifiers and transistors. Available in various electrical resistivity ranges, conductivity types, diameters and lengths according to individual customer requirements.

USES: Single-crystal rods used directly in the manufacture of semi-conductor devices. Polycrystal rods used for producing monocrystalline material by the float-zone technique. Chunks used for single-crystal growing techniques.

SHIPPING INFORMATION: Silicon Metal, Electronic Grade. Special containers according to form and quantity. Individual rods packaged in polyethylene sleeves with data sheet.

FUNCTIONAL FLUIDS: AIRBORNE, INDUSTRIAL, SPECIALTY

AIRBORNE

AROCLOR® FLUIDS

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 1.485. 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 resins and patch-like materials to give products having a decreased fire hazard. Viscous oils and resins do not support combustion when heated above even at their boiling points—temperatures above 600°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 are easily soluble in most common organic solvents and dyes oils; hard crystalline materials are, in general, less soluble; all are compatible with most common oils and resins have excellent oxidative properties. All forms are thermoplastic, apparently undergo no further condensation or hardening upon repeated heating and cooling. Nonshrinking when exposed to air; no noticeable oxidation or laminating takes place. The clear resins have rather low oxidation losses: at 65°C. (150°F.) less than 0.04 m. per sq. m. of surface per month.

USES: Liquid Aroclors are used as dielectrics for capacitors or capacitors and transformers. Solid Aroclors are used to impregnate carbon resistors, and when combined with other plastic materials, they are excellent for electrical insulation. They are also used for a variety of electrical applications, are excellent for the manufacture of electrical insulating materials. In the form of resins, they are used in the manufacture of cellulose acetate butyrate, to extend with alkyds, and oils and as plasticizer and resin extenders for rubber-base paints, including chlorinated rubber styrene, butadiene and

and on next page

0557538

LEXOLDMON004943

vinyls. In these protective coatings for metal, masonry and wood, *Amcol* impart adhesion, resistance against moisture, acids, alkalis or other corrosive influence and they improve electrical insulating properties, durability and flame resistance. They function as solvents in water-soluble compounds, wood preservatives, stains, caulking compounds and putties. Employed in adhesive formulations as hardeners, *Amcol* products impart adhesion of laminates with asphaltic materials, the *Amcol* plasticize the asphalt, reduce flammability and improve durability. For printing inks, in precision-casting waxes, floor waxes and other wax products, used widely in synthetic adhesives including epoxy caulks, extreme, vinyls and rubber-base materials, *Amcol* improve adhesion and resistance against corrosive influences. Selected liquid *Amcol* are used as nonflammable hydraulic fluids for de-casting machines. They are used as actuating media for thermostats. *Amcol* are useful in cutting oils as extreme pressure lubricants, as high-temperature lubricants and as quenching fluids. *Amcol* 143 is employed as a nondamaging, 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 NOIBN without filler, 500-lb. steel drums; 500-lb. net fiber drums; 100-lb. net baks.

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 NOIBN, 1-qt. cans; 1-gal. cans; 5-gal. cans; 51-gal. drums.

OS-45* TYPE III HIGH TEMPERATURE AIRCRAFT HYDRAULIC FLUID.

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid

PROPERTIES: A clear, amber liquid with outstanding hydraulic properties over a -65°F. to 400°F. temperature range.

USES: High temperature hydraulics for both airborne and ground environmental applications.

SHIPPING INFORMATION: Chemicals NOIBN, 1-qt. cans; 1-gal. cans; 5-gal. cans; 51-gal. drums.

OS-45* TYPE IV HIGH TEMPERATURE AIRCRAFT HYDRAULIC FLUID.

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid

PROPERTIES: A clear, amber liquid with outstanding hydraulic properties over a -65°F. to 550°F. temperature range.

USES: High temperature hydraulic for both airborne and ground environmental applications.

