



AUTOMOTIVE FINISHES

REPRESENTATIVES CONFIDENTIAL PRICE LIST

EFFECTIVE APRIL 15, 1927

Subject to change without notice

TERMS:

One per cent for cash ten days from date of
invoice, or thirty days net



THE SHERWIN-WILLIAMS CO.

ADMINISTRATION OFFICES AND FACTORY: CLEVELAND, OHIO
SALES OFFICES AND WAREHOUSES IN PRINCIPAL CITIES

Lac. C (E) D27 670

0007-SWP-000011900

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OPEX AUTOMOTIVE FINISHES

This printing of the Opex Automotive Price List incorporates all the splendid development added to the line during the past year. The Chemical Products Department have done a wonderful job for us in research and formulation. Each and every product added has not only added prestige to Opex Automotive Finishes, but been a credit to Sherwin-Williams and all that good name represents.

The Manufacturing Department has given us the best and most complete line on the market. The question is, are we going to take full advantage of the unexcelled facilities at our command? We are better equipped with our unexcelled warehouse service and close contact with the trade to clearly dominate the automotive finishing business. There is no reason why we should not be first in this field in volume of sales as well as first in quality and service.



EFFICIENCY DATA

Inasmuch as the efficiency data incorporated in the previous automotive price list is now to be found in the Opex Representative's Sales Manual, it is not necessary to repeat it here, but for your ready reference we are listing below the subjects covered particularly relating to automotive finishes so that you may quickly turn to them in your B 476.

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OIL METAL PRIMERS

The above materials can be sprayed directly from the can or they can be slightly **REDUCED WITH TURPENTINE**. Oil Primer Red, White and Yellow, No. 36 air-dry in thirty-six hours, but where the shop is equipped with ovens for forced drying, will dry in five to six hours at 150 degrees Fahrenheit, or two to two and one-half hours at 250 degrees Fahrenheit. The Oil Primer Red, White and Yellow No. 12, air dry in twelve hours, and are designed especially for custom shops where there is no installation of equipment for forced drying.

It is recognized that for best results a long oil primer such as our No. 36 should be used, but where the trade demands a shorter drying product, namely twelve hours or over night, we have designed the No. 12 primer to meet this demand.

For your information and in order to avoid any misunderstanding, please be advised that all primers, surfacers, fillers, etc., of an oil nature (that is not of a pyroxylin or Opex nature) but for use under our Opex finishes will be classified in the series from Rx 28001 to Rx 28500.

Rex		Qts.	1's	5's
28002	Oil Metal Primer White No. 36.....	3 25	2 85	2 75
28003	Oil Metal Primer Yellow No. 36.....	3 25	2 85	2 75
28005	Oil Metal Primer White No. 12.....	3 25	2 85	2 75
28006	Oil Metal Primer Yellow No. 12.....	3 25	2 85	2 75
28001	Oil Metal Primer Red No. 36.....	2 75	2 35	2 25
28004	Oil Metal Primer Red No. 12.....	2 75	2 35	2 25

OIL GLAZING PUTTY

Oil Glazing Putty No. 16 is used for glazing an entire body to serve as a surfacer and then is sealed in with a coat of Oil Primer No. 12 or No. 36. Air dries in eight hours. Can be baked in four hours at 150 degrees Fahrenheit, or two hours at 250 degrees Fahrenheit. If Oil Glazing Putty No. 16 is to be reduced, turpentine should be used.

While Oil Glazing Putty No. 16 is the best there is for glazing an entire body either with a knife or with a gun, Oil Glazing Putty No. 25530 gives much better results for spot puttying. The latter air dries throughout in one-half the time required for No. 16 and can be put on twice as thick.

Rex		1's	5's	25's
25530	Glazing Putty (Oil Base).....			2
28016	Glazing Putty No. 16 (Oil Base).....	28	23	21

OIL UNDERCOATER THINNER

On oil undercoatings **TURPENTINE** is recommended as a thinner. Do not reduce oil undercoatings with Opex thinner.

OIL LIQUID SANDING SURFACER

An Oil Liquid Sanding Surfacers that is ready for spraying as it comes in the package. If reduced, turpentine only must be used. Air dries in six hours so that two coats a day may be applied. Force dries in two hours at 150 degrees F. After drying it is water sanded with fine sandpaper to a smooth uniform surface. The Red Oxide Oil Liquid Sanding Surfacers is non-bleeding.

Rex		1's	5's
28009	Oil Liquid Sanding Surfacers Light Gray.....	3 50	3 40
28007	Oil Liquid Sanding Surfacers Red.....	3 00	2 90
28008	Oil Liquid Sanding Surfacers Dark Gray.....	3 00	2 90

OPEX METAL PRIMERS—LACQUER PRIMERS

Opex Metal Primer air-dries in from ten to fifteen minutes, but for best results one hour should be allowed before the next coat is applied. Reduction for spraying, one part of Opex Thinner No. 10, Rx 04510 to two parts of Primer. Opex Metal Primer should be used only on new work and not for use over old paint or varnish. We produce special finishes for use over old paint and varnish which are listed later in this price list.

No. 28503 Black is the same quality as 28501, except that it is thin, ready for spraying.

The greatest possible care must be exercised in cleaning the metal to insure the proper adherence to Opex Primers.

It is absolutely understood that the word "Opex" will be used only on goods that are of a pyroxylin nature. Our Oil Primers, Surfacer and Fillers do not carry the "Opex" label. This in order to distinguish between the two types of materials.

Rex		1's	5's	drums
28501	Opex Metal Primer Red.....	3 35	3 25	3 15
28503	Opex Metal Primer Black.....	3 05	2 95	2 85
04564	Opex Metal Primer Clear.....	2 95	2 85	2 75

OPEX GLAZING PUTTY—LACQUER PUTTY

Opex Glazing Putty is our answer to the call from Opex Headquarters shops for a quick drying glazing putty in full keeping with present day finishing schedules. This excellent new product is offered the trade in handy economical one pound (approximately) zinc tubes and the material can be squeezed onto the glazing knife just like tooth paste on a tooth brush. It is quick and easy to use for a fast hard and solid surfacing.

This product is used for the same purpose as the Oil Glazing Putty No. 25530 excepting that it is of a pyroxylin nature. Is used for spot glazing and puttying. Dries in 15 to 20 minutes, although an hour should be allowed prior to the application of the next coat. Should only be thinned with Thinner No. 10, Rx 04510, or Binder Thinner No. 2, Rx 04502. Do not thin with any other material.

Opex Glazing Putty is the only lacquer putty that we know of that does not raise an oil primer and can be back-knifed.

Rex		One lb. tube
28705	Opex Glazing Putty Light.....	75
28706	Opex Glazing Putty Dark.....	

OPEX SANDING SURFACERS—LACQUER SURFACERS

Rex		1's	5's
28701	Opex Surfer Light.....	4 25	4 15
28702	Opex Surfer Dark.....		

Opex Surfer Light, Rx 28701, and Opex Surfer Dark, Rx 28702, are supplied in heavy consistency and for spraying should be reduced with equal parts of Opex Thinner No. 10, Rx 04510, or Opex Binder Thinner No. 2, Rx 04502. If to be applied over an undercoating of an oil nature such as our Oil Primers and Sealers, No. 36 or No. 12, the material should preferably be reduced with our Opex Binder Thinner No. 2, Rx 04502. In other words, when any first coat of Opex (Pyroxylin) material is applied over an oil paint or varnish surface, either old or new, this first coat of Opex should be reduced to proper consistency with Opex Binder Thinner No. 2, Rx 04502.

These two surfacers are designed for use over either the Oil Primers and Sealers or over the Opex Metal Primer Red. When applying over Oil Primer and Sealer, the first coat should be a very light or so-called dust coat. Subsequent coats can be applied more heavily. Always bear in mind that when applying Opex or pyroxylin materials over a primer, sealer, surfacer, etc., of an oil nature that the first coat should be put on very lightly as in this manner the solvents in the Opex finishes will not be present in sufficient volume to attack the oil undercoatings.

SHERWIN-WILLIAMS PRODUCTS

OPEX SANDGLAZE SURFACER

Rex		1a	5a
28708	Opex Sandglaze Surfer, Light Gray	\$4.25	\$4.15
28709	Opex Sandglaze Surfer, Dark Gray	4.25	4.15

Opex Sandglaze is the result of months of intensive research and practical tests in our relentless search for the ideal lacquer sanding surfacer. It would have been an easy matter to merely make one that would sand easy by simply increasing the pigment content by replacing a portion of the solid content of cotton, gum, and oils but that would mean the loss of the required elasticity and also give a very porous film. We could not afford to risk our reputation as manufacturers of quality auto undercoaters just to give the shop a surfacer that was easy to sand but which we knew would not stand up. Such a nearsighted policy would not be the best policy for us nor for our users who rely upon the integrity of our good name.

Formulas were revised; many new raw materials were tried. Finally, a combination employing new oils and pigments was evolved that was the answer to our problem of giving our trade the easiest sanding surfacer consistent with good filling, non-porosity and durability. Tests were made in the laboratories and in custom shops, then on the assembly lines of big production shops. Orders and repeat orders prove the superiority of Sandglaze.

Sandglaze overcomes another objection common to lacquer surfacers heretofore, that of becoming hard in the bottom of the can. Sandglaze does not settle out in the package. Furthermore, it does not settle when reduced in the spray pot.

Sandglaze not only sands easily but quickly, giving a lustrous velvet glaze. Sandglaze is ready for either dry or water sanding two hours after application. Sandglaze will therefore not only reduce sanding, the most expensive operation of automobile finishing, but it will mean a big material saving to our shops because Sandglaze requires at least 150 per cent reduction with Opex Thinner.

In spite of its exceptionally high solid content you will find that Sandglaze flows out better than any other lacquer surfacer you have ever used. The same can safely be said of its filling properties. Sandglaze also holds the lacquer enamel coats out better for greater depth and tone than any lacquer surfacer that has ever come to our attention.

Sandglaze is recommended for use over either our Oil Primer and Sealer or Opex Primer. While Sandglaze can be used over old paint we do not recommend it for this purpose because of its high solid content which has a tendency to lessen its elasticity which is so important for a Binder Surfer. Sell Sandglaze for application over primer and Opex Binder Surfer for over the old paint.

The above information applies on both the light and dark, with the exception that the solids will be slightly different in the dark because of the small addition of black used for tinting.

Sandglaze is stocked in all warehouses and will be supplied the trade in one and five gallon packages.

OPEX UTILITY BLACK

Rex		1's	5's
30315	Opex Utility Black	\$3.25	\$3.15

Opex Utility Black was formulated to meet the demand for a cheaper spraying black for "quick paint" jobs. Motor car dealers and auto paint shops specializing in used car finishing want a good filling high gloss black and are willing to sacrifice some durability for a lower material cost. Opex Utility is offered to meet these requirements. It must be definitely understood, however, that Opex Utility Black cannot be compared with Opex Coach and Opex Hi-Gloss Black for maximum durability and perfect flow. Opex Utility Black will nevertheless give satisfactory service for resale work, but should not be sold to replace our first quality automotive blacks for burn-off jobs. You will note that the package does not carry the Opex auto label.

Opex Utility Black is supplied ready to spray, requiring no reduction. It has excellent covering and good filling qualities. It has a high gloss that does not require polishing although when thoroughly dry gives a hard film that can be rubbed if desired.

Although it is provided ready for use, Opex Utility Black does not have a tendency to settle out hard in the package. Furthermore, this splendid new addition to our line is gasoline-proof, providing it is given over night to dry, to insure complete evaporation of all imprisoned solvents.

It is hardly necessary to add that Opex Utility Black offers extreme value at its low price and that we expect a large volume of business on 30315 but without any loss of business on 31014 and 32001, as each serves an individual and different purpose. Every custom shop and car dealer using any spraying lacquer will become an immediate and continuous consumer of Opex Utility Black.

Opex Utility Black is carried in stock in all warehouses in regulation one and five gallon cans.

S-W FIXIT BLACK

Rex	Qts.	L's
30315 S-W Fixit Black (Brushing).....	\$1.40	\$5.00

Fixit Black is a specially developed satin gloss brushing black for general touch-up work and for finishing instrument panels, windshield frames, gasoline tanks, steering columns, brake levers, accessories, and other parts of an automobile body that can be brushed to better advantage than sprayed. Fixit Black can of course be sprayed where desired, taking a reduction of 25 to 33 1/4% with either brushing or spraying lacquer thinner.

Fixit Black will prove itself in both application and service to possess maximum covering and filling properties, plus excellent brushing qualities.

Fixit Black does not raise or lift over old paint under ordinary conditions common to all brushing lacquers. You will find it recoats in a wonderful manner. Fixit Black also works exceptionally well over older lacquer finishes.

Should a gloss be desired Fixit Black can be rubbed the same as any sprayed lacquer after the second day. Also note that the material should not be gas sanded until after the second day following application.

Fixit Black is new and individual and will find a ready welcome in every auto refinishing shop. There is no match or "something just as good" on the market. Fixit Black is sure to be imitated but with the proper and immediate introduction of our sales force, Fixit Black is destined to become another Sherwin-Williams specialty universally recognized as supreme.

Fixit Black is stocked in all warehouses and available in quarts and one gallon containers.

SHERWIN-WILLIAMS PRODUCTS**OPEX ROUGH STUFF**

Rex	1s	5s
28707 Opex Rough Stuff.....	4 25	4 15

Sands down about as easy as an Oil Surfacers.

