



Chemical Resistance





Contents

Foreword

Tables

Chemicals

(Materials generally referred to by chemical name)

Acids	6
Alcohols, Monohydric	6
Alcohols, Dihydric and Trihydric	7
Bases	7
Esters	7
Ethers	7
Ether-Alcohols	7
Hydrocarbons	8
Hydrocarbons, Halogenated	8
Ketones	8
Salts	8
Miscellaneous Chemicals, Compounds, and Gases	10
Commercial and Natural Products (Materials generally referred to by common name or trade nam	e)
Aeronautical and Automotive Items	11
Nonautomotive Greases and Oils	11
Household Items	12
Miscellaneous	13

Foreword *Tenite* acetate, a plastic produced from cellulose acetate, has been tested in contact with a number of materials, and the results are presented in this brochure.

Most tests were conducted by immersing injection-molded specimens of *Tenite* acetate in a chemical for the period of time shown. Most values given are the result of a single test, and the measured gains in weight and thickness are rounded to the nearest 0.1%. Unless stated otherwise, tests were conducted at 23°C (73°F) and solutions were aqueous; i.e., "Acid, Acetic, 5%" indicates a 5% solution of acetic acid in water, tested at 23°C. Unless other characteristics are specifically mentioned, the information given under "Observed Condition of Plastic" refers only to the appearance and feel of the plastic specimen.

The test results presented in this report are intended only as a guide to the general chemical resistance of *Tenite* acetate. In actual applications where chemical resistance is a concern, it is necessary to conduct testing with the specific chemical, reagent, and end-use article involved. No effort is made in this publication to account for specific chemicals or reagents which may no longer be commercially available or which may have been modified after test results were obtained.

Certain materials designated in this publication are generally unsatisfactory for use in contact with *Tenite* acetate. There is no implication that other materials are suited for use with *Tenite* acetate.

Because results from tests conducted at different temperatures or for different time periods may be different from those shown in this report, users of *Tenite* acetate must be guided by their own tests, made under conditions equivalent to, or representative of those to which the plastic will be subjected in actual service.

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
CHEIVIICALS				
Acids				
• Acetic, 5%	1 year	5.5	3.2	Slightly softened, surface attacked
• Acetic, 10%	1 week	5.4	3.0	Slightly softened, surface attacked
• Acetic, 30%	1 week	17.0	22.6	Softened
• Chromic, 6%	8 days (38°C, 100°F)		_	Softened and swollen
Citric, 10%	1 year	2.8	1.7	Unchanged
• Citric, 10%	2 months (60°C, 140°F)			Decomposed
• Citric, 30%	1 week (60°C, 140°F)		—	Decomposed
• Fluosilicic, 10%	2 months	-1.3	2.0	Slightly warped
• Fluosilicic, 28%	2 months	-1.7	0.0	Slightly warped
Formic, 3%	20 days	_		Unchanged
Hydrochloric, 6%	2 days	1.3	0.1	Unchanged
Hydrochloric, 8%	2 days	0.1	-0.8	Softened
Hydrochloric, 10%	1 month	2.1	1.5	Softened and swollen
Hydrofluoric, 10%	1 month			Softened and swollen
Hydrofluoric, 48%	1 month		_	Decomposed
Lactic, 10%	2 days	3.1	1.5	Unchanged
Lactic, 50%	2 days	6.8	4.3	Slightly softened, surface attacked
• Nitric, 10%	1 week			Decomposed
Oleic	1 year	-3.3	-0.8	Unchanged
• Phosphoric, 30%	2 months	2.0	0.8	Unchanged
• Phosphoric, 50%	2 months	1.6	-0.4	Brittle, surface attacked
• Phosphoric, 75%	1 week			Decomposed
Pyrogallic, 4%	1 week	7.9	3.6	Stained yellow
Stearic	1 week			Unchanged
• Sulfuric, 3%	1 month	3.0	2.2	Softened
• Sulfuric, 10%	1 year			Decomposed
• Sulfuric, 20%	8 months			Decomposed
• Tannic, 10%	4 months (60°C, 140°F)	7.6	1.8	Softened
Tartaric	2 days	2.9	1.6	Unchanged
Trichloroacetic	1 month			Decomposed
Alcohols, Monohydric				
n-Amyl	2 days	-0.4	0.3	Unchanged
tert-Amyl	2 davs	-0.2	0.2	Unchanged
n-Butvl	2 days	1.4	1.4	Unchanged
sec-Butyl	2 days	0.4	0.8	Surface bleached slightly
tert-Butyl	2 days	-2.0	0.3	Unchanged
• Diacetone	···· j -			Dissolved
• Ethyl	2 days	12.7	27.9	Swollen and softened
• Ethyl. 50%	1 week	14.5		Swollen and softened
2-Ethvlhexvl	1 week			Unchanged

• Indicates that material is generally unsatisfactory for use in contact with Tenite acetate under the conditions of this test.

