

TECHNICAL SERVICE from TITANOX

Prepared for: Mr. N. Petro
Glidden-Durkee Div., SCM Corp.



1. R-4 Has E864 is better than AC-25 or AC-385 for chalk adhesion but not satisfactory.
E864 mixed with epoxy substrate.

PROJECTS — START STABILITY IMPROVEMENT OF NOROCIDE N96 IN ALL PRODUCTS.

7. GRAMOLA 80 [#] AC411C + 20 ALKYD			
MJT	CNF 208 FUNGICIDE	10 [#] + 50 [#] ZnO	= <u>MILDEW</u> 10
	NOROCIDE N96	NO ZnO	= 10
	ADUACIDE 348	NO ZnO	= 5
	8 [#] SUPER ADIT	CONTROL	= 8
	NO FUNGICIDE	"	= 5
	S 13	4 [#] DAY	= 10
	XD 7603L	3 [#] WET	= 10
	HORLO N96	7 1/2 [#]	= 10

SERIES: LP 1039-40

EXPOSURE TIME 2 MONTHS.

		* ORIGINAL DISAPPEARED 3 months
LATEX PRIMER		
DYPHOS	—	
NALZIN SC-1	— X	
HALOX	— X	
PZ-26	—	
NALTHANE 200	—	
CONTROL	— X	

INCREASING LEVELS OF TiO_2 IN LATEX PAINTS

Object of test: To determine the effect amounts of titanium dioxide have on the chalk resistance of latex paints.

Exposed: August 1967 (Vertical South and North)
 Surface: Cedar
 Applied: One coat over alkyd primer
 Color: Blue

Vinyl Copolymer - 30% P.V.C.

<u>1.5#s</u>	<u>2.0#s</u>	<u>2.5#s</u>	<u>3.0#s TiO_2</u>	
P-843	A	B	C	"TITANOX" 2060
P-844	A	B	C	"TITANOX" 2062
P-845	A	B	C	"TITANOX" 2030

Acrylic - 30% P.V.C.

P-846	A	B	C	"TITANOX" 2060
P-847	A	B	C	"TITANOX" 2062
P-848	A	B	C	"TITANOX" 2030

Vinyl-Copolymer: TiO_2 + Minex 4
 75% Everflex BG
 25% Aroplaz 1271

Acrylic: TiO_2 + Minex 4
 80% AC-35
 20% Aroplaz 1271

Primer: 200# "TITANOX" 2033
 225# Magnesium Silicate
 67% Flat Alkyd
 33% Long Oil Alkyd
 40% P.V.C.

"TITANOX" 2020 EXPOSURES

Object of Test: To compare "TITANOX" 2020 with various competitive grades for appearance and general durability.

Exposed: November 12, 1970
 Surface: Plywood
 Applied: 2 Coats - Brush and Drawdown
 Color: Gray

(Vertical South & North)
 (45° South)

Vinyl
Emulsion

T-897
 T-898
 T-899
 T-900

T-901
 T-902
 T-903

Acrylic
Emulsion

T-904
 T-905
 T-906
 T-907

T-908
 T-909
 T-910

"TITANOX" 2020
 TiPure R-902
 Unitane OR-600
 TiPure R-960

"TITANOX" CL-NC
 "TITANOX" 2020
 "TITANOX" RANG-I

Vinyl:

200# TiO₂
 135# Calcium Carbonate
 75% Flexbond 860
 25% Aroplaz 1271
 30% P.V.C.

Acrylic:

200# TiO₂
 135# Calcium Carbonate
 80% AC-35
 20% Aroplaz 1271
 30% P.V.C.

"TITANOX" PIGMENT EXPOSURES

Object of test: To compare various "TITANOX" grades with competitive types for appearance and general durability.

Exposed: October 1968
 Surface: M.D. Plywood
 Applied: 2 Coats
 Color: Gray

(90° South)

AcrylicVinyl

S-257	S-268	TiPure R-902
S-258	S-269	"TX" 2020
S-259	S-270	"TX" 2060
S-260	S-271	OR-600
S-261	S-272	TiPure R-960
S-262	S-273	"TX" 2062
S-263	S-274	"TX" 2033
S-264	S-275	Unitane OR-650

Acrylic

200# TiO₂ 85% AC-388
 135# Ca. Carb. 15% Aroplaz 1271
 30% Pigment Volume

Vinyl
Copolymer

200# TiO₂ 75% Flexbond 860
 100# Ca. Carb. 25% Aroplaz 1271
 30% Pigment Volume

COMMERCIAL OIL & LATEX PAINTS

Object of Test: To compare the durability and weathering characteristics of commercial oil systems with commercial latex systems.