Gives a smoother surface for lacquer enamels. Does not scratch or cut through as easily. Tends to bring up the gloss. More foolproof—an unskilled rubber can handle it.

Can be applied a coat an hour or less time. A car can be surfaced while one coat of Oil Surfacers is drying.

Does not gum up the sandpaper.

Does not bridge the mouldings.

A neutral shade that can be used under either light or dark colors.

Economical—A paste consistency that will stand 175 to 200 per cent reduction with No. 10 Thinner.

For proper application the metal should, of course, be absolutely clean, free from grease or dirt. Even greater care must be exercised in this respect when lacquer undercoats are used. The primer must be allowed full drying time. Where applied over an Oil Primer the first coat of Opex Surfacers should be a dust or mist coat to avoid too great penetration of the solvents. Two or three heavier coats will then build up a good surface that can easily be sanded to a smooth hard finish. Being made of an inert transparent filler its hiding power is not so great but its filling properties cannot be excelled.

Opex Rough Stuff when reduced with Opex Thinner should be thoroughly stirred to make sure that all the material is in full suspension at all times as it has a tendency to settle out upon standing. With Opex Rough Stuff, Glazing Putty is not necessary. Before surfacing, gun glaze any deep file marks or other body metal imperfections. By gun glaze we mean covering these places with a heavy coat of Opex Rough Stuff from the spray gun. Then apply three coats of Opex Rough Stuff all over the body and then sand the complete job down to a smooth level surface. If properly applied the putty knife can also be eliminated. However, if any small imperfections do remain after sanding these can be filled with a putty knife using Opex Rough Stuff full body. For best results three hours at normal room temperature should be allowed after application of the last coat of Opex Rough Stuff before the sanding operation is begun.

OPEX BINDER SURFACERS—LACQUER SURFACERS

Rex	1s	5s
28703 Opex Binder Surfacers Light....	4 90	4 80
28704 Opex Binder Surfacers Dark....		

The Opex Binder Surfacers are used where an Opex finish is to be built over a surface previously painted or varnished, and differ from the Opex Surfacers Light, Rx 28701, and Opex Surfacers Dark, Rx 28702, in that they are constructed in such a manner as to have the least possible effect on the old painted or varnished surface.

The Opex Binder Surfacers Light, Rx 28703, and Opex Binder Surfacers Dark, Rx 28704, are supplied in heavy consistency and for spraying should be reduced with at least equal parts of Opex Binder Thinner No. 2, Rx 04502. Under no condition should these goods be reduced with any other thinner, as in doing so the value of the Opex Binder Surfacers for use over old paint will be minimized, if not entirely destroyed. In applying over the old painted or varnished surface after it has been properly prepared, spray on a very light dust coat which can be followed with heavier subsequent coats. Opex Binder Surfacers air-dry in fifteen to twenty minutes, but approximately one hour should be allowed between coats. Do not forget that these Binder Surfacers should be reduced only with Opex Binder Thinner No. 2, Rx 04502, and nothing else. Be sure to caution everyone using the Binder Surfacers regarding this point.

Inasmuch as our company is the only one that has successfully introduced to the trade a Binder Surfacers for use over the old paint and varnish finish, we have a mighty effective exclusive selling feature in this particular product. Its use not only permits the refinishing shop to use lacquers without the necessity of using the burn-off in every case, but consequently enables the refinisher to turn out a finished job in half or less the usual time, and at considerable less expense to the motor car owner. Its use also enables the motor car dealer to use lacquers on used cars where they could not use them where the burn-off process is used on account of the additional time and expense involved. It behooves every representative to strenuously push this product to the automotive trade.

The Opex Binder Surfacers is not in any sense a cure-all and can not be used where the old paint is too badly cracked or ready to fall off. The old finish must necessarily be in good condition.

Being a heavy pigmented material, a slight adjustment in the gun is usually required. Cut down on the material—have it wet enough to flow on but not so it will run. The customary air pressure is needed to break it up thoroughly.

The Opex Binder Surfacers offers a new market to the refinishing shop and motor car dealer for finished jobs cheaper and quicker, particularly for the lower priced cars and used cars.

SHERWIN-WILLIAMS PRODUCTS

OPEX CLEAR BINDER

Ref		1s	5s
04567	Opex Clear Binder.....	3 65	3 55

Opex Clear Binder was originally formulated to be used as a Clear Binder for auto refinishing over old paint. It can be sprayed as a clear coat or mixed equal parts with Binder Surfacer. If sprayed clear to serve as a better primer or bond coat, the first coat should be applied as a mist coat to prevent any possibility of raising the old finish. Opex Clear Binder can also be used advantageously where desired, over a lacquer surfacer to seal the porosity of the undercoater.

Opex Clear Binder is a high solid straight lacquer cotton solution with an excellent solvent mixture.

OPEX AUTOMOTIVE LACQUER ENAMELS

Ref		Qts.	1s	5s
31001	Opex Auto White.....			
31002	Opex Century Yellow Medium.....			
31003	Opex Tudor Gray.....			
31006	Opex Gray Dark.....			
31011	Opex Sage Brush Green Light.....			
31013	Opex Hampton Gray.....			
31014	Opex Coach Black.....			
31016	Opex Yellow Cab Yellow.....			
31017	Opex Victoria Blue Deep.....			
31022	Opex Erie Blue.....			
31023	Opex Orinoco Vermilion.....			
31024	Opex Mephisto Red.....			
31025	Opex Vogue Blue (formerly Rolls Royce Blue).....			
31028	Opex Sailor Blue (formerly Nash Blue).....			
31030	Opex Brewster Green Medium.....			
31031	Opex Devonshire Green (formerly Taxicab Green).....			
31033	Opex Virginia Cream.....			
31038	Opex French Gray.....			
31039	Opex Sahara Gray.....			
31041	Opex Buckingham Gray (formerly Cadillac Buck- ingham Gray).....			
31042	Opex Phaeton Blue (formerly Overland Blue).....			
31044	Opex Crest Blue (formerly Packard Blue).....			
31045	Opex Tanuara (formerly Chrysler Biege).....	1 70	4 00	5 80
31049	Opex Mannequin Blue (formerly Marmon Blue).....			
31068	Opex Suntan.....			
31069	Opex Paradise Green.....			
31070	Opex Jungle Green.....			
31071	Opex Cabriolet Gray.....			
31072	Opex Peerless Gray.....			
31073	Opex Taupe Brown.....			
31074	Opex Cleveland Cream.....			
31075	Opex Panama Green.....			
31076	Opex French Mauve.....			
31077	Opex Mauve Glow.....			
31078	Opex Ritz Blue.....			
31079	Opex Chateau Gray.....			
31080	Opex Arabian Tan.....			
31081	Opex Surf Green.....			
31082	Opex Coburn Gray.....			
31083	Opex Glacier Blue.....			
31084	Opex Tuscan Tan.....			
31085	Opex Camco Cream.....			
31086	Opex Palmetto Green.....			
31087	Opex Lichen Gray.....			
31088	Opex Thrush.....			
31089	Opex Caledonian Brown.....			
31047	Opex Burgundy Maroon (formerly Windsor Maroon).....	1 95	7 00	8 80
29059	Opex Chassis Black.....		2 25	2 15

SHERWIN-WILLIAMS PRODUCTS

MOTOR CAR STANDARDS

This is a supplementary line of Opex Enamels, Automotive Grade, ready mixed, to meet the demand of our trade as far as possible for these motor car standards that have proven most generally used by the motor car manufacturers.

These Enamels will not only enable us to take care of requests from Nash, Moon, Dodge, Paige, Peerless, and Chandler car dealers for these colors, but will also enable us to solicit business from many other car dealers whose manufacturers use these colors but will also enable us to solicit business from many other car dealers whose manufacturers use these standards on various models of McFarland, Lincoln, Hudson, Chrysler, and other motor cars. It will also better enable our Opex shops to take care of their dealer work rather than necessitating turning to competitive sources of supply.

Rex		Qts.	1s	5s
31054	Opex Gun Metal Blue.....			
31055	Opex Yale Blue.....			
31057	Opex Kensington Gray.....			
31058	Opex Ambata Green.....			
31059	Opex Lotus Blue.....			
31060	Opex Sea Fog Gray.....			
31061	Opex Ocean Blue.....	1 70	8 00	8 80
31062	Opex Algerian Blue.....			
31063	Opex Marine Blue.....			
31064	Opex Silver Gray.....			
31065	Opex Fawn Gray.....			
31066	Opex Marmoneck Gray.....			
31067	Opex Mallard Green.....			
31092	Opex Moon Gray.....			
31091	Opex Royal Maroon.....	1 95	7 00	8 80

These are the 15 popular colors that make up this new line, together with the makes and models of the motor cars using them:

Gun Metal Blue—31054 Ford Open Models	Algerian Blue—31062 Chevrolet Sedan Dodge Deluxe Sedan Paige 6-75 Coupe Peerless 6-80 4 door Sedan Peerless 8-69 Custom Sedan Kaiser 6 Coach Lincoln—Marmon—Chrysler—McFarland
Yale Blue—31055 Nash 227 (Upper Section and Wheels)	Sea Fog Gray—31060 Oldsmobile Roadster Oldsmobile Landau Sedan Paige 6-75 Cabriolet Peerless 6-72 Roadster Moon Touring Lincoln—Marmon—McFarland—Gardner
Lotus Blue—31059 Buick Chandler Big 6 Sedan Chandler Special 6 Sedan Chandler 31 Sedan Velic 60 Coupe	Marine Blue—31063 Nash 270 (Body and Wheels) Chrysler 50 Sedan Paige 6-45 Sedan Paige 6-75 Sedan Moon Series "A" Ford Closed Models Moon 4 Door Sedan Chrysler Models
Ocean Blue—31061 Oldsmobile Roadster Oldsmobile Landau Sedan Paige 6-75 Cabriolet Peerless 6-72 Roadster Lincoln—Marmon—McFarland—Moon Touring—Gardner	Kensington Gray—31057 Nash 221 (Lower Body and Wheels) Nash 223 (Body and Wheels) Hudson Brougham Peerless 6-72 5 Pass. Coupe Wills-St. Claire
Silver Gray—31064 Chandler Light 6 Sedan Chrysler 80—Roadster Lincoln—Franklin	Mallard Green—31067 Nash 265—(Body and Wheels) Nash 268—(Body and Wheels) Nash 224—(Body and Wheels) Nash 225—(Body and Wheels) Chrysler—50 Coupe
Fawn Gray—31065 Paige 6-45 Brougham Ford Closed Models Moon De Luxe Roadster Moon Cabriolet Moon 2 Door Sedan	Royal Maroon—31091 Ford Closed Models
Marmoneck Gray—31066 Dodge Special Sedan	
Moon Gray—31092 Moon 4 Door Sedan Moon Series "A"	
Ambata Green—31058 Peerless 6-90 Sport Sedan Gardner 8-80 Sedan Gardner 8-80 Roadster Auburn 8-80-8 Moon Standard Roadster	

SHERWIN-WILLIAMS PRODUCTS

OPEX HI-GLOSS BLACK

Ref.	Qtz.	1s	5s
32001 Opex Hi-Gloss Black.....	1 70	6 00	6 80

We all know that anyone can make a gloss lacquer by merely adding gum, such as we do in some of our Opex Industrial Lacquer Enamels and also our Brushing Lacquers, but then the film is not as satisfactory as to durability, particularly on outside exposure as our Opex Automotive Lacquer Enamels. No one so far as we know has developed a Hi-Gloss Black, except by the addition of gum, that will withstand the rubbing and polishing operations and outside exposure without breaking down; which therefore means that this gloss is being obtained at the expense of the product. Opex Automotive Hi-Gloss Black is formulated identical with our present Opex Coach Black and owes its gloss entirely to its method of manufacture—a development within our own organization of which naturally we are very proud.

Inasmuch as this material is formulated identical with Opex Coach Black, and because it will require no polishing or at least very little polishing, it stands to reason that it should have even greater durability because in the polishing process a certain part of the film is rubbed off. Where necessary, Opex Automotive Hi-Gloss can be rubbed, but a longer time should be allowed after spraying before rubbing than with the present Opex Automotive Lacquer Enamels.

Opex Hi-Gloss Black flows out smoothly and offers even greater resistance to blushing, having a very high grade solvent mix. The solid content of gum, cotton and plasticizer is the same as our present Opex Coach Black.

While added gloss always tends to magnify imperfections, these imperfections do not show up to any greater extent. As in the use of all lacquer enamels the character of the surface being finished determines the quality of the final effect. A well built up surface gives a good smooth film. Reduced 125 to 150 per cent with a good grade of thinner like Opex Binder Thinner No. 2 or Opex RE-FLOW COAT, 04518, applied wet enough to reflect the gun in the material being sprayed, gives results that are a revelation in motor car finishing. Too much air pressure causes orange peel. A slight adjustment of some spray guns is necessary, cutting down on the material flow.

Opex Hi-Gloss Black is especially recommended for finishing fenders and running gear eliminating their removal for the dipping and baking processes giving the gloss without polishing plus the well known advantages of lacquer.

Auto paint shops and motor car dealers specializing in "quick paint" for resale or used car finishing will find Opex Hi-Gloss Black an ideal material, as it gives them an unusually durable quick drying glossy finish without the expense of polishing.

OPEX WHITE GROUND

Ref.	Qtz.	1s	5s
31053 Opex White Ground.....	1 70	6 00	6 80

Opex White Ground was developed particularly to provide a solid white base where Opex Auto White is used for finishing hearses, delivery truck bodies, etc. It covers solid in one coat even over darker undercoaters. It stays white, saves material and labor.