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Alcohols, Monohydric (Continued)				
Isoamyl	2 days	-0.4	0.1	Unchanged
Isobutyl	2 days	-1.7	0.4	Unchanged
• Isopropyl	2 days	10.9	18.4	Swollen
• Methyl	2 days	22.6	51.0	Blushed, softened, and swollen
• Methyl, 5%	1 year	4.0	2.6	Blushed and softened
• n-Propyl	2 days	2.2	4.2	Blushed
Tetrahydrofurfuryl	3 days			Softened and swollen
Alcohols, Dihydric and Trihydric				
Glycerin	1 year	-0.7	-0.2	Unchanged
Ethylene Glycol	1 year	1.3	1.4	Very slightly softened
Diethylene Glycol	4 months	20.8	15.9	Warped and softened; surface attacked
Triethylene Glycol	4 months	25.4	22.9	Warped and softened; surface attacked
Propylene Glycol	2 days	0.4	0.4	Unchanged
Bases				
Ammonium Hydroxide, 10%	1 month	3.0	12.4	Softened; surface attacked
Sodium Hydroxide, 1%	1 month	-1.9	-0.1	Softened and warped
Sodium Hydroxide, 10%	1 week			Decomposed
• Trimethylbenzyl Ammonium Hydroxide, 5%	17 days	-4.9	5.9	Swollen and checked
Esters				
n-Butyl Acetate	2 days	7.2	9.8	Surface attacked
sec-Butyl Acetate	2 days	3.7	3.6	Surface attacked
• Ethyl Acetate				Dissolved
• Ethyl Lactate				Dissolved
• Ethylene Glycol Monoethyl Ether Acetate	2 days			Surface attacked
• Ethylene Glycol Monomethyl Ether Acetate				Dissolved
Isoamyl Acetate	2 days	1.9	0.6	Surface attacked
Isobutyl Acetate	2 days	7.8	4.3	Surface attacked
Isopropyl Acetate	2 days	7.3	8.4	Surface attacked
Methyl Acetate				Dissolved
Tetra(2-ethylbutyl) silicate	1 month (50°C, 122°F)	-2.4	-0.8	Unchanged
Ethers				
Diethyl Ether	2 days	1.4	11.2	Blushed and swollen
Di-Isopropyl Ether	2 days	-9.3	-0.2	Unchanged
•1,4-Dioxane				Dissolved
Ether-Alcohols				
Diethylene Glycol Monobutyl Ether	2 days	1.0	1.6	Surface attacked slightly
Diethylene Glycol Monoethyl Ether	2 days	11.2	12.3	Swollen; surface attacked
Diethylene Glycol Monomethyl Ether				Dissolved
Ethylene Glycol Monobutyl Ether	2 days	2.0	2.8	Surface attacked slightly
Ethylene Glycol Monoethyl Ether	2 days	23.1	25.3	Swollen and slightly softened
• Ethylene Glycol Monomethyl Ether				Dissolved