Exposed: October 1970 (Vertical South & North)
 Surface: Yellow Pine - White Paints
 Cedar - Tinted Paints
 Applied: 2 Coats and 1 coat over recommended primer

White				Tint			
Oil		Latex		Oil		Latex	
Self-Primed	Over Primer	Over Primer	Self-Primed	Self-Primed	Over Primer	Over Primer	Self-Primed
T-825	A	B*	T-826 <i>GRAIN</i>	T-841	A	B*	T-842 N L Industries
T-827	A	B	T-828 <i>CRACK</i>	T-843	A	B	T-844 Sherwin-Williams
T-829	A	B	T-830	T-845	A	B	T-846 <i>CR</i> Sears
T-831	A	B*	T-832	T-847	A	B*	T-848 <i>OK</i> Montgomery Ward
T-833	A	B*	T-834 <i>OK</i>	T-849	A	B*	T-850 Pratt & Lambert
T-835	A	B	T-836 <i>CR</i>	T-851	A	B	T-852 Benjamin Moore
T-837	A	B	T-838 <i>CR</i>	T-853	A	B	T-854 P. P. G. <i>STAINING</i>
T-839	A	B	T-840 <i>GRAIN CRACK</i>	T-855	A	B	T-856 Glidden

* Acrylic Emulsion Primer

SL STAINING @ BOTTOM OF BOARD.

PRATT & LAMB + P.P.G. USE MICA IN TINTS.

WITH SIDE OVER PRIMER B PP6 HAS BEST HIDE RESISTANCE

1971 U.S. COMMERCIALS

Object of Test: To compare the durability and weathering characteristics of commercial oil systems with commercial latex systems.

Exposed: November 1971 (Vertical South & North)
 Surface: Novelty Yellow Pine-White Paints
 Cedar -Tinted Paints
 Applied: 2 Coats and 1 coat over recommended primer

Self-Primed	(Oil Over Primer)	(White Latex Over Primer)	Self-Primed	
U-569	A	B*	U-570	CR Dutch Boy
U-571	A 2 AYD	B*	U-572	Sherwin-Williams
U-573	A	B	U-574	CR Sears
U-575	A	B*	U-576	Wards
U-577	A	B*	U-578	Pittsburgh CR-9
U-579	A	B*	U-580	M-80 Moore CR-5
U-581	A	B*	U-582	M-80 Devoe
U-583	M-950 A M-50	B	U-584	M-80 Glidden CR 6

WHITENESS ALL 9.10. U1 TO 4.578
 Tints

Self-Primed	Oil Over Primer	Latex Over Primer	Self-Primed	
U-585	A	B*	U-586	Dutch Boy
U-587	A*	B*	U-588	Sherwin-Williams
U-589	A	B	U-590	Sears
U-591	A	B*	U-592	Wards
U-593	A	B*	U-594	Pittsburgh
U-595	A	B*	U-596	Moore
U-597	A	B*	U-598	Devoe
U-599	A	B	U-600	Glidden

*Water thinned latex primer

1972 U.S. COMMERCIALS

LP-1038-14

Exposed: October 1972

90° #1

Surface: Novelty Yellow Pine- White Paints
Cedar - Tinted Paints

Applied: 2 coats and 1 coat over recommended primer

<u>White</u>			
<u>Oil</u>		<u>Latex</u>	
<u>Self-Primed</u>	<u>Over Primer</u>	<u>Over Primer</u>	<u>Self-Primed</u>
V-009	A	B*	V-010 M-8 Dutch Boy
V-011	A	B	V-012 Sherwin-Williams
V-013	A	B	V-014 Sears
V-015	A	B*	V-016 Wards
V-017	A	B CR-8	V-018 Glidden CR-6
V-019	A	B*	V-020 PPG
V-021	A	B	V-022 Moore
V-023	A	B	V-024 Devco
V-025	A	B*	V-026 Conchemco
V-027	A	B* CR-8	V-028 O'Brien CR-6