Build up the surface in the usual way with your primer and surfacer allowing overnight after the watersanding operation and then spray one solid coat of Opex White Ground and two coats of Opex Auto White and you will have the whitest, deepest, prettiest white lacquer finish you ever saw.

If the pigment has settled in the bottom of the container, pour the free liquid off into a clean vessel and stir the remaining portion with a flat paddle to a smooth soft mass. Then add the liquid very slowly, stirring constantly while adding.

Opex White Ground should be reduced with Opex Thinner 125 to 150 per cent. While Opex Binder Thinner No. 2 should be used for best results, it must be used for thinning where applied over oil undercoaters or over old paint.

OPEX THINNERS

Ref.	1s	5s	30 gal. Drums	50 gal. Drums
04502 Opex Binder Thinner No. 2.....	2 40	2 30	2 25	2 20

This thinner must be used exclusively where any Opex surfacers, enamels, etc. for automobile work are used over either oil undercoatings or old painted or varnished surfaces which are being prepared for a lacquer finish. When reduced with Opex Binder Thinner No. 2, Rx 04502, better results will be obtained under certain conditions, namely, better flowing, top finish. A 100% solvent thinner. Quick drying and excellent flowing qualities.

LACQUER THINNERS

No doubt the only reason we are not selling more lacquer thinner is because some of our representatives do not know our own thinners and how they compare with other manufacturers' thinners.

Open Enamels Can't Be Reduced With Applesauce

In the case of Open Automotive Enamels at least equal reduction with Open Thinner is required; yet we know for a positive fact we sell but a small part of the volume of thinner necessary to reduce Open Enamels. With the quality and price we have on Open Thinner we should sell thousands of gallons more of thinner than we do of Lacquer Enamels.

Be a Specialist to Your Trade

We cannot blame the trade because they do not know the difference unless this is brought to their attention or until they run into trouble and are looking for better thinners. It is up to each and everyone of you to become intimately acquainted with Open Thinner and carry on an educational and sales campaign with this all-important fluid. Lacquer men will respect your knowledge and be able to look upon you as an authority and they will use you rather than when it is to their advantage to use certain types of thinners for their particular work.

There's a Joker in the Cheap Thinner Can

Many lacquer thinner users claim they are buying lacquer thinner for less than \$1.00 per gallon. In one case we analyzed one of these thinners and found it was nothing but gasoline with a little Ethyl Alcohol in it. These cheap unreliable thinners flooding the market may be appropriately designated as "bootleg thinners." You can easily appreciate that thinners can be greatly adulterated and the customer will have little opportunity to discover this until some work goes bad and then the chances are the customer will blame the painter rather than the thinner.

Open Thinners for Open Enamels

You will no doubt be interested to know that when you take a gallon of Open Automotive Enamel and reduce it ready for spraying that the material is made up of approximately 80% volatile liquids (and only 20% solids). This opens up the importance of using a good thinner. The solvent base in Open Automotive Enamels is practically the same as No. 10 Thinner and when a cheaper thinner is used the results naturally are not the same as with an equal or better thinner. The boiling range of the solvents and non-solvents in thinners, where the two products are uniform, which is not the case where cheap or even "bootleg" thinners are used for reducing Open Enamels.

Specialized Manufacture

The solvents and non-solvents that go into making Open thinners and other lacquer products are never touched from the time they come into the yard in tank cars until they are blended in the store room which eliminates the personal equation. All these liquids are weighed by pump, conveyor or gravity and all goods are weighed out automatically by weight rather than bulk. All the different raw materials flow through individual pipe lines and are stored in separate tanks so that there is no possibility of mistakes in mixing or contamination.

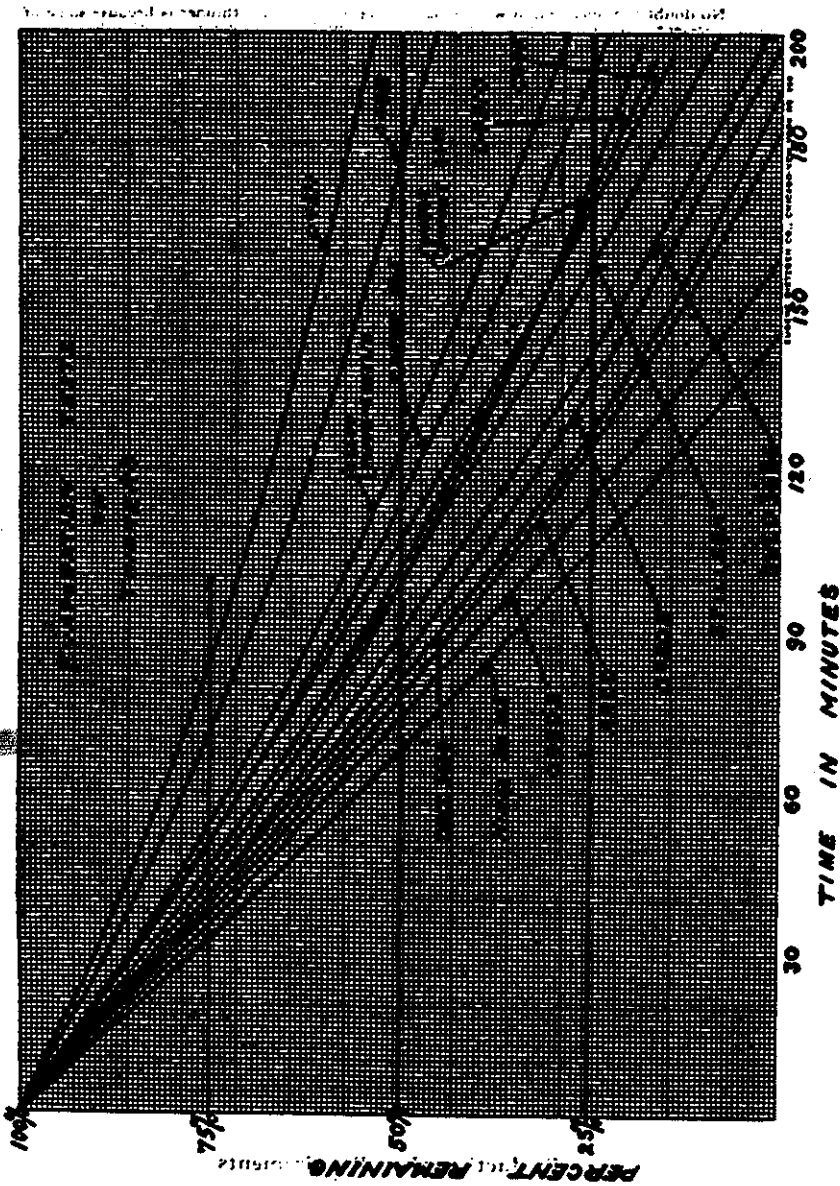
The Solvent Market

There is no one but has control of the solvent market. All solvent thinners must buy on the open market the same as any other commodity. The most important raw materials in the manufacture of solvents are controlled by DuPont, the Commercial Solvents Corporation, and all companies using the product are obliged to buy it from them. Therefore, it resolves itself into a matter of purchasing power. We buy and stock it in tank car lots. Furthermore, we have the added advantage of trading Acetic Acid, of which we are one of the largest producers in the world, which must be used in making the Butyl Acetate from Butyl Alcohol.

Production Shop Requirements

How can small consumers afford to use cheap thinners when the big production shops do not feel that they can afford to take any chances? Fisher Body use a thinner that is a little cheaper than our No. 10 but they finish off with a flowing thinner similar to our Re-flow Coat. Ford and Dodge and other large producers use a thinner that is even better than our No. 10.

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low, and small amounts of water. The curves are based on the assumption that the material is exposed to a constant temperature of 100°F. The curves are based on the assumption that the material is exposed to a constant temperature of 100°F. The curves are based on the assumption that the material is exposed to a constant temperature of 100°F.

SHERWIN-WILLIAMS PRODUCTS

How Opex Compares with Competitive Thinners

Below you will find outlined a chart showing just exactly how Opex Thinners compare with competitive thinners as to rate of evaporation, blushing, and solvent strength.

Name	Evaporated (Minutes)	Evaporated (Minutes)	Evaporated (Minutes)	Evaporated (Minutes)	Blush- ing Test	Sol- vent Strength
Mimax (105)	32	68	100	145	5	3
04503	35	74	109	160	4	3
Arco	37	77	127	182	3	4
Duco (3614)	38	80	127	185	3	3
04505	40	84	130	200	3	3
Shillman's	43	99	148		2	3
Cook's	50	100	157		4	5
04510	45	100	158		2	2
Duco (3601)	45	104	159		2	2
04502	45	105	159		2	3
Zepon (5)	50	113	180		2	3
Flood-Cooklin	52	122	199		4	1
04500	53	123	200		1	1
04518	65	175			1	2
04511	83				1	2

Evaporation

The first column shows how many minutes it takes for 25% of each thinner to evaporate. For instance, 25% of No. 3 evaporates in 35 minutes; but in the case of Redox Coat, No. 18, it takes 65 minutes for 25% of this thinner to evaporate. 50% of No. 3 thinner evaporates in 74 minutes in comparison with 175 minutes for Redox Coat. 200 minutes is the maximum time allowed for evaporation, as shown on this chart, so you can draw your own conclusion as to the final flowing out of the better grades of thinner.

As you should know, an evaporation test is made to determine the rate of drying of the thinner. A quick drying thinner will not permit the liquid to flow out as smoothly and yet not "orange peel" as a slow-drying thinner will. We therefore regard the evaporation test as an important one as it tells us considerable about the blush resistance and flowing qualities. Thinners which are known to be good thinners in actual use will invariably show up well in this case; also cheap thinners which are of known inferior quality will always show up poorly.

Blushing

The blushing test, as the name implies, determines the blush resisting qualities of the thinner.

Solvent Strength

The solvent strength test, as the name indicates, is made to determine the solvent strength of a thinner. It tells us the relative amounts of solvent and non-solvent present. A thinner with a high solvent strength will be more effective in removing old paint than a thinner with a low solvent strength. A thinner with a high solvent strength will also be more effective in removing old paint than a thinner with a low solvent strength.

Balanced Formulae

Under the heading of "blushing test" and "solvent strength" No. 1 indicates the highest rating and No. 5 the lowest possible rating. In studying this chart, you will notice that one thinner may show up well on the evaporation test but register poorly on the blushing test. A thinner may also show up good on both the blushing and evaporation test but poorly on the solvent strength test. On the other hand, you will note that some thinners show up well on the solvent strength test but are poor on the rate of evaporation and blush resistance. The more you analyze Opex Thinners, keeping in mind their selling price in comparison with other thinners sold at a similar price the more you will become convinced that Opex Thinners not only are the best balanced formulae but give the trade more value for the money than any other thinners on the market. Pick out the competitive thinners that are giving you the most trouble in sales in your territory, study the weaknesses of their proposition and the advantages of Opex and you will experience little difficulty in displacing competitive thinners.

As a typical example, take Duco Thinner No. 3614, which is probably one of the biggest individual selling lacquer thinners on the market, and which is sold at a price higher than Opex Thinner No. 10. You will find, however, as a matter of fact, that Duco No. 3614 more closely approximates our No. 5 Thinner than No. 10. No. 3614 evaporates very fast and is medium in blush resistant properties and low in solvent strength; whereas No. 10 has considerably less rate of evaporation and shows up very well on both the blush and solvent strength tests. Duco 3636 is very close in formulation to 04505, the flow and gloss being equal, but the selling price being higher than our No. 10. If you analyze the more you analyze the Opex Thinner proposition the more you become sold on the fact that we have an unbeatable combination. If we are losing any thinner business on price it is because our customers do not know the reason for the difference in the price of thinners. If it is purely a price proposition we have low priced thinners too—but we do not want to sell them—at least until the customer knows exactly what he is buying.

SHERRIN-WILLIAMS PRODUCTS

Opex Thinner No. 7 and No. 10

Although the characteristics of our Opex Thinners have been outlined before in the prior list and in the Opex Observer, No. 10 and No. 7 offer the biggest prospects for the sale of lacquer thinners, as will outline their innermost secrets in greater detail.

No. 2 Thinner

This thinner was developed on the basis of 100% solvent property and without the use of any non-solvents which of course are detrimental so far as application over old paint is concerned. There is no toluol, benzol, or other hydrocarbons in this formula. No. 2 Thinner was designed for use where shops desire to get the very best high gloss finish with a minimum amount of rubbing, and we have even found it applicable and sold in large quantities to as large an organization as Nash Motor Car Co. for their high gloss work on finishes, especially on wheels where they did not care to rub the finish.

No. 2 has been one of our leaders now for the last three years and is being imitated by a great many other companies, even to the extent of calling theirs "No. 2." There are a great many Opex users who will use nothing else, and it has to be sold by salesmen on its ability to do the job and not on price.

A large amount of solvent present makes positive that the cotton, gum, and oil lay out in a homogeneous film, and not either one of them separating out before it is due to come out of the solution. With extremely cheap thinners, oftentimes the gum is precipitated out a few moments before the cotton comes out, so that you really have two different films, a gum film and then a cotton film on top of it, although at times it is just the opposite, and the cotton comes out first, with the gum coming out later, all of which gives an improper film, so far as adherence to metal is concerned, flow, gloss, etc.

No. 10 Thinner

No. 10 Thinner is comprised of about 50% solvents and 50% extender. The solvents, however, are very high boiling solvents—Butyl Acetate, Butyl Propionate, Amyl Acetate, etc., with the minimum amount of medium boiler. In the non-solvents part, we use only the highest boiling Hydrocarbons—Xylol and Toluol. No wood alcohol, benzol, or similar products are used in either of these formulas.