SHIPPING INFORMATION: Chemicals NOIBN, 1-qt. cans; 1-gal. cans; 5-gal. cans; 51-gal. drums.

SKYDROL* 500-A FIRE RESISTANT JET AIRCRAFT HYDRAULIC FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Moisture: 20% max.; neutralization number: 0.10 max.; Sp. Gr. 25°/25°C. 1.060-1.065; viscosity at 100°F. 11.7-14.0 cs.

PROPERTIES: A clear, purple, fire-resistant hydraulic fluid with excellent lubricity. Operational at -65°F.

USES: Hydraulic fluid for hydraulic systems in turbo jet and turbo prop aircraft, which must be operational at -65°F.

SHIPPING INFORMATION: Hydraulic system fluids other than petroleum, 1-qt. cans; 1-gal. cans; 5-gal. cans; 51-gal. drums.

SKYDROL* 7000 FIRE RESISTANT AIRCRAFT HYDRAULIC FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

TYPICAL ANALYSIS: Cloud point below 0°F.; moisture 0.25% max.; neutralization number 0.2 max.; Sp. Gr. 1.080 to 1.086 at 25°/25°C.; pour point -70°F. or lower.

PROPERTIES: A clear, orange-red liquid with the best low-temperature performance, stability, non-corrosiveness, excellent viscosity-temperature characteristics, and resistance to oxidation.

USES: Hydraulic fluid in aircraft cabin superchargers, expansion turbines for air-conditioning systems and the aircraft hydraulic system itself.

SHIPPING INFORMATION: Hydraulic system fluids other than petroleum, 1-qt. cans; 1-gal. cans; 5-gal. cans; 51-gal. drums.

HYDRAUL* AC COMPRESSOR LUBRICANT

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—40% SSU, 210°F.—45 SSU; moisture—0.15% max.; neutralization number (acid)—0.15 max.; sp. gr. at 25°/25°C.—1.340-1.360.

PROPERTIES: A light amber, mobile, straight synthetic fire resistant air compressor lubricant with excellent lubricity, non-corrosive, extremely stable to heat and oxidation, a shear stable fluid with a two-fold purpose: to eliminate carbon deposits on valves and pistons, and to reduce future maintenance costs; and to provide safety from air compressor fires and explosions.

USES: A fire and explosion resistant lubricant for air compressors, such as those used in air separation plant, blast air systems, ammonia synthesis plants, 30-60 psi booster stations and other tire processing plants.

SHIPPING INFORMATION: Chemicals NOIBN, 51-gal. steel drums; 5-gal. cans.

HYDRAUL* F-9 HYDRAULIC FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—215 SSU, 210°F.—45 SSU; moisture—0.20% max.; neutralization number (acid)—0.15 max.; sp. gr. at 25°/25°C.—1.270-1.300.

PROPERTIES: A light, amber, cloudy liquid; straight synthetic fire resistant fluid with excellent lubrication 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 de-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.

HYDRAUL* 60 HYDRAULIC FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—60 SSU, 210°F.—34 SSU; moisture—0.10% max.; neutralization number (acid)—0.12 max.; sp. gr. at 25°/25°C.—1.058-1.091.

PROPERTIES: A clear blue, oily, straight synthetic fire resistant hydraulic fluid with excellent lubrication 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, precision equipment such as machine tools. Low temperature properties suited for many outdoor operations.

SHIPPING INFORMATION: Hydraulic system fluids other than petroleum, 51-gal. steel drums and 5-gal. cans.

HYDRAUL* 150 HYDRAULIC FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—150 SSU, 210°F.—50 SSU; moisture—0.15% max.; neutralization number (acid)—0.17 max.; sp. gr. at 25°/25°C.—1.119-1.143.

PROPERTIES: A light, amber, straight synthetic fire resistant hydraulic fluid of low viscosity with excellent lubricity and low temperature pumping characteristics; non-corrosive, stable to heat and air.