<u>Tints</u>			
<u>Oil</u>		<u>Latex</u>	
<u>Self-Primed</u>	<u>Over Primer</u>	<u>Over Primer</u>	<u>Self-Primed</u>
V-029	A	B* OK	V-030 Dutch Boy
V-031	A	B OK	V-032 Sherwin-Williams
V-033	A	B OK	V-034 Sears
V-035	A	B* OK	V-036 Wards
V-037	A	B OK	V-038 Glidden
V-039	A	B* OK	V-040 PPG
V-041	A	B OK	V-042 Moore
V-043	A	B OK	V-044 Devco
V-045	A	B* OK	V-046 Conchemco
V-047	A	B* OK	V-048 O'Brien

* Water thinned latex primer

NORTH SIDE - SW ONLY ONE DAY ALL OTHERS WET.

GLD006355

U.S. COMMERCIAL PAINTS

LP-1038-14

Exposed: November 1972 (Vertical South & North) 90° #1
Surface: Yellow Pine - White Paints
Cedar - Green Paints
Applied: Two coats & 1 coat over recommended primer

WHITE

<u>Self-Primed</u>	<u>Over Primer</u>			SELF PRIMED
V-098	A	Glidden	Y-1800 oil	
V-099	B	"	Y-3600 latex	CA-6
V-100	A	PPG	1-845 oil	
V-101	B*	"	70-110 latex	
V-102	A	S-W	Kem-1-Coat alkyd	
V-103	B	Sears	Weatherbeater latex	
V-104	A	Kurfees	735-01 oil	
V-105	B	"	625-01 latex	
V-106	A*	O'Brien	A61-00 latex (Hg Free)	
V-107	B*	"	A61-00 latex (Std.)	CA-2

TINTS

<u>Self-Primed</u>	<u>Over Primer</u>		
V-108	A*	O'Brien	A61-81 latex
V-109	B*	"	A61-06 latex (Hg. Free)
V-110	A	PPG	1-815 oil
V-111	B	Sears	Weatherbeater latex
V-112	A	Kurfees	735-91 oil
V-113	B	"	625-91 latex

* Water thinned latex primer.

1973 U.S. COMMERCIALS

LP-1038-15

Exposed: October 1973 (54)
 Surface: Novelty Yellow Pine - Whites
 Cedar - Tints
 Applied: 2 coats self-primed and 1 coat over recommended primer

<u>Oil</u>		<u>White</u>		<u>Latex</u>	
<u>Self-Primed</u>	<u>Over Primer</u>	<u>Over Primer</u>	<u>Self-Primed</u>		
V-634	A	B*	V-635	Dutch Boy	
V-636	A	B	V-637	Sherwin-Williams	
V-638	A	B	V-639	Sears	
V-640	A	B*	V-641	Wards	
V-642	A	B	V-643	Glidden	
V-644	A	B*	V-645	PPG	
V-646	A	B	V-647	Moore	
V-648	A	B	V-649	Devoe	
V-650	A	B*	V-651	Conchemco	
V-652	A	B*	V-653	O'Brien	
<u>Green</u>					
V-654	A	B*	V-655	Dutch Boy	
V-656	A	B	V-657	Sherwin-Williams	
V-658	A	B	V-659	Sears	
V-660	A	B*	V-661	Wards	
V-662	A	B	V-663	Glidden	BROWN STAIN RUN DOWN
V-664	A	B*	V-665	PPG	
V-666	A	B	V-667	Moore	
V-668	A	B	V-669	Devoe	
V-670	A	B*	V-671	Conchemco	
V-672	A	B*	V-673	O'Brien	

* Water thinned primer

GLD006357

EXTERIOR LATEX PAINTS

Object of Test: To determine the durability of various emulsion paints when applied on new wood.

EXPOSED: October 1968 (Vertical South and North)
 SURFACE: Novelty Yellow Pine
 APPLIED: Two Coats Self-Primed
 One Coat over Alkyd Primer
 COLOR: White and Blue

<u>Self-Primed</u>	<u>Over Primer</u>	<u>Vehicle</u>
S 282	S 283	Accoflex XL
S 284	S 285	Nelco PRE-902
S 286	S 287	Nelco PRE-903
S 288	S 289	Nelco 460
S 290	S 291	AC-35
S 292	S 293	Flexbound 860
S 294	S 295	Everflex BG
S 296	S 297	UCAR 360
Vinyl Copolymers:		200# "TITANOX" CL-NC 100# Ca Carbonate 75% Vinyl Latex 25% Aroplaz 1271 30% P.V.C.
Acrylic:		200# "TITANOX" CL-NC 135# Ca Carbonate 85% AC-35 15% Aroplaz 1271 30 P.V.C.
Alkyd Primer:		200# "TITANOX" RA-47 245# Mg. Silicate 60% Flat Alkyd 33% Long Oil Alkyd 40% P.V.C.