No. 10 Thinner represents the best formulation for the money that we can produce. It might interest you to know that there is less than 8% average profit on this thinner as sold at the present list price, and if we cannot make 8% on a turn-over on our thinners, it is because our salesmen cannot sell them at the proper price, because we have already priced them too low. The use of an inferior product for thinning carries its own reward the same way as letting down Old Dutch Enamel with gasoline as against the use of turpentine.

Sell Your Proposition

Ask your Opex accounts why they spoil good lacquer with cheap thinner. Thoroughly explain to them why they should use Opex Thinners for Opex Enamels to obtain the proper harmony and balance in formula. Convince them of the fact that Opex Thinners have a larger proportion of solvent than others sold at the same price, so that they provide a proper factor of safety for our customers and the better the thinner the greater the factor of safety. Convince them of the fact that back of every gallon of Opex Thinner stands a chemical and technical staff that other companies cannot match. This group of experts insures a quality and uniformity that cannot be obtained through other sources of supply. To your accounts this should mean the difference between taking a chance and being absolutely sure of the thinner they are using.

The Cat's Out of the Bag
If you are selling SWP in comparison with lead and oil, you can also explain that he will not get uniform and high quality raw materials unless he hires a chemist to check all shipments. No reputable solvent house is peddling solvents in drums and jobbers can adulterate easily. We also know that the wrong proportion of materials means trouble and that constant care in mixing is required.

Meet Trade's Requirements
Remember the line from 04503 to 04506 represents gradually increased quality, which means better flow, better bluish resisting properties, etc., as the selling price increases. Small cheap objects will not justify high price thinners. On the other hand, automobiles and high grade furniture demand a thinner which will result in a quality finish. Large surfaces require a good flowing thinner in order to have a minimum of "orange peel" and spray dust. Good flowing thinners result in a lower labor cost because they require less rubbing and sanding than where cheap thinners are used.

No Benzol in Opex Lacquers

There is no benzol or other toxic ingredients used in the manufacture of Opex Lacquer and Thinner. Benzol is a good non-solvent and its use would also permit a reduction of twenty cents per gallon in the cost but when it was found to be injurious to the health, its use was immediately discontinued. It is interesting to note that the original work undertaken in Washington, when the effects of various solvents and non-solvents were carefully and definitely determined, was inspired by our own President and the rest back-ground and investigation was instigated by our own development department. The initial report was furnished Mr. Martin and forwarded to the technical organizations of the institution for criticism before printing, so that before others in the finishing industry knew about the effect of Benzol (the only material that proved to be toxic) we had eliminated Benzol and substituted Toluol, a coal tar base product. We know, however, from examination of many other thinners that the majority of thinners on the market contain Benzol. Ask your thinner prospects point blank, "Do you want to use a poisonous thinner in your shop?"

Durability

Scientific tests have definitely proven that the character of thinner employed has a direct bearing upon the durability of the lacquer film, although the solvents have no permanent part in the resulting film. The better the thinner, the better the film.

Warehouse Stocks

Good sized stocks are available at all warehouse points. In addition there is a reserve stock of better than 20,000 gallons of Opex Thinner in the Chicago warehouse at all times. If necessary, we can turn out tank cars of thinner on 24 hours' notice at our new thinner plant.

Start right now to justify the investment the company has made for our Opex accounts and do a selling job on Opex Thinner that will make our competitors look like back numbers.

No. 5 Thinner

Although our best recommendation favors No. 10 for new work and No. 2 for over old paint, whenever you run up against a thinner selling for less than No. 10, sell our No. 5 which is a mighty good thinner for the money. Over 50% of all the lacquer thinners analyzed by our thinner experts have been comparable to No. 5 and in a great many cases only equal to our No. 3. While No. 10 is to be preferred, of course, sell No. 5 where they will not pay the price for No. 10. No. 5 can be substituted but it has a little stronger odor, is not as resistant to blushing, and carries 10% more non-solvent and 5% less low and medium boiling point solvents. No. 5 represents the average thinner sold by competitors but at higher prices than ours. Study the evaporation graph and chart, and then cash in on the added value represented in Opex Thinners.

Thinner Costs Increasing

Corn, barley and wheat are all on the upgrade. The higher they go, the higher the raw material cost of solvents. Our costs on Ethyl and Butyl Alcohol have both increased ten cents per gallon in the past few months. An increased tariff wall on Butyl will cut off importation and thus raise the domestic selling price. All indications point to further increased costs in the purchase of solvents and the manufacture of thinners. Our thinners are now very closely priced, so if there is any change in price on our volume thinners (2.5, 10 and 3) it will be an increase rather than a reduction.

Confidential Data

Please treat this detailed information that we are giving you in this bulletin as strictly confidential, for your own personal information and use only. Preserve this bulletin and do not take any chances of it getting out of your hands.

OPEX THINNERS

To supplement the foregoing data on lacquer thinner and so as to have the complete story on this vitally important story all together for ready reference in the OpeX-price list efficiency information, we are reprinting the illuminating article prepared by Fred Lang, of the Chemical Products Department (the man directly responsible for the formulation of OpeX Thinners).

At the present time competition is very keen in the sale of lacquer thinners and we are hearing daily a great deal regarding low priced competitive thinners.

In order that we may obtain and hold our share of the thinner business, it is important that the representative who calls on the trade know something about thinners in general and is able to discuss intelligently the various properties and requirements of thinners. This is particularly true in dealing with large companies where the buyer frequently calls in one of their technical men who is versed on lacquers and thinners to talk over the proposition with the representative. We do not believe it necessary for the representative to know all about our thinners chemically, but he should have a good practical knowledge so that he will not be entirely in the dark when such an occasion arises.

A lacquer thinner is a mixture of volatile solvents and non-solvents, which mixture is used for reducing or thinning down a lacquer or a lacquer enamel. The term solvents in this case refers to those liquids in the thinner which are capable of dissolving nitro-cellulose or cotton and the term non-solvents designates those liquids which will not dissolve nitro-cellulose but are used merely as extenders or diluents. The following are the main solvents and non-solvents used in our thinner:

The solvents are amyl acetate, butyl propionate, amyl propionate, butyl acetate, hexanone, benzoin, cellosolve, and ethyl acetate. These are all expensive solvents with the exception of the last named, and their use in increasing proportions does, of course, increase the cost of the thinner. The non-solvents are amyl alcohol or refined fuel oil, butyl alcohol, toluol, xylol and special lacquer naphtha. The first two are quite expensive materials costing about the same as the solvents. The last three are comparatively low in price.

Both the solvents and non-solvents have their purpose in the thinner. Space will not permit here for us to go into detail regarding the purpose of each of the various solvents and non-solvents. It is really not essential to the story. Merely to know that there are two general classifications of raw materials and that the proportioning of these raw material controls the quality and cost is all that is necessary here.

In the first place, it must be understood that a thinner can be made of very low priced raw materials and at the same time appear on casual inspection and testing to be equal to a better quality thinner made from higher priced solvents. What we mean is that unless one is on guard, a cheap thinner might appear to be doing the work satisfactorily, and it only appears this way because the conditions are extremely favorable at that particular time. We have known a number of instances where it has worked out exactly this way and the same thinner under different conditions, such as more humid weather, did not do the work nearly as well as the better quality thinner.

As a typical example of an extremely cheap thinner, one could mix together three parts of gasoline or naphtha and one part of ethyl acetate and have a so-called thinner, costing less than 40 cents per gallon. This thinner might get by in a few cases especially where it is used with a high quality lacquer or enamel in which there is a rich mixture of high-boiling solvents to carry along the cheap solvent and non-solvent in the thinner. But this thinner would never work under average atmospheric conditions and with an average quality lacquer.

In contrast with this, one might mix together 5, 6, or more high grade high boiling solvents and non-solvents, and have a thinner in which the raw materials alone would cost around \$3.00 per gallon. This thinner, if the solvents are proportioned correctly for proper drying, would of course work satisfactorily under all conditions and even with very cheap lacquers.

It must be therefore understood that thinners can be made very cheap or very expensive, and detection is not always easy unless the thinner is tested out under all conditions in which it might be used.

In formulating our thinners, we have taken into consideration that the thinner must be made to do a certain work. It must do this work satisfactorily and to the exclusion of such difficulties as poor flow, blushing, wavy film, poor gloss, offensive odor, etc. These are the first requirements and are, of course, the important ones.

A second requirement is that the thinner must be formulated at the lowest possible cost without impairment of the quality. The second requirement is also essential if we are to compete successfully where price is an important consideration.

We have done a great deal of laboratory development work in the compounding of our thinners and in comparing these with other thinners on the market. It might be of interest to show here how this comparison is made.

We know that the real test of a thinner is to determine how it works out in actual practice, such as in spraying auto bodies or other large surfaces. Laboratory methods of testing mean little or nothing unless they can be verified in actual practice. At the same time we have learned from experience that it is very difficult to get a fair estimate of a thinner by simply spraying a large panel or even a large object like an auto body unless the operator who makes the comparative test is extremely careful in making certain that he handles the two thinners exactly the same and under identically the same conditions. This is not easy to do as the personal element enters into the test quite strongly. One operator

will get different results than another operator when using the same thinner and under supposedly the same conditions. We have at different times sent out samples of thinner to various representatives and customers for them to test out and report back to us. The reports we have received have been on a whole very contradictory, indicating that simply spraying a panel or some such object is not an absolutely reliable method for judging a thinner. Possibly the slight variations in handling the gun and variations in humidity and temperature account for this.

On account of this unreliability we have developed some tests which give us very accurate data regarding the thinners. The tests have been worked out very carefully and will check closely when repeated. We have found that thinners which rate high in these tests invariably are high quality thinners and rate high in actual use. It is only on this last condition that we are willing to use these tests in judging a thinner. The five following tests are the tests we use in obtaining complete data on a thinner. No single one of them, or even two of them, would be considered sufficient for passing final judgment. It is evident that a thinner might rank high in one of these tests, for example in the blushing test, and rate very poorly in the other four. A true value can be placed on the thinner only after all the tests are made and each one taken into consideration in rendering the verdict.

1. Blushing Test

This test is made as the name implies to determine the blush resisting qualities of the thinner. The test is made in a very specially designed apparatus where 30 samples can be tested out simultaneously. The apparatus consists of a chamber, cubical in shape, about 3 feet on a side. A thermostat automatically controls the temperature very accurately to within one degree, and the humidity is controlled very accurately also by regulating the amount of air introduced. Sprayed or poured samples can be introduced without opening the chamber. Very reliable data is obtained in this test, and this data is extremely valuable where a thinner is to be sold in localities subject to high humidity and lacquer blushing troubles.

2. Evaporation Test

This test is made to determine the rate of drying of the thinner. It is well known that a quick drying thinner blushes much easier than a slow drying thinner. Also a quick drying thinner will not permit the lacquer to flow out as smoothly and without the wavy "orange peel" effect as a slow drying thinner. We therefore regard the evaporation test an important one as it tells us considerable about the blush resisting and flowing qualities. Thinners which are known to be good thinners and have a good reputation in actual use will invariably show up very good in this test. Also cheap thinners which are of known inferior quality will always show up poorly in this test.

In making the test, an analytical balance and special weighing dishes are required. The test is absolutely worthless unless extreme care is taken by the operator in making his weighings. Some experience is required before the test can be made accurately. Duplicate samples are always run and unless the two check within 2%, the data is not accepted and the test is repeated.

3. Solvent Power Test

This test, as the name indicates, is made to determine the solvent strength of the thinner. It tells us the relative amounts of solvent and non-solvent present. The test is made by dissolving a specified amount of cotton in the thinner and then determining the amount of a non-solvent, toluol, required to precipitate the cotton out of solution. This test does not identify the solvent but in conjunction with the evaporation test and saponification test, we are able to make the identification quite closely. The only value to this test is that it tells us if the thinner contains an excessive amount of non-solvent and therefore gives us an approximate idea of the raw material cost.

4. Gloss Test

Some thinners are known to be especially good in retaining the gloss of the enamel. Usually a thinner which rates high in the evaporation test and solvent power test will show up well in the gloss test. However, this is not always the case, and it is advisable to make this test along with the others. It is very simple, as it is made by spraying panels about two feet by three feet in size and noting the appearance of the finish after complete drying of two hours or more. The best results are obtained by making a comparative test between the thinner being tested and some other thinner of known quality such as our No. 10 or No. 2 Thinner. Care must be taken, of course, to see that the same enamel is used with each thinner and exactly the same amount of thinner be used with each. In addition to the gloss this test also serves to give an idea of the flow and also if the thinner has any tendency to cause the enamel to "orange peel."

5. Chemical Analysis

A complete chemical analysis is not always made because it is not necessary unless some uncertainties come up in the other tests. Usually the other tests give us sufficient data so that a part at least of the analytical work can be omitted. We will not attempt to go into detail here regarding the various tests made in the analysis but will merely mention them by name with a word or two of explanation.

Saponification Test: This test tells us the per cent of solvent in the thinner when used in conjunction with the distillation test. It also serves as a check on the solvent power test.

Copper Corrosion Test: A very important test and should never be omitted. It tells us if the thinner is corrosive in its action on metals. All thinners should pass this test.

SHERWIN-WILLIAMS PRODUCTS

Specific Gravity: This is made only for a matter of record to check up on uniformity.

Acidity: This is made to determine if the solvents in the thinner have been properly neutralized and purified.