USES: Fire resistant hydraulic fluid in equipment which operates out of doors at low temperatures part of all of the time, such as Askania Recorder equipment, fire-fight trucks and similar equipment with cold weather fluid requirements.

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

HYDRAUL* 625 HYDRAULIC FLUID

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquid.

TYPICAL ANALYSIS: Viscosity at 100°F.—625 SSU, 210°F.—45 SSU; moisture—0.15% max.; neutralization number (acid)—0.16 max.; sp. gr. at 25°/25°C.—1.340-1.360.

PROPERTIES: A light, amber, straight synthetic fire resistant hydraulic fluid with excellent lubrication and pumping characteristics; non-corrosive, extremely stable to heat and air; a shear, stable fluid designed for long service life.

0557539

USES: Manufacture of anti-oxidants, anti-ozonants, gasoline gum inhibitors; medical compounds for poultry, dyes, dyes, color and pigments.

CONTAINERS: Code 30 ICCOIBN Lever pak with flowed in rubber jacket. (Gross weight: 500-lbs. approx.)

SHIPPING CLASSIFICATION: para-Nitroaniline · Dye Intermediate NOIBN).

ortho-PHENETIDINE

Also known as *ortho-aminophenyl ethyl ether*, *ortho-aminophenolate* and *2-aminophenyl ethane*.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 137.18

STANDARD FORM: Liquid.

SPECIFICATIONS: Dark red liquid; crystallizing point: -1.0°C. min.; distillation range: first drop 231.0°C. min.; 95% (1-90 ml) 2.0°C. max.; dry point 234.0°C. max.; solubility in HCl complete.

USES: An intermediate in the production of dyes, dyes, dyes. **CAUTION:** This product is toxic. Avoid breathing its vapors and contact with skin.

SHIPPING INFORMATION: Dye Intermediate NOIBN. "Poison" label required. 475-lb. steel drums.

para-PHENETIDINE

Also known as *para-aminophenyl ethyl ether*, *para-aminophenolate* and *4-aminophenyl ethane*.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 137.18

STANDARD FORM: Liquid.

SPECIFICATIONS: Light yellow liquid; crystallizing point 4.0°C. min.; distillation range: first drop 245.0°C. min.; 95% (1-90 ml) 2.0°C. max.; dry point 251.0°C. max.; solubility in HCl opalescent max.

USES: An intermediate in the production of dyes and pharmaceuticals. **CAUTION:** This product is toxic. Avoid breathing its vapors and avoid contact with the skin.

SHIPPING INFORMATION: Dye Intermediate NOIBN. "Poison" label required. 450-lb. steel drums.

FLAVORINGS

ETHAVAN *Ethylvanillin*

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 108.17

STANDARD FORM: Fine crystalline needles.

SPECIFICATIONS: Fine white crystalline needles; completely soluble in ethyl alcohol 95% (1:2); ash 0.03% max.; M.P. 70.5°C. min.

USES: A flavoring and aromatic. Has a flavor similar to that of vanillin but not identical with it. The relative flavoring strength of Ethavan approximates three times that of vanillin.

SHIPPING INFORMATION: Chemicals NOIBN. 100-lb. fiber drums; 25-lb. fiber drums.

METHYL SALICYLATE U.S.P.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 152.14

STANDARD FORM: Water-white liquid.

SPECIFICATIONS: Clear, colorless liquid; assay 98.0% min.; Sp. Gr. 1.180-1.185 at 25°C.; conforms to U.S.P. test for heavy metals and acidity; refractive index at 20°C. 1.5330-1.5380.

USES: Pharmaceutical product; disinfectant; flavoring agent in foodstuffs and beverages; odorant in printing inks and lacquer.

SHIPPING INFORMATION: Methyl Salicylate (Essential Oil NOIBN). 500-lb. and 50-lb. drums.