GLD006358

EXTERIOR LATEX PAINTS

Object of test: To determine the durability of various emulsion
paints when applied on new wood.

Exposed: November 1968 (Vertical South and North)
Surface: Novelty Yellow Pine
Applied: Two Coats Self-Primed
One Coat over Alkyd Primer
Color: White and Blue

<u>Self- Primed</u>	<u>Over Primer</u>	
S 314	S 315	AC-388
S 316	S 317	AC-35
S 318	S 319	Parcryn CA-53
S 320	S 321	Nelco M-306
S 322	S 323	Dow 49-49
S 324	S 325	Dow 354
S 326	S 327	BASF 290 D
S 328	S 329	Flexbond 860

Acrylic:	200# "TITANOX" CL-NC	85% Acrylic Latex
	135# Ca. Carb.	15% Aroplaz 1271
		30% P.V.C.

Vinyl Copolymer:	200# "TITANOX" CL-NC	75% Flexbond 860
	100# Ca. Carb.	25% Aroplaz 1271
		30% P.V.C.

Alkyd Primer:	200# "TITANOX" RA-47
	245# Mg. Sil.
	67% Flat Alkyd
	33% Long Oil Alkyd
	40% P.V.C.

LATEX VEHICLE STUDY

Object of test: To compare the durability and tint retention of several latex paints formulated with different latex emulsion vehicles.

Exposed: November 1972 (Vertical South & North)
 Surface: Yellow Pine and Cedar
 Applied: 2 coats and 1 coat over alkyd primer
 Color: White & Blue

<u>White</u>		<u>Blue</u>		
<u>Self-Primed</u>	<u>Over Primer</u>	<u>Self-Primed</u>	<u>Over Primer</u>	
V-132	A	V-144	A	Rhoplex AC-388
V-133	A	V-145	A	Parcryn 400
V-134	A	V-146	A	Rhoplex AC-35
V-135	A	V-147	A	Parcryn 300
V-136	A	V-148	A	Flexbond 860
V-137	A	V-149	A	AG. FIDE Celanese 21139-12 p 6510
V-138	A	V-150	A	Flexbond 860
V-139	A	V-151	A	Everflex BG
V-140	A	V-152	A	Resyn 2345
V-141	A	V-153	A	Polyco 2158
V-142	A	V-154	A	Ucar 365
V-143	A	V-155	A	Ucar 366

PARCYN 400 = COMPAREABLE TO AC-388
 1330 300 = AC-35

Primer: 200# "TX" 2030
 250# Mg S11
 50% Flat Alkyd
 50% Long Oil Alkyd
 40% P.V.C.

White: 250# "TX" 2030
 240# Asbestine 3X
 80% Latex Emulsion
 20% Aroplaz 1271
 45% P.V.C.

Blue: 200# "TX" 2060
 180# Duramite
 80% Latex Emulsion
 20% Aroplaz 1271
 35% P.V.C.

EXTENDER STUDY IN DEEP-TINT LATEX PAINTS

Object of Test: To demonstrate the effect of the extender and the method of application on the development of "Frosting".

Exposed: February 1971
Surface: Cedar
Applied: As Indicated
Color: Brown

Vertical North

1 Coat Over Latex Primer	2 Coats Self-Primed	1 Coat Over Alkyd Primer	Extender
U-137 <i>POOR</i>	U-138 <i>POOR</i>	U-139 <i>GOOD</i>	Duramite
U-140 <i>FAIR</i>	U-141 <i>POOR</i>	U-142 <i>POOR</i>	Minex 4 <i>POOR</i>
U-143 <i>FAIR</i>	U-144 <i>POOR</i>	U-145 <i>OK</i>	Imsil O
U-146 <i>FAIR</i>	U-147 <i>POOR</i>	U-148 <i>GOOD</i>	Asbestine 325

Acrylic Topcoat:

25# "TITANOX" 2020
150# Napico Brown 422
Extender
80% AC-388
20% Aroplaz 1271
35% P.V.C.