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Hydrocarbons				
Benzene	1 week	5.9	17.5	Softened and swollen
• Butadiene-1,3, liquid	1 year	-9.4	8.9	Warped and shrunken
• Butadiene-1,3, gas	1 month	4.2	2.8	Showed exudation
Heptane	1 year	-5.4	-1.2	Unchanged
Naphthalene (Moth balls)	48 hours (38°C, 100°F, 80% RH)	1.0	0.9	Showed considerable plasticizer exudation
Naphthalene (Moth balls)	24 hours (60°C, 140°F, 88% RH)	8.6	2.0	Showed considerable plasticizer exudation
Propane, gas	2 months	-0.8	0.0	Unchanged
Propane, liquid	1 month	-3.9	0.0	Unchanged
Toluene	1 year	-1.7	8.9	Swollen and slightly softened
Xylene	1 year	-5.6	2.1	Unchanged
Hydrocarbons, Halogenated				
Carbon Tetrachloride	2 months	14.9	4.1	Unchanged
Chlorobenzene				Dissolved
Chlorobromomethane				Dissolved
Chloroform		—	—	Dissolved
• o-Dichlorobenzene	3 days	9.8	4.4	Slightly swollen
p-Dichlorobenzene	3 days	2.2	0.7	Unchanged
p-Dichlorobenzene	3 days (38°C, 100°F, 80% RH)	6.6	4.0	Showed some plasticizer exudation
Ethylene Chloride			_	Dissolved
Methylene Chloride				Dissolved
Propylene Chloride	2 days	25.3	2.1	Blushed and blistered
• s-Tetrabromoethane	3 days	5.4	3.5	Slightly swollen
Tetrachloroethane			—	Dissolved
Tetrachloroethylene	2 weeks			Unchanged
Trichloroethylene	16 hours	32.2	_	Surface attacked
Ketones				
Acetone			_	Dissolved
Cyclohexanone			—	Dissolved
Di-Isopropyl Ketone	2 days	0.0	0.3	Unchanged
Methyl n-Butyl Ketone	2 days	13.4	16.2	Swollen, surface attacked
Methyl Ethyl Ketone			—	Dissolved
Methyl Isobutyl Ketone	2 days	40.4	7.4	Swollen, surface attacked
Methyl n-Propyl Ketone	2 days	51.3	78.5	Swollen and warped; surface attacked
Phorone	2 days	0.0	0.2	Stained yellow
Salts				
Aluminum Acetate, Basic, 33% water slurry	2 months	4.0	2.1	Unchanged
Aluminum Chloride, 10%	2 months	3.3	1.9	Unchanged
Aluminum Chloride, saturated solution	2 months	0.3	0.0	Unchanged
Aluminum Sulfate, 30%	3 months	3.0	2.0	Unchanged
Ammonium Bifluoride, saturated solution	1 month	3.6		Slightly bleached

• Indicates that material is generally unsatisfactory for use in contact with Tenite acetate under the conditions of this test.

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Salts (Continued)				
Ammonium Chloride, saturated solution	1 month	1.4	0.4	Unchanged
Ammonium Nitrate, solid	1 week	0.1	0.1	Unchanged
Ammonium Nitrate, 10%	1 week	2.9	1.6	Unchanged
Ammonium Sulfate, solid	1 year	0.0	0.6	Unchanged
Ammonium Sulfate, 10%	1 year	3.7	1.6	Unchanged
Calcium Chloride, solid	2 days	2.9	0.6	Unchanged
Calcium Chloride, 2.5%	1 year	2.9	2.1	Unchanged
Calcium Chloride, 40%	2 months	0.6	0.2	Unchanged
Calcium Hypochlorite, 6%	3 months	2.9	2.0	Slightly softened
Calcium Phosphate, Monobasic, solid	1 year	-1.1	1.4	Brittle, surface attacked
Calcium Phosphate, Dibasic, solid	1 year	-3.3	-0.6	Unchanged
Calcium Phosphate, Tribasic, solid	1 year	-3.7	-0.9	Unchanged
Calcium Sulfate, solid	1 year	-0.2	-0.4	Unchanged
Cupric Sulfate, 10%	2 months	3.5	1.8	Unchanged
Cupric Sulfate, saturated solution	2 months	3.1	1.7	Unchanged
Cuprous Chloride, saturated solution	1 week	2.3	2.8	Unchanged
Ferric Chloride, 5%	2 months	2.9	2.1	Unchanged
Ferric Chloride, 20%	2 months	2.5	1.9	Unchanged
Ferric Chloride, 40%	2 months	2.8	0.5	Unchanged
Ferric Chloride, saturated solution	1 week			Surface tacky
Magnesium Chloride, solid	2 days	2.9	1.6	Unchanged
Magnesium Sulfate, solid	2 days	3.1	1.8	Unchanged
Mercuric Chloride, 5%	2 days	5.9	1.8	Unchanged
Potassium Aluminum Sulfate, 21%	4 months (38°C, 100°F)	3.9	2.6	Surface attacked slightly
Potassium Chloride, solid	1 year	0.0	0.8	Unchanged
Potassium Chloride, 10%	1 year	3.3	1.3	Unchanged
Potassium Cyanide, 10%	2 months	-5.8	-4.8	Discolored and softened
Potassium Cyanide, saturated solution	2 months	-1.2	-2.9	Discolored and softened
Potassium lodide, saturated solution	3 days			Stained yellow
Potassium Permanganate, saturated solution	2 days	3.3	1.4	Stained black
Potassium Sulfate, solid	1 year	0.1	0.4	Unchanged
Potassium Sulfate, 10%	1 year	2.6	1.5	Unchanged
Silver Nitrate, 3%	2 days	2.0	0.6	Slightly softened
Sodium Bicarbonate, solid	2 days	3.0	1.6	Unchanged
Sodium Bisulfite, 20%	1 week	4.0	2.4	Unchanged
Sodium Borate, 2.5%	2 days	2.9	1.6	Unchanged
Sodium Carbonate, solid	4 days	-0.1	-0.1	Unchanged
Sodium Carbonate, 2.5%	1 year	-8.7	-2.3	Slightly softened
Sodium Chloride, 10%	1 year	2.5	1.5	Unchanged
Sodium Chloride, saturated solution	2 months	1.3	0.5	Unchanged
Sodium Chloride, saturated solution	2 months (60°C. 140°F)	1.0	-0.5	Unchanged
• Sodium Cyanide, 10%	2 months	-4.2	-5.6	Discolored, softened
Sodium Cyanide, saturated solution	2 months	-0.8	-2.6	Discolored, softened