METHYL SALICYLATE U.S.P. *Synthetic*

ORGANIC DIVISION—LITERATURE AVAILABLE

SPECIFICATIONS: Colorless liquid; assay essentially 100%; color APHA 10 max.; odor, characteristic; refractive index at 20°C. 1.536; specific gravity at 25-26°C. 1.180 to 1.185; solubility in 70% alcohol (1:2), complete; solubility in Normal Potassium Hydroxide 1:100. Turbidity, none; color, faint yellow; max.; heavy metals, meets test; weight per gallon, 9.9 pounds; meets all requirements of U.S.P.

USES: Methyl Salicylate U.S.P. (Synthetic) is widely used in sprays, as well as various kinds of insecticides, disinfectants, mouth washes, perfumes, pharmaceuticals, in bookbinding, gummed tape and paper, as an odor principle in polishes, printing and coating inks, and in covering of decorative odors of such products. It is also used in the manufacture of lacquer.

SHIPPING INFORMATION: 500-lb. drums, returnable; 50 and 50-lb. drums, non-returnable. Methyl Salicylate (Essential Oil NOIBN).

METHYL SALICYLATE U.S.P. *Synthetic*

ORGANIC DIVISION—LITERATURE AVAILABLE

SPECIFICATIONS: Colorless liquid; assay, essentially 100%; color APHA 10 max.; odor, characteristic; refractive index at 20°C. 1.536 to 1.538; Sp. Gr. at 25-26°C. 1.180 to 1.185; solubility in 70% alcohol (1:2), complete; solubility in Normal Potassium Hydroxide 1:100. Turbidity, none; color, faint yellow; max.; heavy metals, meets all requirements of U.S.P.

USES: Widely used in sprays; insecticides, disinfectants, perfumes, pharmaceuticals in bookbinding, gummed tape and paper; as an odor principle in polishes, printing and coating inks, pastes and glues, and as a flavoring agent in foodstuffs, bookbinding, checking gum and roof seal.

SHIPPING INFORMATION: Methyl Salicylate (Essential Oil NOIBN) 500-lb. drums—returnable; 50 and 50-lb. drums—non-returnable.

SACCHARIN

Also known as *saccharin insoluble*, and *ortho-sulfobenzamide*.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 183.18

STANDARD FORM: Powder and coarse powder.

SPECIFICATIONS: White crystalline powder; M.P. 227.0°C. min.; moisture 0.5% max.; ash 0.2% max.; Na₂CO₃ (1:5) complete; ash 0.2% max.; heavy metals, max.

USES: Sweetener for tooth pastes, mouth washes, and other preparations. Approximately 500 times the sweetening power of sugar.

SHIPPING INFORMATION: Chemicals NOIBN. 100-lb. drums.

VANILLIN

Vanillin U. S. P.; also known as *methylprotocatechuic aldehyde* and *hydroxybenzaldehyde*.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 152.14

STANDARD FORM: Fine crystals.

SPECIFICATIONS: Fine, white crystalline needles; M.P. 30°C. min.; no foreign flavor in sugar solution (1:100); max.; solubility in alcohol (1:2) complete.

USES: As a flavoring agent in foodstuffs and as an odorant in rubber.

SHIPPING INFORMATION: Chemicals NOIBN. 100-lb. drums; 25-lb. fiber drums.

ACL*

INORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Powder and granular. A strong organic chlorine liberating compound. Used as a disinfectant in household and commercial cleaning, as a scouring cleanser, machine diswashing compound, and as a bleaching agent, etc.

PRODUCT DESCRIPTION:

ACL Grade	Chemical Name
85	Trichloroisocyanuric Acid
70	Dichloroisocyanuric Acid
50	Potassium dichloroisocyanurate

SHIPPING INFORMATION: Fiber drums with 50-lb. liner. ACL-85 and ACL-50 270-lbs. net. ACL-70 270-lbs. net.

AROCLOR* POLYCHLORINATED POLYPHENYLS

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquids, resins or solids.