MINIX 4 HAS POOR WATER RESISTANCE

Latex Primer:

200# "TITANOX" 2030
75# Dypnos PG
65# Asbestine 325
85% AC-388
15% Aroplaz 1271
25% P.V.C.

Alkyd Primer:

200# "TITANOX" 2030
250# Asbestine 3X
50% Wallkyd 1952
50% Beckosol P-470
40% P.V.C.

*IN COATING LEAD, LEAD SALT CAN CORRODE (MIGRATE) ALONG THROUGH
THE FILM.
LEAD SULFATE FORMING THROUGH.*

 EXTERIOR LATEX PAINTS

Object of Test: To demonstrate the effect of various extenders at various pigment volumes on tint retention and durability.

EXPOSED: June 1968
 SURFACE: Cedar Siding
 APPLIED: One Coat over alkyd primer
 COLOR : Blue

(Vertical South & North)
 (45° South)

Pig: 200# "TITANOX" RA-47
 Extender

Veh: 75% Flexbond 860
 25% Aroplaz 1271

30% P.V.C.	40% P.V.C.	50% P.V.C.	60% P.V.C.	70% P.V.C.	Extender
R 947	A	B	C	D NO CHALK	Minex 4
R 948	A	B	C	D	Unimal 310 1037
R 949	A	B	C	D CHALK 1	Duramite
R 950	A	B	C	D	Asbestine 3X

BAD FINE @ 60 INCH
BAD FADING 13.00
SPRINK

Pig: 200# "TITANOX" RA-47
 Extender

Veh: 80% AC-388
 20% Aroplaz 1271

	A	B	C	D	Extender
R 951	A	B	C	D	Minex 4
R 952	A	B	C	D	Unimal 310
R 953	A	B	C	D	Duramite
R 954	A	B	C	D	Asbestine 3X

FAINT & HAS GOOD MIDDLE RESISTANCE

Primer: 200# "TITANOX" RA-47
 245# Magnesium Silicate
 67% Flat Alkyd
 33% Long Oil Alkyd
 40% P.V.C.

SEMI-GLOSS LATEX ENAMELS

Object of Test: To compare the durability and weathering characteristics
of commercial latex semi-gloss enamels.

EXPOSED: July 1969
SURFACE: M. D. Overlay Plywood
APPLIED: One Coat over Latex Primer
COLOR: White and as indicated

4.5°
(Vertical South)

WHITE

S 960	Gold Bond #132	S 966	#240 Red- National Gypsum
S 961	Viko #3300	S 967	#3364 Green- Brooklyn P & V
S 962	Lucite #1800C	S 968	#1803C Green- du Pont
S 963	Muralo #370	S 969	#367 Maroon- Norton & Sons
S 964	Dutch Boy #19-10	S 970	#19-82 Green- N L Industries
S 965	EL-1044	S 971	EL-1045 Green
T 117	#636	T 118	#638 Green- Sapolin
T 132	#670	T 133	#671 Lacquer Green- Foy Johnston

EL-1044 275# "TITANOX" CL-NC
50% AC-61
50% AC-490
24% P.V.C.

EL-1045 75# "TITANOX" CL-NC
100# Atomite
50% AC-61
50% AC-490
21% P.V.C.

Primer: 200# "TITANOX" RA-47
100# Amorphous Silica
85% AC-388
15% Aroplaz 1271
25% P.V.C.

LATEX ENAMELS

Object of test: To compare the durability and tint retention of commercial latex semi-gloss and full gloss enamels on exposure.

Exposed: October 1972 (45° South)
 Surface: Plywood & Novelty Y.P.
 Applied: One coat over recommended primer & 2 coats self-primed
 Color: White & Green