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Salts (Continued)				
Sodium Ferrocyanide, solid	1 week	0.4	0.0	Unchanged
Sodium Fluoride, 4%	1 month	3.6		Unchanged
Sodium Hypochlorite, 5%	2 days	0.9	0.4	Softened, surface attacked
Sodium Nitrate, solid	2 months	-0.3	-0.2	Unchanged
Sodium Nitrate, 10%	1 year	2.6	1.5	Unchanged
Sodium Nitrate, saturated solution	2 months	1.5	0.9	Unchanged
Sodium Nitrite, solid	2 months	-0.4	-0.4	Unchanged
Sodium Nitrite, saturated solution	2 months	0.8	0.3	Unchanged
Sodium Silicate, solid	2 months	0.6	0.2	Etched
Sodium Silicate, saturated solution	2 months	-0.3	-2.6	Softened
Trimethylbenzyl Ammonium Chloride, 5%	17 days	0.6	3.2	Unchanged
Zinc Chloride, hydrous salt	1 week	0.9	0.0	Unchanged
Zinc Chloride, saturated solution	1 week			Dissolved
Miscellaneous Chemicals, Compou	nds, and Gases			
Ammoniated Mercury	1 week (60°C, 140°F)			Unchanged
• Aniline				Dissolved
Carbon Disulfide	1 month	0.6	1.9	Unchanged
Carbon Disulfide, saturated atmosphere	2 days	5.9	2.4	Unchanged
Chlorine, dry	1 week	3.6	0.8	Crazed and brittle
Chlorine, moist	1 week	3.0	0.1	Crazed and brittle
Chlorine, saturated solution	1 week			Softened and considerably swollen
• Ethylene Oxide, gas	1 day	18.5	39.7	Softened and swollen
• Eugenol				Dissolved
• Formaldehyde, 35%	1 week	11.8	0.9	Softened and swollen
Hydrogen Sulfide, dry	1 month	1.1	0.8	Unchanged
Hydrogen Sulfide, moist	2 months	4.0	2.3	Unchanged
Hydrogen Sulfide, saturated solution	2 months	1.6	2.2	Unchanged
Hydroquinone, 20 g/gal	1 week	5.6	3.1	Stained light yellow
Iodine, saturated solution	2 days	2.5	0.8	Stained light brown
Nitrobenzene	3 days			Softened, swollen, and badly warped
Phenol, 5%	1 week			Decomposed
Sulfur Dioxide, dry	2 months	17.3	11.6	Swollen and warped
Sulfur Dioxide, moist	2 months	13.5	9.7	Swollen and warped
Sulfur Dioxide, saturated solution	2 months	10.6	13.5	Swollen and considerably warped
Titanium Tetrachloride	3 days			Very brittle
Triethanolamine	1 week	11.7	24.9	Badly softened
• Triethanolamine, 10%	1 week	-5.2	0.7	Softened, surface attacked