PROPERTIES: Chlorinated aromatic hydrocarbons, water-white mobile liquids and pale yellow to light amber resins and opaque solids. They all indices above 1.40. In general are stable at 150°C., not affected by boiling water, and soluble in organic solvents. The light oils can be used as solvents for oils and resins distill readily under vacuum and resins almost odorless and tasteless at temperatures.

0557540

LEXOLDMON004945

GENERAL INFORMATION: Most *Aracolor* 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 are 150-300°C. All have excellent electrical characteristics: high dielectric strength and resistance, low power factors, certain of the liquids have a high dielectric constant as compared with mineral oils. The solid and resins are easily soluble in most common organic solvents and drying oils; hard crystalline materials are, in general, less soluble; all are insoluble in water. Viscous oils and resins have excellent adhesive properties. All forms are thermoplastic, apparently undergo no further condensation or hardening upon repeated melting and cooling. Nonvolatile when exposed to air no noticeable oxidation or hardening takes place. The clear resins have rather low vaporization losses; at 65°C. (150°F.) less than 0.01 cm. per sq. in. of surface per month.

USES: Liquid *Aracolors* are used as dielectrics for condensers or capacitors and transformers. Solid *Aracolors* are used to impregnate carbon resistors, and when combined with other plastic materials, the *Aracolors* are excellent solvents or impregnating agents for a variety of electrical apparatus, wire coatings and tape. *Aracolors* are used as plasticizers and resins in lacquers including nitrocellulose, ethyl cellulose and cellulose acetate butyrate, to extend varnish resins and oils and as plasticizer and resin extenders for rubber-base paints, including chlorinated rubber, styrene, butadiene and vinyls. In these protective coatings for metal, masonry and wood, *Aracolors* impart adhesion, resistance against moisture, acids, alkalis or other corrosive influence and they improve electrical insulating properties, durability, resistance to flammability. They function as sealers in water-proofing compounds, wood preservative formulations, caulking compounds and putty. Employed in asphaltic stoving materials and cellulose products impregnated or laminated with asphaltic materials, the *Aracolors* plasticize the asphalt, reduce flammability and improve durability. For printing inks; in precision-casting waxes, floor waxes and other wax products. Used widely in synth. adhesives including ethyl cellulose, styrene, thyls and rubber-base materials, *Aracolors* improve adhesion and resistance against corrosive influences. Selected liquid *Aracolors* are used as nonflammable hydraulic fluids for die-casting machines. They are used as activating media for thermistors. *Aracolors* are useful in cutting oils as extreme pressure lubricants, as high-temperature lubricants and as grinding fluids. *Aracolor 1248* is employed as a non-flammable, 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 NOIBN without filler, 600-lb. steel drums; 500-lb. net fiber drums; 100-lb. net bags.

BENZYL CHLORIDE *Also known as alpha-chlorobenzene.*

ORGANIC DIVISION—LITERATURE AVAILABLE

FORMULA: $C_6H_5CH_2Cl$

MOLECULAR WEIGHT: 126.58

STANDARD FORM: Liquid.

SPECIFICATIONS: Clear to slightly turbid, colorless to yellow liquid; Sp. Gr. 1.105-1.110 at 15.5°-15.5°C. Boiling range at 760 mm 2°C. max. including 150°C.

USES: A highly reactive aralkyl halide used in the production of the following: dyestuffs; perfume bases such as benzyl alcohol, acetate and other esters; plasticizers; resins; wetting agents; vermiculites; rubber accelerators; gasoline pump inhibitors; benzyl benzoate; and pharmaceuticals. **CAUTION:** This product irritates the skin and eyes; avoid skin contact and breathing its vapors. Benzyl Chloride is highly reactive with metals and their derivatives, especially iron, and due care must be exercised in handling, storage and processing of Benzyl Chloride.

SHIPPING INFORMATION: Chemicals NOIBN. Corrosive liquid (white label required), 475-lb. nickel drums; 2000-gal. 2-compartment nickel tank trucks.