<u>White</u>	<u>Primer</u>	<u>Green</u>
V-069 Dutch Boy 19-10	028	V-082 Dutch Boy 19-84
V-070 Sears 3201	2490	V-083 Sears 32825
V-071 Sears 33015	2490	V-084 Sears 33825
V-072 Glidden Y-3670	Y-1851	V-085 Glidden Y-3677 = OK
V-073 Glidden RFT-73002	Y-1851 <i>CHALK 4</i>	V-086 Glidden RFT-73002 <i>DAN HIGH</i>
V-074 PPG 70-352	CP-2245	V-087 PPG 70-650
V-075 Moore's 13101	10000	V-088 Moore's 13141H
V-076 Devoe 1701	1502	V-089 Devoe L-12597-1
V-077 Conchemco 7200	7411	V-090 Conchemco 7210
V-078 O'Brien A64-00	A20-08	V-091 O'Brien A64-81
V-079 Wards 531	180	V-092 Wards 595
V-080 S-W A8WA11	A2W5	V-093 S-W A8WA11
V-081 Grow 7902	MW-2177	V-094 Grow 7955
V-120 Foy 670	MW-2177	V-095 Foy 671
V-128 Dutch Boy 210 Alkyd	018	V-129 Dutch Boy 284 Alkyd
V-130 EL-1044	MW-2177	V-131 EL-1045
V-168 Porter 620	MW-2177	V-169 Porter 619
V-170 Cook 827-W-156	MW-2177	V-171 Cook 827-G-154

V3670 *NEED TO IMPROVE DIRT RESISTANCE BU,*
 MW-2177 Primer: 200# "TITANOX" 2030
 250# Mg Sil
 50% Flat Alkyd
 50% Long Oil Alkyd
 40% P.V.C.

EL-1044 275# "TITANOX" 2060
 100% AC-507
 24% P.V.C.

EL-1045: 75# "TITANOX" 2060
 100# Minex 7
 100% AC-507
 21% P.V.C.

OK in general as compet.
 THE FLATTING EFFECT DUE TO
 HEAVY CHALK LAYER GAVE AN
 EXCELLENT UNIFORMITY FOR RFT-73002
 OVER WOOD GRAIN.

GLD006364

GLOSS LATEX PAINTS

Object of Test: To compare the gloss retention, durability and weathering characteristics of semi-gloss latex paints.

Exposed: January 1971
 Surface: Plywood
 Applied: 2 coats over alkyd primer
 Color : White and Blue

(Vertical South)
 (45° South)

WhiteBlue

U-104
 U-105
 U-106
 U-107
 U-108
 U-109

U-110
 U-111
 U-112
 U-113
 U-114
 U-115

CCM
 9
 7
 5
 9
 9
 Rhoplex AC-61
 AC-388
 AC-490
 AC-22
 AC-507
 Wallpol 40-134

CHALKS-6
CHALKS-9
CHALKS-6
CHALKS-7 NO SLOUGH
CHALKS-8
DIRTY

Latex Gloss 275# "TITANOX" CL-NC
 100% Latex Emulsion
 23% PVC

AC 507 best for gloss retention & tint retention

PAINTING OF WEATHERED FACTORY COATED SIDING

Object of test: To determine the adhesion of various conventional coatings to various types of pre-coated sidings.

Exposed: 1965 *PAINTED 1965* (Vertical South)
 Painted: October 1965 & June 1972
 Surface: Tedlar, vinyl, aluminum and pressed board - All Weathered
 Applied: One coat
 Color: White

S-306*	Sherwin-Williams Kem-1-Coat	Alkyd
S-307*	Sears #2900	Alkyd Modified Acrylic Latex
S-308*	350# "TITANOX" RA-47 (2030) 135# Mg. Silicate	85% AC-388 15% Aroplaz 1271 40% P.V.C.
S-309	25# "TITANOX" A-MP (1070) 225# "TITANOX" RA-47 (2030) 200# Mg. Silicate	85% AC-388 15% Aroplaz 1271 40% P.V.C.
S-310*	100# "TITANOX" A-MP (1070) 200# "TITANOX" RA-47 (2030) 220# Minex 4	75% Aroplaz 1248 25% Chlorowax 70 33% P.V.C.
S-311*	350# "TITANOX" RA-47 (2030) 90# Mg. Silicate	75% Flexbond 860 25% Aroplaz 1271
S-312	50# "TITANOX" A-MP (1070) 200# "TITANOX" RA-47 (2030) 155# Mg. Silicate	75% Flexbond 860 25% Aroplaz 1271 40% P.V.C.
S-313*	75# "TITANOX" A-MO (1060) 75# "TITANOX" RANC-I (2062) 300# Zinc Oxide 340# Mg. Silicate	66% Raw L.O. 34% "Z" Bod. L.O. 33% P.V.C.

* Indicates one coat applied June 1972

Sidings weathered 7 years prior to June 1972 painting

TEDLAR CHALKS HEAVILY.

PAINT PROTECTED BY OVERHANGING ROOF

Object of test: Evaluation of finishes for appearance when exposed under a wide eave.