Fractional Distillation: Used to aid in identification of the various raw materials in the thinner.

Sulphuric Acid Insoluble Test: For determining the amount of coal tar and petroleum materials present. This identifies the low priced ingredients.

Non-Volatile Residue Test: For determining the presence of non-volatile material. A good thinner should show not even a trace of non-volatile residue.

Residual Odor Test: To determine if any odor remains after ordinary drying of the thinner at room temperature.

In conclusion let us emphasize several points which we have tried to bring out in this article and which the representative should keep in mind when soliciting the thinner trade.

Uniformity: Our thinners are absolutely uniform. They are doubly checked before leaving our plant.

Quality Raw Materials: The raw materials entering into our thinners are purchased on very rigid specifications, and all materials not meeting these specifications are rejected. This eliminates corrosive solvents, offensive odors and other defects.

Correct Formulation: Our thinners have had the closest attention in their development. All available raw materials on the market have been studied carefully. In some cases hundreds of experimental formulas have been made up and tested out as described above before the final formula is sent to the customer.

Value: Dollar for dollar value has been considered just as carefully as the quality and we know that no single reliable competitor is giving the customer any more for his money than we are. The tremendous buying power of our company and the contracting of raw materials in very large quantities at favorable prices enable us to give the value we do.

Complete Line: Our line of thinners consisting of 04503, 04505, 04510, 04500, and 04502, is as complete a line as could be desired and covers a range in price which should catch almost any business on the market. Besides these we have the Retarder Thinner 04511 which has had a remarkable sale and the new Reflow Coat 04518 which rounds out the line completely.

LACQUER TESTS

OpeX we know to be the best balanced lacquer on the market. However, just saying so does not result in increased business. To enable the representative to prove his statement of the superiority of OpeX we have devised simple but practical tests that our representative can make which prove that OpeX possesses more of the right kind of goods in the package, higher natural gloss, less rubbing, and longer wear.

Many factors must be looked into to determine which is the best balanced lacquer. For example, by using a high percentage of gum a high gloss will be obtained. This will, of course, lower the durability of the film. This shows the necessity for arriving at a decision as to which piece of goods has the best all-around properties. A good lacquer cannot be judged on one factor alone but each and every one of the following must be taken into consideration:

1. Condition in Package
2. Quality of Solid Content
3. Quantity of Solid Content
4. Covering
5. Clear Tone of Colors
6. Flow
7. Toughness of Film
8. Gloss
9. Blushing
10. Fastness of Colors

The following tests show how the above properties can be determined.

1. Condition in Package

The condition of the lacquer in the package has considerable bearing on the results to be obtained. If the pigment settles out in the bottom it takes considerable time to stir it back again. Even by taking the greatest precaution there is a chance that the film will appear "specky" due to the imperfect breaking up of some of the pigment particles. By leaving the package in one position for a certain length of time the degree of settling will be readily noted.

2. Quality of Solid Content

The first factor to determine is the type of solids used and the ratio of cotton to gum and oil.

Take two quart cans and pour $\frac{1}{4}$ pt. of OpeX into one and the same amount of the competitive material into the other. The two lacquers should be the same color. By the addition of benzine or gasoline, the cotton, gum, oil, and pigment is thrown out of solution. Stir the lacquer while the gasoline is being added. Be sure to add sufficient to throw down all the solids. Between $\frac{1}{4}$ to $\frac{1}{2}$ pt. should be sufficient. If the lacquer is rich in solvents, more gasoline will be necessary than if the solvents are weak. By noting the amount used the solvent strength may be determined.

Where a high cotton content is used the product will be quite solid, stringy in appearance, and hardens up fast on exposure to the air. If a high gum content is present it will be a soft mushy mass, which can be rolled into a ball and remains soft on exposure to air. The durability and toughness of lacquer depends upon the quantity of cotton.

3. Quantity of Solid Content

The amount of solids is determined by noting the quantity of solids precipitated by the benzine or gasoline and also by the weight per gallon of the material. If the first test has indicated that solids are about equal in ratio, then the one which contains the most solids would be heaviest per gallon and would be the best to buy.

However, if the test has shown a difference as to quality, one containing more gum than the other, then the solid content means very little. Gum solutions, even with a high solid content, are thin in comparison to other cotton solutions. If the viscosity is low and the solids high, then it points to a high gum content, for example:

	Solids	Viscosity
Competitive Sample	34.15%	28
OpeX Auto Enamel	32%	40

Our Industrial Enamels, for example, have an equal solid content and a much thinner body than our Automotive Enamels. A lacquer, of course, with a high gum content may be given a false body by using a high viscosity content. This, however, would be caught in the second test.

4. Covering

This very important factor may be noted by reducing the two samples to be tested equally with the same reducer and pouring them out side by side on plate glass. By holding the glass to the light any difference is readily noted.

5. Clear Tone of Colors

The public is becoming more and more educated as to color and becoming more fastidious in their selection, based upon the clearness and brilliance of the colors used. By examining the plate glass in the above test the clarity of tone can also be noted.

6. Flow

The flow depends largely upon the type of solvents used. Spray out on panels, using the same thinner for reduction, and note the degree of smoothness. Pour the two thinners to be tested in can covers and note the time taken for evaporation. The slower the evaporation the better the flow. No non-volatile residue should be left in the can covers.

7. Toughness of Film

Wipe a piece of plate glass with a little mineral oil. Spray on side by side the two samples. When perfectly dry, strip off the film and see which is the toughest. If the gum content is very high it will be difficult to keep it intact when stripping it from the glass. This test will check the results obtained in test No. 2.

8. Gloss

By examining the panel prepared in the last test the natural gloss as sprayed may be noted. The easiest way to obtain a high gloss is by using a high percentage of gum. This would be indicated in the previous tests. OpeX does not derive its good natural gloss in this way, which would reduce the durability of the film. The secret is in our method of grinding the pigments. It is an acknowledged fact that the less rubbing necessary the greater the durability. Rubbing is a very costly operation and OpeX, with its good gloss, lowers the amount of rubbing necessary. The gloss also depends on the flow; the smoother the finish the higher the gloss.

9. Blushing

By breathing on the two samples while they are drying and noticing how quickly the blushing disappears the factor of safety of the solvent mix used may be determined.

10. Fastness of Colors

While there are machines for determining this, the average user of lacquer may check up this factor, where the time will permit, by spraying the panel and making an exposure test. Cover $\frac{1}{4}$ of the panel, expose at 45 degrees southern exposure, and at intervals compare the covered and uncovered sections.

Without a doubt the opening of additional repaint shops or swinging paint shops over into the use of lacquer has been the task of all lacquer salesmen of competitive concerns, as well as our own, for the last two or three years. This task is not yet completed, but undoubtedly is approaching the end. For example, the same of our regular SWP and shelf line, we are not going into a man's store and induce him to take on a line of paint, but we are going in and selling him our line, where he has been selling or using some other line of goods. The amount of business we are able to obtain by getting people to go into the paint business is relatively small. We must therefore acknowledge the fact that a great deal of our sales effort must be made along the line of establishing ourselves in shops where a competitor is already established, and by the same token we must be very careful to see that we are establishing ourselves in our own accounts well enough to continue this business with the account, and not letting the competitor come in with an inferior piece of goods and oust us, on a price basis.

The chart which follows indicates the amount of material actually in our package and comparative amounts in a prominent competitor's package of similar shade. Now, it is true that the weight per gallon may mean nothing, but if goods are formulated upon approximately the same ratio of cotton to gum and oil, solvents to non-solvents, and pigments sufficient for the proper covering, and in good ratio with the binding qualities of the cotton and gum, then that package which contains the greatest amount of coverage (solids) is necessarily the best bargain for the consumer.

COMPETITIVE SAMPLE			OPEX		
Name	T. S.	Vis.	Name	T. S.	Vis.
Green	29.6	64	Taxicab Green	34	60
Gray	27.3	55	Gray Green Light	40	45
Gray	18.6	18A	Sage Brush Gr. Lt.	39.5	45
Green	26.9	57	Channel Green	35	60
Gray	29.1	36	Buckingham Gray	37.5	55
Green	28.1	60	Brewster Green Lt.	35	60
Brown	27.1	32	Beige Brown	36	40

The formulas of one of our chief competitors and our own are running very close alike, the advantage being as indicated above in the actual coverage of our materials, and secondly the tremendous advantage we have in our method of manufacture, which gives us a superior product so far as gloss and rubbing qualities are concerned. A product that has to be rubbed less we know wears better, so in the long run we really have against our competitor's the following features:

1. More goods per can as coverage goes
2. Higher gloss, demanding less rubbing
3. Better wearing
4. Lower price

You can prove any of the above statements right on the job. The actual experience in a large production shop in Cleveland showed 11 motor hoods to the gallon of one make and only 7 hoods of another well-known competitor against OpeX 16 hoods to the gallon. Try and get your prospective customers to prove it out and be convinced. The above facts, coupled with your usual sales arguments, give one all the ammunition necessary to combat competition of any competitor. The same methods of finding out just where your goods stand should be made by yourself in the customer's shop against the competitive goods. You may be sure that you have nothing to lose by any comparative tests you desire to make.

SHERWIN-WILLIAMS PRODUCTS

The success of our business in going against cheap competition is most gratifying, but the greatest problem confronting us today is to be sure that each of our salesmen realizes the fallacy in any customer using any of the medium grade lacquers unsuited for such work, such as are now flooding the market, manufactured by unscrupulous organizations who do not know what they are offering and jeopardizing the good name that lacquer has earned for itself.

Our own company manufactures a line of industrial lacquers which carry a high gloss, and for equal solids would have a much lower viscosity in the package. That is, the goods would be much thinner per gallon, although the gallon would weigh the same as high-grade automotive finishes. This class of goods in a gallon can should be marketed for somewhere around \$3.75 to \$4.00 and the ratio of gum and oil to cotton content is such that it makes it very easy for one to prove out the fact that this is cheaper industrial lacquer rather than high-grade automotive finish.

Gum solutions are very thin in viscosity, even with the high solid content. Cotton solutions tend to run heavier. When one increases the solid content so as to form a comparison with a line of cheap materials against the Opex automotive finishes an explanation of this point should be of interest and aid us in maintaining business in the face of competitive lower prices.

	Solids	Viscosity
Competitor's Sample	34.15%	28
Opex Auto Enamel	32%	40

We have repeatedly told you that the solid content is the answer to what is in the can. This is entirely true, providing we figure as to whether the solids are the correct ones or not, whether gum costing from 8c to 15c a pound is substituted for cotton at 40c to 50c a pound, and a test to prove this point is very easily made right in the consumer's shop.

Of course, it is possible for a competitor to use a high viscosity cotton and build up their viscosity so as to show somewhat near to our own, and if this is the case we would not have the chance to show the great difference in body of our material, but would catch them on one of the other points. Peculiarly enough, however, the competition for the most part runs equal or slightly less total solids in general and far lower viscosity.

In the above samples of black, a cheap Bone Black, not worth more than 5c to 7c a pound, was used and although they had an equal weight on samples, they had only half the covering. The Opex Coach Black carried a 45c to 48c black, the highest grade Carbon Black. True, the competitor may have a denser Black but it would take twice as many coats to get the coverage, and, furthermore, the settling of this Black in the package was such that it was almost impossible to get it off the bottom.

It is not easy to conduct an elasticity test in the ordinary customer's shop. We spray the goods on tin panels (which have been prepared by wiping over with mercury and then removing all possible with a rag, leaving a very thin coating) and put the tin panels in the oven for one or two days, heated to about 180 degrees F. At the end of about 36-48 hours, the high gum content products are so brittle that they cannot be removed from the tin in any sort of a sheet, but fly off when touched with a knife, whereas the Opex products will come off in sheets and have a very flexible, rubbery feel when rolled up. In our laboratory we make strength tests on these films, and the strength of Opex film is always satisfactory, where with the high gum competitive goods we cannot even get a sample large enough to put on the machine for test; it is so fragile. This is exactly what happens after a car has been exposed and the film has a chance to dry out, where the gum content proposition is used.

	Elasticity	Hiding
Competitor's Sample	Brittle	6
Opex Auto Enamel	O. K.	10

Peculiarly enough, on all tests made in our laboratory the difference in price has oftentimes been not more than 10%. The difference in quality actually proved out in the laboratory to be 25-30%. If you show the customer that for 10% higher price he gets a 25-30% better piece of goods, there is not much question as to where the business is going.

If a high gloss lacquer where the gloss is produced by the addition of gums is the satisfactory solution of producing a satisfactory finish in the easiest manner, then the motor car production shops would have been using this type of finish for the last several years, but it is a matter of fact that none of the cheaper competition we are running up against in refinishing shops could ever have had an opportunity to show their goods in a production shop, because the large producers of motor cars know that a high gloss gum finish which is masquerading under the name of a lacquer finish would only cause them trouble in the long run. Your good customer can do no better than follow the experience of the large production shops and considering the small amount of money in materials per job as compared to the good reputation of the shop and the amount of labor expended in refinishing a car, the difference in price between cheap enamels built up of gum bases and Opex built up on nitro-cellulose base is such that the small saving in price per gallon is not warranted.

The Sherwin-Williams Company led the way in producing the first semi-gloss or semi-lustre automotive finish of a satisfactory character. The semi-gloss or semi-lustre was obtained by manufacturing methods and not by introduction of high gum content. As you have already been advised, our High Gloss Coach Black is the next step forward in the introduction of a high gloss finish, produced by manufacturing methods entirely independent of any raise in gum content. The same test for elasticity, hiding, viscosity, etc., shows our High Gloss product equal in strength and wearing quality to our own Coach Black, or any high grade competitive material.