		Percen	t Increase	Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
COMMERCIAL AND NATUR	AL PRODUCTS			
Aeronautical and Automotive Items	5			
GASOLINES:				
Amoco Regular	1 year	-2.8	-0.2	Stained light yellow
Amoco Premium	1 year	-2.9	-0.1	Unchanged
Aviation, 100 Octane (Standard Oil Company)	1 year	-4.4	-1.1	Slightly stained
<i>Exxon</i> Extra	1 year	-2.6	0.0	Stained yellow
<i>Exxon</i> Regular	1 year	-2.3	-0.2	Stained yellow
Shell High-Test	1 year	-2.3	-0.0	Stained yellow
Shell Regular	1 year	-1.9	-0.1	Stained yellow
Texaco Fire Chief	1 year	-2.5	-0.2	Stained yellow
Texaco Sky Chief	1 year	-3.4	-0.0	Stained light yellow
HYDRAULIC FLUIDS:				
Skydrol	1 year	-1.1	-0.2	Unchanged
Skydrol 500	1 year	1.2	0.4	Surface dulled
Jet Propulsion Fuel 3 (Humble Oil Company)	1 year	-6.0	-1.6	Unchanged
Kerosene	1 week	-0.8	-1.9	Unchanged
OILS:				
Aeroshell No. 12	1 year	-6.0	-2.0	Unchanged
Purol HD, SAE 10	6 months	-0.3		Unchanged
Shell Diala Oil AX	2 months	-1.7	-0.8	No change
Socony Oil DTE Heavy Medium Special	3 days	-0.1	-0.1	Unchanged
<i>Texaco</i> #50, 1692 Low-Temperature Oil, MIL-L-644B	4 weeks (50°C, 122°F)	-1.9	-0.3	
Nonautomotive Greases and Oils				
ESSENTIAL OILS:				
Bitter Almonds		_	_	Dissolved
Borneol, 50% in n-Butanol	2 days	0.1	0.3	Unchanged
Citronella	2 days	0.6	0.3	Unchanged
Cloves				Dissolved
Eucalyptus	2 days	0.3	0.1	Unchanged
Lemon	2 days	0.3	0.1	Unchanged
Menthol, 50% in n-Butanol	2 days	0.0	0.2	Unchanged
Palmarosa	2 days	1.0	0.5	Unchanged
Pennyroyal	2 days	1.0	0.6	Unchanged
Spearmint	7 days			Unchanged
Terpineol	2 days	0.1	0.1	Unchanged
Thyme (White)	2 days	0.4	0.1	Unchanged
Turpentine	1 year	-0.9	0.2	Unchanged
Wintergreen	2 days	2.7	1.6	Surface attacked slightly
Mineral Oil	4 months	-2.2	-1.0	Unchanged
Sour Crude Oil	1 year	-3.2	-1.3	Slightly stained

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Nonautomotive Greases and Oils ((Continued)			
Sperm Oil	1 week (90°C, 194°F)	-4.0	0.0	Slightly warped
Transformer Oil, G.E., No. 10-C	1 week (82°C, 180°F)	-2.9	0.6	Unchanged
Transformer Oil, Pyranol	1 week (90°C, 194°F)	-3.6	0.0	Unchanged
Household Items				5
Bacon	3 weeks (in refrigerator)	_		Unchanged
Butter	3 days			Unchanged
Carbolic Acid, 5%	1 week			Decomposed
Catsup	1 week			Slightly stained
Clorox Solution	2 days			Badly softened
Coffee Grounds	3 days			Unchanged
Colgate Dental Cream	2 days			Unchanged
Cologne Sticks	1 day			Badly warped
Coty Bath Salts	1 day			Softened and swollen
Coty Lipstick	40 days			Slightly brittle and slightly stained
Coty Lipstick Pomade	28 days			Unchanged
Dole Frozen Pineapple concentrate	1 week	1.9	1.0	Unchanged
Dreft Detergent, 5%	2 months	0.9	1.3	Unchanged
Hershey's Chocolate Syrup	1 week	1.7	0.7	Unchanged
Hind's Honey & Almond Cream	1 week	1.8	4.3	Slightly warped
Horseradish	3 days			Unchanged
Hydrogen Peroxide, 3%	1 year	4.5	3.0	Bleached and softened
Hydrogen Peroxide, 5%	2 days	3.1	1.7	Slightly Bleached
Iced Coffee	1 week	1.9	0.9	Stained
Iced Tea	1 week	2.0	1.0	Unchanged
• Joy Detergent	2 months	-3.3	10.1	Swollen and slightly warped
Joy Detergent, 10%	2 months	-0.3	1.8	Unchanged
Kool-Aid Soft Drink Mix	3 days			Surface attacked slightly
Lard	3 days			Unchanged
Lemon Juice	1 week	4.3	4.0	Unchanged
Lemonade	1 week	2.5	1.4	Unchanged
• Lysol	1 year			Badly softened
Max Factor Powder Base Cream	3 days			Unchanged
Mayonnaise	3 days			Unchanged
Mennen Shave Cream	2 days			Unchanged
Mercurochrome	2 days	3.3	1.5	Stained light pink
Milk	3 days			Unchanged
MINUTE MAID FROZEN CONCENTRATES:	<u> </u>			
Grapefruit	1 week	1.9	0.6	Unchanged
Orange	1 week	2.0	0.9	Unchanged
Tangerine	1 week	1.9	0.7	Unchanged
Lemonade	1 week	1.8	0.9	Unchanged