EXPOSED: October 1968
 SURFACE: Cedar and Plywood
 APPLIED: One Coat over Alkyd Primer
 COLOR: White

Vertical North

S298	Sherwin-Williams Kem - 1 - Coat	Alkyd
S299	Sears #2900	Alkyd Modified Acrylic Latex
S300	25# "TITANOX" AMP 225# "TITANOX" RA-47 200# Mg. Silicate	85% AC-388 15% Aroplaz 1271 40% P.V.C.
S301	350# "TITANOX" RA-47 135# Mg. Silicate	85% AC-388 15% Aroplaz 1271 40% P.V.C.
S302	50# "TITANOX" AMP 200# "TITANOX" RA-47 155# Mg. Silicate	75% Flexbound 860 25% Aroplaz 1271 40% P.V.C.
S303	350# "TITANOX" RA-47 90# Mg. Silicate	75% Flexbound 860 25% Aroplaz 1271 40% P.V.C.
S304	100# "TITANOX" AMP 200# "TITANOX" RA-47 220# Minex 4	75% Aroplaz 1248 25% Chlorowax 70 33% P.V.C.
S305	75# "TITANOX" AMO 75# "TITANOX" RANC-I 300# Zinc Oxide 340# Mg. Silicate	66% Raw L.O. 34% Bod. L.O. 33% P.V.C.
Alkyd Primer: 200# "TITANOX" RA-47 245# Mg. Silicate 67% Flat Alkyd 33% Long Oil Alkyd 40% P.V.C.		

GLD006367

ONE COAT OIL-ALKYD HOUSE PAINTS

Object of test: To determine the effect of vehicle modifications on durability and appearance in a lead and zinc free house paint.

Exposed: March 1971 (Vertical South & North)
Surface: Novelty Yellow Pine
Applied: 2 coats
Color: White

Pigmentation: 50# "TITANOX" 1070
250# "TITANOX" 2020
315# Magnesium Silicate

U-149 25% Raw Linseed Oil
15% "Q" Bodied Linseed Oil
35% Aroplaz 1248
25% Chlorowax 70

U-150 U-149 with 5# Vancide PA for 20# Super Ad-It

U-151 U-150 with Syntex 3490 for Aroplaz 1248

U-152 15% "Q" Bodied Linseed Oil
60% Syntex 3490
25% Chlorowax 70

U-153 75% Syntex 3490
25% Chlorowax 70

Pigment Volume: 33%

GLD006368

EXTERIOR WHITE HOUSE PAINTS

Object of test: To compare a paint made according to Federal Specifications TT-P-102c with oil and alkyd base house paints for appearance and general durability on exterior exposure.

Exposed: July 1972 (Vertical South & North)
 Surface: Cedar and Yellow Pine
 Applied: 2 Coats self-primed and 1 coat over primer
 Color: White

Self-Primed

Over Primer

U-955	A	TT-P-00102c
U-956	A	TT-P-102a
U-957	A	TT-P-103b
U-958	A	MIL-52324
U-959	A	Benj. Moore 110-01

TT-P-00102c

150# "TX" 1070
 175# "TX" 2020
 125# Zinc Oxide
 200# Mg Sil
 100% Isophthalic Alkyd
 30.5% P.V.C.

TT-P-102a

160# "TX" 1070
 400# Leaded Zinc Oxide
 (35% Leaded)
 170# Basic Carb. Wt. Lead
 240# Mg Sil
 75% Refined L.O.
 25% Bodied L.O.
 31.0% P.V.C.

TT-P-103b

75# "TX" 1070
 75# "TX" 2062
 300# Zinc Oxide
 340# Mg Sil
 66% Raw L.O.
 34% Bodied L.O.
 31.5% P.V.C.

MIL-P-52324

154# "TX" 1070
 55# "TX" 2062
 200# Zinc Oxide
 310# Mg Sil
 55% Isophthalic Alkyd
 20% Bodied L.O.
 25% Refined L.O.

Primer

200# "TX" 2030
 300# Amorphous Silica
 100# Mg Sil
 42% Flat Alkyd Solution
 58% Long Oil Alkyd
 42.5% P.V.C.

EVALUATION OF VARIOUS MILDEWCIDES

Object of test: To determine the effectiveness of several fungicides in exterior latex films.