We believe that the less rubbing done on a car the longer the finish will wear, and we believe that as a new high gloss line is developed we will have a still superior piece of goods, if possible, to any that has yet been developed.

Whether we retain our present business and go out and get more depends entirely upon whether the individual salesman talks quality or proves quality. The man who can prove the quality of his goods by actual demonstration in the customer's shop will be very well repaid in the growth and maintenance of a satisfactory business in our Opex automotive line.

Please insert these pages #339
and #340 in your Opey Automotive Price List.

Do not fail to destroy the old
page, as the information contained in these
pages becomes effective immediately and
supercedes that issued April 15th.

E.W. Windsor.

Price List List

SHERWIN-WILLIAMS PRODUCTS

OPEX THINNERS — Continued

Net	1's	5's	30 gal. Drums	50 gal. Drums
04510 Opex Thinner No. 10.....	1 80	1 70	1 65	1 60

Opex Thinner No. 10 should be used for thinning all Opex, or products of a lacquer nature, excepting where the first Opex lacquer coat is applied over an oil paint or varnish surface, either new or old, in which case only our Opex Binder Thinner No. 2, Rx 04502, should be used. Contains no benzol, acetone, or other toxic materials. Has no solvents that are acid or alkaline to cause corrosion or discoloration on metal. Clean and water white. Odor not offensive or obnoxious. 100% volatile at ordinary room temperature. Not as good flow as Binder Thinner No. 2 but a little slower drying.

Net	1's	5's	30 gal. Drums	50 gal. Drums
04506 Opex Remover and Cleanser.....	1 10	1 00	95	90

This material is designed only for washing out air guns and general cleanup work around the shop. Must not be used for thinning any Opex finishes.

Net	1's	5's	30 gal. Drums	50 gal. Drums
04511 Opex Retarder Thinner.....	2 20	2 10	2 05	2 00

Designed for use in damp weather when Pyrexlin materials generally are subject to blushing or frosting. If this occurs reduce with a special thinner made of one part of Opex Retarder and three parts of Opex Thinner No. 10 or Opex Binder Thinner No. 2. Every shop should have a gallon or two of Retarder Thinner on hand at all times throughout the warmer weather. Opex Retarder Thinner is made of high boiling point solvents, which slow down the rate of evaporation when mixed with Opex Thinner No. 10 as recommended above but should not be used straight.

OPEX RE-FLOW COAT

Net	1's	5's	Drums
04515 Opex RE-FLOW COAT.....	2 00	2 00	2 00

Everyone knows that it is good practice to shoot a shower coat of clear thinner over the job after the last coat of lacquer enamel, just prior to the polishing operation to give a complete eraser of the enamel, eliminating any orange peel, spray dust, or sanding scratches that may be present. Opex RE-FLOW COAT is a specially formulated thinner to give the maximum results and greatest natural gloss.

Opex RE-FLOW COAT will increase the gloss at least 50% in the hands of any spray man and with some colors sprayed by experienced mechanics bring up the gloss 100%, in many cases eliminating the necessity of polishing.

Opex RE-FLOW COAT will save valuable time and labor for shops that do quality work and save the polishing operation entirely for those shops that specialize on cheaper quantity work.

For best results spray on a good wet coat, almost to the point of sagging, wet enough to reflect the spray gun in your hand. Lap the wet edges for uniformity.

Opex RE-FLOW COAT is a specially formulated thinner to give the maximum results and greatest natural gloss. It is designed to be used in conjunction with Opex Thinner No. 10 or Opex Binder Thinner No. 2. It is not to be used straight.

OPEX STRIPING ENAMELS

Net	1's	5's	Drums
21402 Yellow Striping Enamel.....	1 80	1 70	1 65
21403 Black Striping Enamel.....	1 80	1 70	1 65
21404 Medium Blue Striping Enamel.....	1 80	1 70	1 65
21405 White Striping Enamel.....	1 80	1 70	1 65
21406 Red Striping Enamel.....	1 80	1 70	1 65
21407 Green Striping Enamel.....	1 80	1 70	1 65
21408 Silver Striping Enamel.....	1 80	1 70	1 65
21409 Light Gray Striping Enamel.....	1 80	1 70	1 65
21410 Light Blue Striping Enamel.....	1 80	1 70	1 65

The standard packages are half pint varnish cans. Goods however can be supplied in gallon packages, if desired. The material should be reduced but slightly for tamping. Use either No. 10, Rx 04510, or Binder Thinner No. 2, Rx 04502.

SHERWIN-WILLIAMS PRODUCTS

OPEX LACQUER POLISH

Ref. No.	Qty.	Pts.	Gals.
78504	Opex Lacquer Polish	45	3.00

Opex Lacquer Polish is the result of over a year's development and tests for a perfectly balanced liquid lacquer polish. Note the pertinent sales pointers on this product.

1. Has no acidity; therefore can be sold in tin cans.
2. Does not separate or emulsify. Always ready to use.
3. Contains a mild abrasive that cleans and polishes in one operation but will not cut or bleed the color.
4. Works exceptionally easy and leaves a lustrous clean cut surface.
5. Economical. Will polish a large number of cars.
6. 40% discount to the auto paint shop, paint dealer, car dealer, accessory store, garage, etc.
7. 40 and 20 per cent discount to paint jobbers and automotive accessory jobbers.
8. Can also be used to clean and polish lacquer finished furniture.
9. Works well on baked enamel.
10. Put up in attractive lithographed cans—a typical Sherwin-Williams package. Packed 24 to the case.
11. Low list price—profitable discount.

Opex Lacquer Polish is easy to use, efficient, economical, and safe. Dampen a clean soft cloth and go over all the body. It will dry and flatten out by the time you are back to the point where you started. Go over the entire car rather than a panel at a time. Then rub and polish off with a clean soft cloth with but one thickness of the cloth between your hand and the surface and then watch the traffic scum go and the gloss come up. Try it out yourself—it adds "fire" to the sales talk. Remember though that no car should be polished directly in the sunlight and also that 78504 does not take the place of the polishing compound in the finishing room.

OPEX POLISHING COMPOUND

Ref. No.	Qty.	1's	5's
78502	Opex Polishing Compound	20	4.00 2.75

Opex Polishing Compound does not grind or scratch the surface, but brings up a high luster. In applying the Lacquer, apply the usual number of coats and sand out with wet sandpaper after the last coat of enamel. A light spray of Opex No-Flow Coat, Ex 94518, may then be applied which tends to smooth out any slight scratches caused by sanding. Then take a clean dampened cloth and apply the Opex Polishing Compound, rubbing off with a clean soft rag which gives a dry hard polish of excellent luster.

MASKING COMPOUND

Ref. No.	Qty.	Gals.
78510	S-W Masking Compound	20 2.00

S-W Masking Compound was developed to meet a demand for a masking compound for two color lacquer work on automobile bodies, signs, and architectural finishing. It is soluble in water but the lacquer solvents do not penetrate its coating.

S-W Masking Compound will be used in place of paper and tape. It can also be used for masking windows and nickel work if desired. There have been a number of window masking compounds on the market but this is the first successful body masking compound offered the trade.

After the fenders and upper panels have had the necessary number of coats of lacquer enamel, allow at least a full hour for drying and then with a soft brush, preferably camel's hair brush, apply a solid coat of S-W Masking Compound over those parts of the panels that require shielding from the top of the panel. Care should be exercised that the Masking Compound is not brushed to any part of the surface that is being sprayed. If water sanding between lacquer enamel coats is employed, care must be used that the water does not run off the panel being sanded down on the Masking Compound and thus dissolve part of the coating. Allow one hour for drying, then sponge off the Masking Compound, using plenty of clean water.

S-W Masking Compound is ready for use as it comes in the package. If it is necessary at any time to reduce it, add a little water. S-W Masking Compound is not only more convenient and efficient but is economical as a gallon should mask off 16 to 20 cars.

SHERRIN-WILLIAMS PRODUCTS

INSULATING VARNISHES

(KYLE) Clear Elastic Baking Varnish No. 14 (02014)

A clear, elastic, acid and water-proof. Has highest dielectric strength and longest life under heat. Will bake in from eight to twelve hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity 1.350. Thin with benzine. Intended for use where extreme flexibility and longest life under heat are required, such as on varnished cloth, large coils, wound and insulated before assembly, etc.

	1s	5s	bbbl.	drums
Less than 50 gals.	1.65	1.55		
50 gals. or over	1.55	1.45	1.20	1.15
Electrical jobbers	1.45	1.35		

Ajax Clear Quick Elastic Baking Varnish No. 14 (02014)

A very strong, tough varnish. Is oil, acid and water-proof. Has highest dielectric strength and maximum binding and cementing properties. Will bake in from eight to ten hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity 1.373. Thin with benzine. Intended for use where toughness and binding and cementing properties are required, such as on small D. C. armatures, etc. The most suitable varnish for general coil work, also oil-cooled transformers.

	1s	5s	bbbl.	drums
Less than 50 gals.	1.65	1.45		
50 gals. or over	1.45	1.35	1.20	1.15
Electrical jobbers	1.35	1.25	1.10	1.05

Ajax Clear Quick Baking Varnish No. 17 (02017)

A hard, tough varnish which is oil, acid and water-proof. Has highest dielectric strength, similar to No. 14 Varnish, but not quite as long life. Bakes in from six to eight hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity 1.370. Thin with benzine. Intended for use where quick baking is essential. A very satisfactory varnish for use on small D. C. armatures and other work where a quick baking, hard, tough varnish is required.

	1s	5s	bbbl.	drums
Less than 50 gals.	1.60	1.40		
50 gals. or over	1.40	1.30	1.10	1.05
Electrical jobbers	1.30	1.20	1.05	1.00

Ajax Clear Air Drying and Baking Varnish No. 18 (02018)

A clear varnish, which is oil, acid and water-proof. Has high dielectric strength, but not quite as long life as No. 17 Varnish. May either be baked or air dried. Baking in from five to seven hours at 100 degrees Centigrade (212 degrees Fahrenheit), or will air dry in from eight to fourteen hours. Specific gravity 1.350. Thin with benzine. Intended for use where baking facilities are not available, or where an extremely quick baking varnish is necessary. A very satisfactory varnish for use on small D. C. armatures not subjected to very severe conditions of service.

	1s	5s	bbbl.	drums
Less than 50 gals.	1.45	1.35		
50 gals. or over	1.35	1.25	1.10	1.05
Electrical jobbers	1.25	1.15	1.00	0.95

Ajax Clear Air Drying Finishing Varnish No. 19 (02019)

A clear spirit finishing varnish. Similar in all respects to Ajax Black Air Drying Finishing Varnish No. 26, and is suitable where a clear varnish is preferable to black. Specific gravity 0.910.

	1s	5s	bbbl.	drums
Less than 50 gals.	1.90	1.80		
50 gals. or over	1.80	1.70	1.55	1.50
Electrical jobbers	1.70	1.60		

SHERWIN-WILLIAMS PRODUCTS

INSULATING VARNISHES—Continued

Ajax Black Plastic Baking Varnish No. 20 (02020)

An extremely elastic and flexible black varnish. Is oil, acid and water-proof. Has highest dielectric strength and longest life under heat. Will bake in from ten to twelve hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity .870. Thin with benzine. Intended for use where the most extreme conditions of service (exposure to oil, water and heating) are encountered. May be used on cloth, all types of coils, and on both large and small armatures.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 50	1 40	1 15	1 10
50 gals. or over	1 40	1 30	1 05	1 00
Electrical jobbers	1 30	1 20	1 05	1 00

Ajax Black Plastic Baking Varnish No. 21 (02021) (New Formula)

A black varnish which dries with a plastic film. Is water-proof, acid-proof and fairly resistant to oils. Has highest dielectric strength and longest life under heat. Will bake in from ten to twelve hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity .865. Thin with benzine. Suitable for use on field and stator coils; also for use on large armatures and armature coils which are treated with varnish before assembly. Not recommended for use on small D. C. armatures.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 35	1 25	1 00	95
50 gals. or over	1 25	1 15	90	85
Electrical jobbers	1 15	1 05	80	80

Ajax Black Plastic Baking Varnish (02005) (Old Formula)

A black varnish which dries with a plastic film. Is water-proof, acid-proof and fairly resistant to oils. Has highest dielectric strength and very long life under heat. Will bake in from ten to twelve hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity .870. Thin with benzine. Suitable for use on field and stator coils; also for use on large armatures and armature coils which are treated with varnish before assembly. Not recommended for use on small D. C. armatures.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 30	1 20	95	90
50 gals. or over	1 20	1 10	85	80
Electrical jobbers	1 10	1 00	75	70

Ajax Black Semi-Plastic Baking Varnish No. 22 (02022)

A black varnish which dries with a semi-plastic film. Is water-proof, acid-proof and fairly resistant to oils. Has highest dielectric strength and long life under heat. Will bake in from eight to ten hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity .865. Thin with benzine. Suitable for use on field and stator coils and all types of armatures and armature coils, except very high-speed armatures.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 30	1 20	95	90
50 gals. or over	1 20	1 10	85	80
Electrical jobbers	1 10	1 00	75	70

Ajax Black Quick Baking Varnish No. 23 (02023)

A very hard, tough varnish. Is oil, acid and water-proof. Has highest dielectric strength. Similar to No. 20 Varnish, but is not quite as flexible and does not have as long life under heat. Will bake in from eight to ten hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity .865. Thin with benzine. Intended for use where a hard, tough, quick baking varnish is required. Suitable for use on field and stator coils, also large and small armatures.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 45	1 35	1 10	1 05
50 gals. or over	1 35	1 25	1 00	1 00
Electrical jobbers	1 25	1 15	1 00	1 00

INSULATING VARNISHES - Continued

Ajax Black Extra Quick Baking Varnish No. 40 (02060)

A very quick baking semi-plastic black varnish which is acid and water-proof, but not oil-proof. Has fair life under heat. Intended for use on the stators of fractional HP motors and similar work where quick baking is essential. The baking time on coils, etc., is from two to four hours at 100 degrees Centigrade (212 degrees Fahrenheit) or it will dry in from six to twelve hours. Specific gravity .865. Thin with benzine.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 25	1 15	---	---
50 gals. or over	1 15	1 05	90	85
Electrical jobbers	1 05	95	80	75

Ajax Black Air Drying Varnish No. 25 (02025)

A black air drying varnish which dries with a fairly hard film. Has excellent insulating properties. Is acid-proof and water-proof, but is not thoroughly oil-proof. Will air dry in about one hour, but requires from four to eight hours to dry in the interior of a coil. Specific gravity .865. Thin with benzine. Intended for use where baking facilities are not available, or where longest life under heat and electricity are not required. Suitable for sold and motor coils and all types of armatures except small high-speed armatures. An ideal varnish for general repair work.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 15	1 05	---	---
50 gals. or over	1 05	95	80	75
Electrical jobbers	95	85	70	65

Ajax Black Air Drying Finishing Varnish No. 26 (02026)

A black spirit finishing varnish. Has good insulating properties. Is thoroughly oil and moisture-proof and produces a beautiful black finish. Will air dry to handle in about twenty minutes, but requires more time to dry if used in a coil. Specific gravity .910. Thin with denatured alcohol. Intended for use as a finishing coat to prevent absorption of lubricating oils and moisture. May also be used on motor frames, etc., as an enamel.