• Indicates that material is generally unsatisfactory for use in contact with Tenite acetate under the conditions of this test.

		Percent Increase		Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Household Items (Continued)				
Mustard	2 days	2.8	1.4	Stained
Oleomargarine	3 days			Unchanged
Orange Juice Concentrate	3 days			Unchanged
Peanut Butter	3 days			Unchanged
Ronsonol Lighter Fluid	1 year	-5.9	-1.3	Softened and etched
Soap, 10%	1 day (88°C, 190°F)		4.1	
Stanley Floor Cleaner	1 week	1.0	0.1	Softened
Stokely's Orange Juice	1 week	2.5	1.4	Unchanged
Temp Cleaner	1 day			Unchanged
Tide Detergent, 5%	2 months	0.1	1.2	Slightly warped
Tomato Juice (Campbell's)	1 week	2.1	1.5	Unchanged
Toni Wave Lotion	3 days	4.7	0.9	Unchanged
Toni Wave Lotion Neutralizer	3 days	3.2	1.3	Unchanged
Vicks Decongestant	2 days (50°C, 122°F)	1.1	2.2	Badly stained
Watkins Fly Spray	2 months	-1.3	0.0	Unchanged
Welch's Frozen Grape Juice Concentrate	1 week	1.7	1.0	Unchanged
Welch's Grape Juice	1 week	2.3	1.0	Unchanged
Miscellaneous				
Blood	1 week	—	—	Unchanged
Budweiser Lager Beer	1 week	5.3	3.9	Swollen
Canada Balsam	3 weeks	-0.0	0.0	
• Carboseal Gas Antileak Compound, liquid	2 months (38°C, 100°F)	26.6	22.5	Swollen, softened, and stained
Carboseal Gas Antileak Compound, vapor	2 months (38°C, 100°F)	2.8	0.8	Slightly stained
Caulking Compound (average of five brands)	1 week (60°C, 140°F)	-2.7	-0.1	Unchanged
Chlordane, 20%	3 days	1.8	3.2	Unchanged
Coca-Cola Syrup Concentrate	1 year	0.3	1.3	Stained slightly
Creosote	8 months	-2.7	0.7	Unchanged
• 2,4-D (Amine Type, 14% free acid)	2 months	1.6	3.0	Swollen, softened, and warped
2,4-D, 4 tablespoons/gal	2 months	2.8	1.9	Very slightly softened
DDT, solid	1 week	0.2	0.0	Unchanged
DDT, 6% in Flit Insect Spray	1 week	0.4	0.4	Unchanged
End-O-Weed Weed Killer (Ester Type, 12.7% free acid)	2 months	2.8	-0.5	Very slightly softened
INKS:				
Carter's No. 10856 Ball Point	2 months	2.1	5.1	Stained blue
Parker Superchrome	2 days (38°C, 100°F)	—	—	Swollen, stained
Sanford's Black Marking	3 days	—	—	Very slightly stained
Sanford's Dri-Line Black Marking	3 days	—	—	Stained red
Sheaffer's Skrip	1 month	1.1	5.8	Stained
Latex Emulsion	1 year	-6.0	-2.2	Unchanged
Mineral Spirits	10 days	-6.5	-1.4	Unchanged
Mortemoth Insecticide, liquid	2 months	1.7	0.7	Unchanged
Naphtha, Industrial	1 month	-3.2	-0.8	Unchanged