BENZYL CHLORIDE, STABILIZED

ORGANIC DIVISION—LITERATURE AVAILABLE

FORMULA: $C_6H_5CH_2Cl$



MOLECULAR WEIGHT: 126.58

STANDARD FORM: Liquid.

SPECIFICATIONS: For material recovered from stabilized solution. Colorless to yellow liquid; Sp. Gr. 1.105-1.110 at 15.5°-15.5°C.

PROPERTIES: This form of benzyl chloride is stabilized by the addition of 25 lbs. of 10% sodium carbonate solution to 450 lbs. of the chloride. The test material is a milky-white emulsion that will separate into two layers when shaken. The bottom or top, depending upon the temperature and the concentration of Na_2CO_3 . The concentration of Na_2CO_3 slowly decreases on standing.

USES: A highly reactive aralkyl halide used in the production of the following: dyestuffs; perfume bases such as benzyl alcohol, acetate and other esters; plasticizers; resins; wetting agents; vermiculites; rubber accelerators; gasoline pump inhibitors; benzyl benzoate and pharmaceuticals. **CAUTION:** This product irritates the skin and eyes; avoid skin contact and breathing its vapors. Benzyl Chloride is highly reactive with metals and their derivatives, especially iron, and due care must be exercised in handling, storage and processing.

SHIPPING INFORMATION: Chemicals NOIBN. Corrosive liquid (white label required), 475-lb. steel drums.

CHLORAMINE-T, N. F.

Also known as N-sodium-N-chloro para-toluenesulfonamide.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 281.70

STANDARD FORM: Crystalline powder.

SPECIFICATIONS: White or faintly yellow powder or crystals; solubility in water 2.15% complete, moisture 18-20%, available chlorine 34.5-35.2% assay 97.4% min., trace max., retained on 10 mesh: 15% retained on 30 mesh.

CHLORINE-CALCAUSTIC SODA, CAUSTIC POTASH AND SODIUM SULFIDE PLANTS: Complete manufacturing plant, 1000 lbs. D-N-NO Mercury Cells offered by Engineering Sales Department.

USES: A water-soluble, chlorine-bearing powder used as a germicide, disinfectant and deodorant.

SHIPPING INFORMATION: Disinfectant Other Than Medicinal NOIBN. 300-lb. fiber drums; 125-lb. lever-paks.

ortho-DICHLOROBENZENE

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 147.01

STANDARD FORM: Liquid.

SPECIFICATIONS: Appearance, practically clear; Color, 30 APHA max.; Crystallizing Point, minus 7.0°C. max.; Distilling Range—first drop 177.7°C. min.—90°—191 ml.; 4.1°C. max.—dry point 188.5°C. max.

USES: Degreasing formulations; tar, grease, paint and carbon removers; spotting agents in dry cleaning; metal polishes; wool and felt scouring; insecticide formulations; and treating of sewage and garbage for odor control.

SHIPPING CLASSIFICATION: ortho-Dichlorobenzene, 55-gal., 18-gauge black iron drums. Gross Weight: 600-lb. approx.

ortho-NITROCHLOROBENZENE

Also known as ortho-chloronitrobenzene.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 157.56

STANDARD FORM: Cast solid.

SPECIFICATIONS: Green-yellow crystalline mass; crystallizing point 31.7°C.

USES: An intermediate in the synthesis of o-aminophenol (dyestuffs intermediate and photographic developer), dichlorobenzene-chlorine-dyestuffs intermediate, and many other organic intermediates. It is a solvent in the synthesis of synthetic-petroleum processes. **CAUTION:** This material is toxic. Avoid breathing its vapors. Avoid contact with the skin. Toxicity reference: U. S. Public Health Bulletin No. 271 (1911).

SHIPPING INFORMATION: Dye Intermediate NOIBN "Poison" label required. 600-lb. steel drums; tank cars.

para-NITROCHLOROBENZENE

Also known as para-chloronitrobenzene.