Exposed: August 1, 1972 *October 23, 1972
 Surface: White Pine
 Applied: 2 Coats self-primed
 Color: White

NORTH SIDE

<u>Acrylic Latex</u>		<u>Vinyl Copolymer</u>		<u>Preservative</u>
A	8	I	8	8# Super Ad-It
B	5	J	5	None
C	7	K	7	3# Amical 48
D	7	L	7	3# Amical 77
E	8	M	8	6# Triphenyltin Salicylate
F	8	N	9	6# Triphenyltin Chloride
G	10	O	10	7 1/2# Nopocide N-96
H	9	P	8	1# Skane M-8
Q*	9	S*	10	2# DOWICIL S-13
R*	10	T*	10	4# DOWICIL S-13

Acrylic

250# "TX" 2030
 240# Mg Sil
 80% AC-35
 20% Aroplaz 1271
 45% P.V.C.

Vinyl

250# "TX" 2030
 240# Mg Sil
 80% Flexbond 860
 20% Aroplaz 1271
 45% P.V.C.

Amical 48	- Abbott Laboratories
Amical 77	- " "
Triphenyltin Salicylate	- Vulcan Materials
Triphenyltin Chloride	- " "
Nopocide N-96	- Diamond Shamrock
Skane M-8	- Rohm & Haas
Dowicil S-13	- Dow Chemical Co.

GLD006370

NON-MERCURIAL FUNGICIDES

Object of test: To determine the effectiveness of two non-mercurial fungicides in exterior latex and solvent thinned paint films.

Exposed: June 1971 (Vertical South & North)
 Surface: White Pine and Plywood (45° South)
 Applied: 2 Coats and 1 coat over TT-P-25c primer
 Color: White

Acrylic Emulsion		Vinyl Emulsion		
U-245	8	U-251	8	8.0# Super Ad-It
U-246	6	U-252	6	No. Preservative
U-247	9	U-253	5	6.0# Abbott Laboratories #33877
U-248	9	U-254	8	9.0# "
U-249	9	U-255	9	12.0# "
U-250	9	U-256	9	9.0# " + 100# Zinc Oxide
U-245	8	U-251	9	8.0# Super Ad-It
U-246	6	U-252	6	No Preservative
U-257	5	U-261	5	6.0# Abbott Laboratories #A9248
U-258	6	U-262	8	9.0# "
U-259	7	U-263	9	12.0# "
U-260	8	U-264	9	9.0# " + 100# Zinc Oxide

Oil-Alkyd-Chlorowax

U-265	20.0# Super Ad-It
U-266	No Preservative
U-267	9.0# Abbott Laboratories #33877
U-268	12.5# "
U-269	19.0# "
U-270	9.0# " #A9248
U-271	12.5# "
U-272	19.0# "

Latex	250# "TITANOX" RA-47	Oil-Alkyd	50# "TITANOX" A-MP
Test	240# Asbestine 325	Chlorowax	250# "TITANOX" 2020
Formulation:	80% Latex Emulsion Test Formulation:		320# Asbestine 325
	20% Aroplax 1248		40% Linseed Oil
	45% P.V.C.		35% Aroplax 1248
			25% Chlorowax 70
			33% P.V.C.

AMICAL 77 IS SLIGHTLY CLEANER VS. 45

GLD006371

NON-MERCURIAL FUNGICIDE

Object of Test: To determine the effectiveness of a non-mercurial fungicide in latex paint films.

Exposed: February 1972

Surface: White Pine - Vertical South & North
Plywood - 45° South

Applied: 2 Coats and 1 coat over TT-P-25c Primer

Color: White

	<u>Acrylic</u>	<u>Vinyl-Copolymer</u>	<u>Preservative /100 Gals.</u>
8	U-678	8 U-683	8# Super Ad-It
5	U-679	5 U-684	None
6	U-680	6 U-685	1# Skane M-8
7	U-681	8.5 U-686	1# Skane M-8 + 50# ZnO
7	U-682	8.5 U-687	2# Skane M-8 + 50# ZnO

Pigmentation: 250# "TITANOX" 2030
240# Magnesium Silicate

Acrylic: 80% Rhoplex AC-35
20% Aroplaz 1271

Vinyl-Copolymer: 80% Flexbond 860
20% Aroplaz 1271

Pigment Volume 45%

EVIDENCE IS NO POINT IN USING 2# SKANE M-8 WITH 50# ZnO.

GLD006372