	1/2 gal. bottles	5 gal. heavy	bbbl.
Less than 50 gals.	2 10	1 30	---
50 gals. or over	2 00	1 20	1 55
Electrical jobbers	1 90	1 10	1 45

Ajax Underwriter's Black Acid Resisting Insulating Paint No. 27

A high gloss black quick drying paint. An excellent insulator, and resists the action of acid and acid fumes. Has no disagreeable odor. Air dries to handle in about thirty minutes. Specific gravity .865. Thin with benzine. Intended as a general purpose paint for meter boards, switchboards, conduits, splices, storage battery cases, work benches, battery rooms, etc.

	pts.	qts.	1s	5s	bbbl.	drums
Less than 50 gals.	1 90	1 50	1 15	1 05	---	---
50 gals. or over	1 80	1 40	1 05	95	80	75
Electrical jobbers	1 70	1 30	95	85	70	65

(02110) 02102221

Ajax Black Acid-Proof Paint No. 28 (02028)

A high gloss black quick drying paint which is especially designed to resist the action of sulphuric and other acids. It is thoroughly water-proof and a good insulator. Air dries in from one-half to one hour. Specific gravity .830. Thin with benzine or gasoline. Intended for painting battery cases, work benches and all surfaces exposed to sulphuric acid and acid fumes.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 10	1 00	---	---
50 gals. or over	1 00	90	75	70
Electrical jobbers	95	80	65	60

SHERWIN-WILLIAMS PRODUCTS

INSULATING VARNISHES—Continued

Clear Oil-Proof Core Plate Baking Varnish No. 29 (02029)

A clear varnish which produces a smooth oil-proof and tenacious coating. Is intended for insulating the laminations of armature and field coils and oil-cooled transformers. Bakes in from ten to fifteen minutes at 150 degrees Centigrade (300 degrees Fahrenheit). Specific gravity 0.855. Thin with benzine.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 45	1 25	1 10	1 05
50 gals. or over	1 35	1 25	1 10	1 05
Electrical jobbers	1 25	1 15	1 00	85

Ajax Clear Air Drying Oil-Proof Core Plate Varnish No. 30 (02030)

A clear spirit varnish which produces a smooth, oil-proof, tenacious coating. Has excellent insulating properties and is thoroughly oil-proof. Will air dry in from five to ten minutes. Specific gravity 0.910. Thin with denatured alcohol. Intended for insulating the core laminations of oil-cooled transformers, also armature and field coils.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 85	1 75	1 60	1 50
50 gals. or over	1 75	1 65	1 50	1 40
Electrical jobbers	1 65	1 55	1 40	1 30

Ajax Black Air Drying Core Plate Varnish No. 31 (02031)

A black varnish which produces a smooth, tenacious coating, possessing high dielectric strength. Will air dry in from twenty to thirty minutes. Specific gravity 0.855. Thin with benzine or gasoline. Intended for insulating the core laminations of field stator and armature coils, also air-cooled transformers.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 10	1 00	75	70
50 gals. or over	1 00	90	75	70
Electrical jobbers	90	80	65	60

Colliac (01164)

A black baking insulating varnish. Possesses good insulating properties, fair elasticity and flexibility. Is water and acid-proof, but not oil-proof. Bakes in five hours at 100 degrees Centigrade (212 degrees Fahrenheit). Specific gravity 0.860. A varnish which may be sold in competition with such materials as Armalac, etc. Thin with benzine.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 20	1 10	85	80
50 gals. or over	1 10	1 00	85	80
Electrical jobbers	1 00	90	75	70

Lustrolac (01165)

A black, quick air-drying insulating varnish. Possesses good insulating properties, fair elasticity and flexibility. Is water and acid-proof, but not oil-proof. Air dries in from four to six hours. Specific gravity 0.898. A varnish which may be sold in competition with such material as Enamelac, etc. Thin with benzine.

	1s	5s	bbbl.	drums
Less than 50 gals.	1 20	1 10	85	80
50 gals. or over	1 10	1 00	85	80
Electrical jobbers	1 00	90	75	70

OPEX AUTOMOTIVE FINISHES

REPRESENTATIVES CONFIDENTIAL INFORMATION AND PRICE LIST

EFFECTIVE MARCH 1st, 1925
Subject to change without notice



THE SHERWIN-WILLIAMS Co.

ADMINISTRATION OFFICES AND FACTORY: CLEVELAND, OHIO
SALES OFFICES AND WAREHOUSES IN PRINCIPAL CITIES

LAC-C (X) B25 501

0007-SWP-000011930

N13597.01

SHERWIN-WILLIAMS

Opex Automotive Finishes

Representatives' Confidential Information

No one item as yet has so stirred the Paint and Varnish Industry as the entrance of production of the Pyroxylin finish into the finishing line. No single new finish has previously received the National advertisement and National discussion as has the new Pyroxylin proposition.

The production of Pyroxylin products is not new in the industry, but the added attention which has been drawn to these products in the last few years has been brought about not by the initiative of any one company but by a summation of events and discoveries of which the following are the most important:

- (1) The tremendous expansion of the motion picture industry calling for previously unheard-of quantities of nitro cotton for the manufacture of film brought about greater researches and cheaper methods for making nitro cotton.
- (2) The Great War showed still further discoveries and perfections in the processes of making nitro cotton better and cheaper.
- (3) The organic chemical industry, previously located only abroad, was started anew in this country, with the result that the solvents for nitro cotton, never before available, were manufactured on a tremendous scale.
- (4) The close of the war found cotton cheap, nitro cotton made in large quantities cheaper than ever before, and plenty of solvents on hand.

Taking the above events and added to them the general awakening of the chemical spirit for production of new items in this country, and you have found the real reason for development of Pyroxylin products that has been carried on now since 1918, and has played such an important part in the picture presented to the general public on paint and varnish surfaces over the last year or two.

SHERWIN-WILLIAMS DEVELOPMENT

Our own Company was not slow to recognize the large and tremendous possible uses of these products and our researches and reports on these products go back as far as 1908. Actual development and sale of products were made as early as 1914, and concerted effort and research and development on a large scale started anew in 1921.

The development work is completed, but not ended. We are absolutely certain of the quality of our product. We are certain that, product for product, we are able to compete with credit to our material with any manufacturer in the country. Our plants are actually built and producing, and for the past three months each individual month has seen a 300% gain in our production, efforts and results.

Any intelligent representative willing to spend some time reading our Opex booklets, and carefully following the information therein, can build up in his individual territory as much business on Opex as they have at present in the entire paint and varnish business. We caution representatives, however, to start on one or two good accounts, and after making a thorough study of the demands, put your problem up to the Manufacturing Department in such a way as to allow them to apply the proper material for the purpose.

You should pick out especially the automotive refinishing business, since selling this industry represents no missionary work on your part. For the past six months, our offices have been flooded with inquiries regarding our automotive finishes, but as our automotive products were being consumed by the larger automobile manufacturers, we were not ready to offer the proposition to the refinishing shops. The plant is now equipped and stocks on hand and we are now ready for your individual part in this work. Nothing can stop the increasing consumption of Opex in your territory. The only question is what share you are going to have in introducing this new product. There is no better time than the present for you to begin to get acquainted with our products and their application. We expect you to place our product in the best refinishing automobile shops in your territory.

SHERWIN-WILLIAMS OPEX AUTOMOTIVE FINISHES

1—QUALITY

The Sherwin-Williams OpeX Automotive Finishes have been thoroughly tried and tested in the following manner:

- (A) On the weather testing machine at Detroit and Chicago.
- (B) By exposure test at Detroit and Chicago.
- (C) By actual application in not less than 50 large automotive manufacturing plants.

We are not sending out some untried proposition, but sending out a product backed by tremendous experience in manufacturing automotive finishes, and probably more individual research work than has been expended on any other Sherwin-Williams product in the last ten years.

We use nothing but the highest grade raw materials in these products. *Film scrap, scrap celluloid, cheap solvents are not in our products.* We ask you therefore, to sell our proposition entirely on a quality basis. It would be absolutely impossible for any small manufacturer to have invested as much in technical skill and development as The Sherwin-Williams Company has already spent developing these finishes. There are cheaper products on the market, the same as there are cheaper paints than SWP. We are certain, however, that materials made from cheap raw materials, loaded with cheap gums and oils, may rub easier and appear more brilliant, but they will not stand up under the acid test of weathering. Write us regarding any competition you meet, and let us give you exact reports on our weathering tests against these competitors' materials.

2—SERVICE

We carry at all warehouses a good stock of the Automobile OpeX line.

3—PRICE

There is a wide variation in price asked for the same product in various parts of the country, depending entirely on the amount consumed by the customer. We expect to have our business built up on a strong profitable basis because we give a strong durable product based on quality. We do not expect to produce a line to compete with cheap products. The superiority of our goods cannot be demonstrated merely by finishing a panel. It must be shown conclusively by weather tests and salesmanship must overcome any possible difference in price by offering our quality backed up by our reputation.

Do not be upset by low prices.

One gallon of Enamel at \$6.00 plus.
One gallon of Thinner at \$2.50 makes
Two gallons of Enamel at \$8.50, or \$4.25 per gallon.

Do not expect us to sell our \$6.00 Enamels, full-bodied, good covering, smooth flowing, to compete with a product offered at \$4.25, which is manufactured by taking good Enamel and reducing it down with cheap Thinner and, therefore, will not stand reduction, cannot cover as well, and will not flow properly.

The Sherwin-Williams Company controls the intermediates that go to make the colors, the pigments, and, in many cases, the very basis of the solvents that make up these Enamels. The Sherwin-Williams Company has behind it a corps of experts, well versed in the production of automotive primers, undercoatings and enamels, and this experience is of extreme advantage in working up proper undercoaters and primers for these new enamels. It is a matter of fact and record that by far the larger proportion of the cars already finished in Pyroxylin have been finished over identical undercoatings we are recommending in our methods, supplied by The Sherwin-Williams Company or its subsidiaries. You should have no difficulty in convincing the automobile finisher or refinisher of the fallacy of expecting a chemical house or a varnish house to prepare for them the proper primers, undercoaters or enamels. The problems connected with the manufacture of these products are essentially paint problems, and as such have been studied by this Company, and The Sherwin-Williams Company have earned and deserved their reputation on their researches and developments on these lines.

TECHNICAL SERVICE

We have demonstrated successfully against every Pyroxylin Enamel made and sold in this country, these demonstrations covering not less than 50 of the largest automotive finishing plants in the country, and under the most exact conditions possibly known, and with success for our products.

We offer your territory and district this same competitor's technical service, limited only by the conditions indicated below. It must be understood that a visit from a technical representative to finish a car from the metal to the polish is the equivalent of giving the customer a One Hundred Dollar sample. We do not intend to give our customers the material for finishing their cars nor do we intend to furnish special representatives to apply the material except where it lines up with good common sense business methods.

COMPETITORS' TECHNICAL SERVICE

Our competitors have offered the services of technical men to their customers to be charged for at the rate of Twenty Dollars per day and expenses, provided they purchase the material to be applied. Another method offered was the opening of schools where the customer was obliged to spend his time to travel to a definite city and oftentimes pay a definite fee for entrance into a school where he learns the application of Pyroxylin.

The Sherwin-Williams Company are not interested in sending out technical representatives and charging the customer for this service, nor are we interested in establishing schools, but we offer, however, a much simpler proposition.

SHERWIN-WILLIAMS TECHNICAL SERVICE

For every Five Hundred Dollar order actually received and passed by our Credit Departments, we will put through a demonstration. This Five Hundred Dollar order would represent our assortment No. 1, and include Primers, Glazing Putty, Surfacers, and Thinners complete, sufficient to finish approximately forty to fifty cars.