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 157.56

STANDARD FORM: Flakes.

SPECIFICATIONS: Light yellow flakes or crystalline mass; crystallizing point 82.5°C. min.

USES: In the manufacture of disodium-benzene-metha-disulfonate; para-aminophenol; 2-chloro-4-nitrobenzoic acid; 2,6-dichloro-4-nitrobenzoic acid; 2-nitro-4-chlorobenzoic sulfonic acid; Pharmaceutical intermediates; "Diazone" an agent for treatment of Bacteroides (Abott patent), and a variety of anti-oxidant and cum inhibitors. **CAUTION:** This product is toxic. Avoid breathing its vapors and avoid contact with the skin. Toxicity reference: U. S. Public Health Bulletin No. 271 (1911).

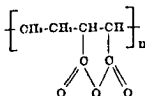
SHIPPING INFORMATION: Dye Intermediate NOIBN "Poison" label required. 425-lb. fiber drums.

0557541

DX-840 RESINS (Ethylene Maleic Anhydride Copolymers)

ORGANIC DIVISION—LITERATURE AVAILABLE

FORMULA:



STANDARD FORM: Fine water-soluble powders available as both straight-chain and cross-linked polymers in a variety of molecular weights.

PROPERTIES AND PERFORMANCE CHARACTERISTICS: The EMA resins are easily converted to the free-acid form; and to its sodium and ammonium-salts, and are readily reacted with alcohols and substituted alcohols and with amines to form esters and resins. By selecting the proper reactant, the following types of derivatives can be prepared: thermoplastic film-formers, polymeric liquids, waxy solids and polyampholytes.

SUGGESTED USES: Borecoat agent for pipes used in oil-well drilling fluids; fillers and thickeners in liquid oil-soluble and emulsion formulations; fillers for water-based latex paints, textile sizes, textile print pastes and inks; suspending agents for ink pigments; thickener for aqueous resin systems; adhesives, binder for foundry cores, etc.

SHIPPING INFORMATION: Bulkwall bags: 50 lbs.; F. O. B. Texas City, Texas. Rail and Truck, Sizing NOB-N.

MALEIC ANHYDRIDE

ORGANIC DIVISION

MOLECULAR WEIGHT: 98.00

STANDARD FORM: Briquettes, fused mass.

SPECIFICATIONS: White briquettes or fused mass, crystallizing point (as produced) 52.5 C. min.; water solution (4 gms. in 10 ml.) clear and colorless; assay: 99.5% min.; color of melt 20 APHA max.

USES: Used alone or in combination with other acids in the manufacture of alkyl and polyester resins; a versatile intermediate for chemical synthesis. Also used for production of paper and textile sizes, agricultural chemicals and ester comonomers for internal plasticization.

SHIPPING INFORMATION: Maleic Anhydrides, 50-lb. bags; 250-lb. fiber drums; tank cars.

PHTHALIC ANHYDRIDE

ORGANIC DIVISION

MOLECULAR WEIGHT: 148.11

STANDARD FORM: White flakes or fused mass.

SPECIFICATIONS: Solubility in benzene (1:20) clear. Assay: 99.5% min.; C.P. 130.8 C. min.

USES: An intermediate in the production of alkyl and polyester resins; dyestuffs; perfume bases; alcohol denaturants; pharmaceuticals; and plasticizers such as ethyl phthalate, dibutyl phthalate, dimethyl phthalate, diethyl phthalate and phthalyl succolates.

SHIPPING INFORMATION: Phthalic Anhydride, 50-lb. bags; tank cars; tank trucks.

STYRENE MONOMER

See Page M-5/24 and M-5/44

VINYL CHLORIDE MONOMER

See Page M-5/19

UREA, INDUSTRIAL GRADE UNCOATED PELLETS

INORGANIC DIVISION

STANDARD FORM: Urea pelleted form without coating agent.