		Percen	it Increase	Observed Condition
Reagent	Time Exposed	Weight	Thickness	of Plastic
Miscellaneous (Continued)				
PAINTS:				
Du Pont Dulux Outside Yellow Enamel (Oil base)	1 week	-1.5	-0.3	Unchanged
Kemtone	1 day			Unchanged
Pittsburgh Semi-Gloss White (Oil base)	1 week	-1.2	-0.4	Unchanged
PHOTOGRAPHIC PRODUCTS (All Kodak Bi	and):			
Acid Fixer	1 week	4.5	2.6	Unchanged
D-72 Developer	1 week	3.4	2.5	Slightly softened
DK-50 Developer	1 week	4.6	2.9	Stained light amber
Polycarbonate Plastic (Lexan)	3 days (38°C, 100°F, 80% RH)			Unchanged (polycarbonate softened, cracked when flexed)
Quinine	2 days (49°C, 120°F)			Unchanged
REFRIGERANTS:				
Freon 11	2 hours			Showed exudation
Freon 12, gas	1 month	0.3	0.2	Unchanged
Freon 12, liquid	1 month	-3.4	-1.1	Unchanged
Freon 22, gas	1 month	2.7	0.7	Unchanged
• Freon 22, liquid				Dissolved
Freon 114, gas	1 month	0.4	0.1	Unchanged
Freon 114, liquid	1 month	0.6	0.6	Unchanged
Solvex Maintenance Scale Retarder, 2 lb/10 gal	1 month	-1.3	-1.0	Unchanged
Stoddard Solvent	3 days	-0.1	0.0	Unchanged
Super Market Fly Spray	1 week	0.1	0.0	Unchanged
Taxite Paint and Varnish Remover	1 day			Swollen, partially dissolved
Toxaphine, 61% (12% solution)	3 days (38°C, 100°F)	1.9	2.5	Unchanged
<i>Ultra Solvex</i> Descaling Agent, 3 lb/10 gal	1 month	3.0	1.5	Unchanged
Varsol No. 2 Solvent	1 week	-1.6	-0.3	Unchanged
Water	1 year	3.1	2.0	Unchanged
Weed-B-Gon Weed Killer (Ester Type, 13.8% free acid)	1 month	1.9	1.7	Unchanged
<i>Weed-B-Gon</i> Weed Killer, 2½ tablespoons/gal	1 month	3.3	1.6	Unchanged

EASTMAN

NORTH AMERICA

Eastman Chemical Company Corporate Headquarters

P.O. Box 431 Kingsport, TN 37662-5280 U.S.A.

Telephone: U.S.A. and Canada, 800-EASTMAN (800-327-8626) Other Locations (1) 423-229-2000 Fax: (1) 423-229-1673

http://www.eastman.com

LATIN AMERICA

Eastman Chemical Mexicana, S.A. de C.V.

Insurgentes Sur No. 1106, Piso 7 Col. Nochebuena Deleg. Benito Juarez Mexico, D.F. 03720 MEXICO

Telephone: (525) 559-7511 Fax: (525) 559-4007

EUROPE / MIDDLE EAST / AFRICA

Eastman Chemical, Europe, Middle East, and Africa Ltd. Tobias Asserlaan 5 2517 KC The Hague NETHERLANDS

Telephone: (31) 70 370 1711 Fax: (31) 70 370 1704

ASIA PACIFIC

Eastman Chemical Japan Ltd.

Yebisu Garden Place Tower, 32F 4-20-3 Ebisu Shibuya-ku, Tokyo 150 JAPAN

Telephone: (81) 3-5424-1551 Fax: (81) 3-5424-1590

Eastman Chemical Ltd.

(Incorporated in U.S.A.) Singapore Branch #05-04 Winsland House 3 Killiney Road Singapore 239519 SINGAPORE

Telephone: (65) 738-4877 Fax: (65) 732-4930 Material Safety Data Sheets providing safety precautions that should be observed in handling and storing Eastman products are available on request. You should obtain and review the available material safety information before handling any of these products. If any materials are mentioned that are not Eastman products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed.

Neither Eastman Chemical Company nor its marketing affiliates shall be responsible for the use of this information, or of any product, method, or apparatus mentioned, and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and for the health and safety of your employees and purchasers of your products. No warranty is made of the merchantability or fitness of any product, and nothing herein waives any of the Seller's conditions of sale.

Tenite is a trademark of Eastman Chemical Company.

© Eastman Chemical Company, 1996.

Publication PP-101B November 1996