ANALYSIS:	
Nitrogen (Min.)	46.0%
Moisture (Max.)	5%
Buret (Max.)	1.0%

USES: Urea Formaldehyde resins for adhesives, plastics, paper and textiles; chemical intermediates, cosmetics, detergents, explosive stabilizer, paints, dentifrice, fermentation, animalies.

SHIPPING INFORMATION: Urea, 50-lb. multiwall paper bags with polyethylene lining. Also in bulk.

AROCLOR* COMPOUNDS

ORGANIC DIVISION—LITERATURE AVAILABLE

STANDARD FORM: Liquids, resins or solids.

PROPERTIES: Chlorinated aromatic hydrocarbons varying from water-white liquids and pale yellow solids. Most Aroclor light amber resins and opaque crystalline solids. Refractive indices above 1.5025. In general are stable on heat: heat at 21-150 C., not affected by boiling with sodium. Soluble in solution. The light oils can be distilled at atmospheric pressure without appreciable decomposition and the heavier oils and resins distill readily under reduced pressure and the resins without colorless and tasteless at ordinary temperatures.

GENERAL INFORMATION: Most Aroclor materials mix readily with resins and pitch-like materials to give products having a decreased fire hazard. Aqueous oils and resins do not support combustion when heated alone even at the 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; all are insoluble in water. The more viscous oils and resins have excellent adhesive properties. All forms are thermoplastic, apparently undergo no further condensation or hardening upon repeated heating and cooling. Solubility: when exposed to air no noticeable oxidation or hardening takes place. The clear resins have rather low vaporization losses: at 68.5 C. (150 F.) less than 0.01 atm. 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 resistors, and when combined with other plastic materials, the Aroclors are excellent and complete matting agents for a variety of electrical insulation, wire coatings and tape. Aroclors are used as plasticizers and resins in lacquers, including nitrocellulose, vinyl cellulose and cellulose acetate lacquers; to extend various resins and oils and as plasticizer and resin extenders for color-coat paints, including chlorinated rubber systems, butadiene and vinyls. In these protective coatings for metal, masonry and wood, Aroclors impart adhesion, resistance to alkali, moisture, acids, alkalies or other corrosive influences and they impart excellent electrical insulating properties, durability and fire-durability. They function as sealers in waterproofing compounds, wood preservative formulations, caulks and cementing putty. Employed in asphaltic slaking materials and cellulose products impregnated or laminated with plastic materials, the Aroclors plasticize the asphalt, reduce combustibility and improve durability. For printing inks in process-casting, waxes, floor waxes and other wax products. Used widely in synthetic adhesives including vinyl 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 shock absorbers and dampers. They are used as actuating media for thermostats. Aroclors are useful in cutting oils as extreme pressure lubricants, in high-temperature lubricants and in engine 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 NOB-N without filler, 600-lb. steel drums; 500-lb. net fiber drums; 100-lb. net bags.

DI-2-ETHYLHEXYL ADIPATE (DOA)

ORGANIC DIVISION—LITERATURE AVAILABLE

MOLECULAR WEIGHT: 370.56

STANDARD FORM: Liquid.

SPECIFICATIONS: Clear oily liquid; color, APHA 25 max.; odor mild; acidity (as adipic acid) 0.02%; max.; Sp. Gr. 0.943-0.948 at 25/25 C.

USES: A primary plasticizer which imparts excellent low temperature flexibility to polyvinyl chloride resins and synthetic rubbers. Used in combination with other plasticizers to help to make quality vinyl resin hose. It is also used in combination with vinyl plasticizers for cloth coatings, wire and cable coatings. Imparts excellent heat and light stability and water resistance to vinyl resins.

SHIPPING INFORMATION: Resin Plasticizer, 50 and 5-gal. drums; tank cars; tank trucks wherever possible.

0557542

LEXOLDMON004947