We are not interested whether this be a single order from one customer, or whether it represents two or three finishing shops who are anxious to learn the method, or, in other words, we would establish in one of the finishing plants in the city a class to be shown how to finish one car, and representatives from the other finishing companies would be present, provided they purchased part of the original initial order.

You will find many shops already familiar with the application of Pyroxylin Enamel and in such cases a sale could be established without the necessity of a demonstration.

It should be self-evident that there are not enough technical representatives in the Company or in the country to demonstrate in each individual shop throughout the country. It is also certain that any refinishing shop that does not go into the Pyroxylin business within the next few months is absolutely doomed to failure in the next year or two. We offer, therefore, to teach a man the fundamental principles and technical application of our products without cost to him, but make the initial order large enough so as to insure that our technical representatives will not be wasting their time on shops too small to warrant our attention and, furthermore, to insure that for our technical service we obtain some creditable business. As a matter of fact, there will be no profit on this first order to the Company.

It may appear as a hard proposition to interest two or three finishers in one town to come together and learn the Pyroxylin method of application, but what difference is there in this method over the establishing of schools where anyone is welcome that pays the fee, and this method is being successfully carried out today by one of our competitors. There is no possibility of a finishing shop keeping this proposition quiet and to themselves. The competitor is going to get the information within a few months, either from our technical representatives or from our competitors.

The assortment we offer is about as follows:

No. 1 ASSORTMENT

40	Gallons Sherwin-Williams Opex Red Oil Primer and Sealer, at \$2.35 per gallon.....	\$ 94.00
50	Pounds Sherwin-Williams Glazing Putty No. 16, at 24c per pound.....	12.00
50	Gallons Sherwin-Williams Opex Automotive Finishes, assorted colors, at \$6.00 per gallon...	300.00
50	Gallons Sherwin-Williams Opex Reducer, at \$2.25 per gallon.....	112.50
10	Gallons Sherwin-Williams Opex Remover and Cleaner, at \$1.25 per gallon.....	12.50
		\$631.00
	Actual Cost to Purchaser.....	500.00

The colors we offer cover well, fast to light, non-fading, and represent any possible combination necessary under the following:

Sherwin-Williams Opex Tudor Gray
 Sherwin-Williams Opex Pearl Gray Deep
 Sherwin-Williams Opex Pelham Blue
 Sherwin-Williams Opex Naiad Green
 Sherwin-Williams Opex Gray Green Light
 Sherwin-Williams Opex Coach Black
 Sherwin-Williams Opex Gray Green Deep
 Sherwin-Williams Opex Dust Proof Gray
 Sherwin-Williams Opex Beaver Brown
 Sherwin-Williams Opex Erie Blue

These shades represent standard shades which we desire to establish and warehouse throughout the country where business warrants.

SHERWIN-WILLIAMS PRODUCTS

AMOUNT NECESSARY FOR A CAR

The amount of material needed for a car, of course, varies with the size of the car and the number of coats applied. The following general information, however, should be sufficient for your purpose.

It requires approximately one quart for one coat on the average size car. This includes the items of Metal Primer and Sealer, Opex Primer, Opex Sanding Surfacers, Opex Binder Surfacers, Opex Automotive Enamels.

Glazing Putty No. 16. Quantity per car depends, of course, on the condition of the metal, but only a few ounces to not more than a pound per car is necessary.

Opex Thinner. The directions for thinning Opex Finishes are described under each of the products on the next page.

Roughly there will be less than \$10.00 worth of material per car, and you should be able to sell our quality proposition as compared to some cheaper product where the cost per car will be from \$7.50 to \$9.00. Think of the tremendous difference in the actual length of life represented by this small price difference. All of our Opex Finishes are of the best quality possible for the purpose and must be sold strictly as quality products and not on a price basis.

ADDITIONAL SHADES

For the automotive manufacturer we have, beside these, special shades already numbering fifty various colors. Additional colors will be manufactured only on receipt of an order for twenty gallons, at \$0.25 per gallon over regular price. We call attention, however, to the fact that not all colors can be duplicated in Pyroxylin. At the present time, there is an entire absence of Maroons, and only colors that have been thoroughly tested can be used, in this way eliminating some shades previously obtained with color varnishes.

COST OF SPECIAL SHADES

To insure length of life of Pyroxylin Enamels, it is absolutely necessary that a proper balance of pigment be carried to the other ingredients used. To obtain some shades desired by the customer, it would be necessary for us to upset this balance and apply either less or more pigment, and this we do not intend to do because of the ill effect on the finished Enamel; for example, very light, delicate Blues usually made with color varnish, by the addition of a small amount of pigment, cannot be duplicated in Pyroxylin, as the final Enamel will not have the covering power and there will not be enough pigment to prohibit the passage of light through the film, and such passage of light would decompose the film in a short time. Also, some products may be found on the market that cover better in one coat than our own. This has been definitely proven to be brought about by loading with pigment, and our weathering tests show that loading with pigment makes the Enamel eventually brittle and shortens its life. The balance of pigment to nitro-cotton in the Sherwin-Williams formula has been developed by a long study and our products will give the longest wearing life, irrespective of any small point which the customer might bring up in favor of the competitive goods.

TAXICAB AND BUS COMPANY SPECIAL COLORS

For taxicab companies, bus lines, and other similar propositions, we are prepared to make the standard shades providing these standard shades can be duplicated in Pyroxylin satisfactorily. Our Technical Department will advise promptly upon receipt of the shade whether it can be duplicated in Pyroxylin with the same expectation of length of time as in our regular line.

TRUCKS, MILK WAGONS, ETC.

Packing house trucks, chain grocery store wagons, tea company conveyances, and, in fact, any company operating a large fleet of wagons or automobiles, should be interesting prospects, and the general information can be applied in all cases equally well. Special shades to match any standard chain store or similar proposition will be made with the proviso that a 20-gallon order is received at the time of requesting the match. The same basis for special technical representatives to apply the product holds in these cases, and exceptions to this rule will only be made after application has been made through District Managers to Cleveland direct.

SHERWIN-WILLIAMS PRODUCTS

OIL PRIMERS AND SEALERS

New No.	Old No.		1/4"l	1"l	5"l
28001	AE 241	Oil Primer and Sealer, Red No. 36.....	\$2.75	\$2.35	\$2.25
28002	AE 289	Oil Primer and Sealer, White No. 36.....	3.25	2.85	2.75
28003	AE 271	Oil Primer and Sealer, Yellow No. 36.....	3.25	2.85	2.75
28004	AE 289	Oil Primer and Sealer, Red No. 12.....	2.75	2.35	2.25
28005	-----	Oil Primer and Sealer, White No. 12.....	3.25	2.85	2.75
28006	-----	Oil Primer and Sealer, Yellow No. 12.....	3.25	2.85	2.75

The above materials can be sprayed directly from the can or can be slightly reduced with turpentine. Oil Primer and Sealer, Red, White, and Yellow, No. 36, air-dry in thirty-six hours, but where the shop is equipped with ovens for forced drying, will dry in five to six hours at 150 degrees Fahrenheit, or two to two and one-half hours at 250 degrees Fahrenheit. The Oil Primer and Sealer, Red, White, and Yellow, No. 12, air-dry in twelve hours, and are designed especially for custom shops where there is no installation of equipment for forced drying.

It is recognized that for best results a long oil primer such as our No. 36 should be used, but where the trade demands a shorter drying product, namely twelve hours or over night, we have designed the No. 12 Primer to meet this demand.

For your information and in order to avoid any misunderstanding, please be advised that all Primers, Surfacer, Fillers, etc., of an oil nature (that is not of a Pyroxylin or Opex nature) but for use under our Opex Finishes, will be classified in the series from Rx 28001 to Rx 28500.

OIL GLAZING PUTTY AND OIL ROUGH STUFF

			1"l	5"l	25"l
28016	Rx 25516	Glazing Putty No. 16 (Oil Base).....	\$0.28	\$0.24	\$0.21

This product is also of an oil nature and should not be confused with the Opex or Pyroxylin products listed and explained hereinafter.

Oil Glazing Putty No. 16 is used for spot glazing and puttying. Air-dries in eight hours. Can be baked in four hours at 150 degrees Fahrenheit, or two hours at 250 degrees Fahrenheit. If Oil Glazing Putty No. 16 is to be reduced, turpentine should be used.

On oil undercoatings turpentine is recommended as a thinner. Do not reduce oil undercoatings with Opex Thinner.

OPEX PRIMERS [Pyroxylin Primers]

			1"l	5"l
28501	AE 316	Opex Metal Primer Red.....	\$3.25	\$3.15

Opex Metal Primer air-dries in from ten to fifteen minutes, but for best results one hour should be allowed before the next coat is applied. Reduction for spraying, one part Opex Thinner No. 10, Rx 04510, to two parts of Primer. Opex Metal Primer should be used only on new work and not for use over old paint or varnish. We produce special finishes for use over old paint and varnish which are listed later in this price list.

It is absolutely understood that the word "Opex" will be used only on goods that are of a Pyroxylin nature. Our Oil Primers, Surfacer, and Fillers, will not carry the "Opex" label. This in order to distinguish between the two types of materials.

OPEX SANDING SURFACERS

			1s	5s
28701	AE 295	Opex Surfacer Light.....	\$4.25	\$4.15
28702	-----	Opex Surfacer Dark.....	4.25	4.15

Opex Surfacer Light, Rx 28701, and Opex Surfacer Dark, Rx 28702, are supplied in heavy consistency and for spraying should be reduced with equal parts of Opex Thinner No. 10, Rx 04510, or Opex Binder Thinner No. 2, Rx 04502. If to be applied over an undercoating of an oil nature, such as our Oil Primers and Sealers No. 36 or No. 12, the material should preferably be reduced with our Opex Binder Thinner No. 2, Rx 04502. In other words, when any first coat of Opex (Pyroxylin) material is applied over an oil paint or varnished surface, either old or new, this first coat of Opex should be reduced to proper consistency with Opex Binder Thinner No. 2, Rx 04502.

These two surfacers are designed for use over either the Oil Primers and Sealers or over the Opex Metal Primer Red. When applying over Oil Primer and Sealer, the first coat should be a very light or so-called dust coat. Subsequent coats can be applied more heavily. Always bear in mind that when applying Opex or Pyroxylin materials over Primer, Sealer, Surfacer, etc., of an oil nature that the first coat should be put on very lightly as in this manner the solvents in the Opex Finishes will not be present in sufficient volume to attack the oil undercoatings.

SHERWIN-WILLIAMS PRODUCTS

So that there will be no misunderstanding, please be advised that all Primers, Surfacers, and Fillers of an Opex or Pyroxylin nature, that is very rapid drying products, we are reserving a series of Rx numbers beginning with Rx 28501 to Rx 29000. Everything in this series is of an Opex or Pyroxylin nature. As advised, the series from Rx 28001 to Rx 28500 is reserved for the Oil Primers, Surfacers, and Fillers. Please be careful therefore in ordering material to specify the correct Rx number.

OPEX BINDER SURFACERS

		1's	5's
28703	Opex Binder Surfacers Light.....	\$4.90	\$4.80
28704	Opex Binder Surfacers Dark.....	4.90	4.80

The Opex Binder Surfacers are used where an Opex Finish is to be built over a surface previously painted or varnished and differ from the Opex Surfacers Light, Rx 28701, and Opex Surfacers Dark, Rx 28702, in that they are constructed in such a manner as to have the least possible effect on the old painted or varnished surface.

The Opex Binder Surfacers Light, Rx 28703, and Opex Binder Surfacers Dark, Rx 28704, are supplied in heavy consistency and for spraying should be reduced with equal parts of Opex Binder Thinner No. 2, Rx 04502. Under no condition should these goods be reduced with any other thinner, as in doing so the value of the Opex Binder Surfacers for use over old paint will be minimized, if not entirely destroyed. In applying over the old painted or varnished surface after it has been properly prepared, spray on a very light dust coat which can be followed with heavier subsequent coats. Opex Binders Surfacers air-dry in fifteen to twenty minutes, but approximately one hour should be allowed between coats. Do not forget that these Binder Surfacers should be reduced only with Opex Binder Thinner No. 2, Rx 04502, and nothing else. Be sure to caution everyone using the Binder Surfacers regarding this point.

OPEX AUTOMOTIVE ENAMELS

		1's	5's
31001	Opex Auto White.....	\$6.00	\$5.90
31002	Opex Century Yellow Medium.....	6.00	5.90
31003	Opex Tudor Gray.....	6.00	5.90
31004	Opex Pearl Gray Deep.....	6.00	5.90
31005	Opex Lenox Blue.....	6.00	5.90
31006	Opex Gray Dark.....	6.00	5.90
31007	Opex Pelham Blue.....	6.00	5.90
31008	Opex Naiad Green.....	6.00	5.90
31009	Opex Thistle Green.....	6.00	5.90
31010	Opex Gray Green Light.....	6.00	5.90
31011	Opex Sage Brush Green Light.....	6.00	5.90
31012	Opex Dover Gray.....	6.00	5.90
31013	Opex Hampton Gray.....	6.00	5.90
31014	Opex Coach Black.....	6.00	5.90
31015	Opex Fawn Gray.....	6.00	5.90
31016	Opex Yellow Cab Yellow.....	6.00	5.90
31017	Opex Victoria Blue Deep.....	6.00	5.90
31018	Opex Gray Green Deep.....	6.00	5.90
31019	Opex Elephant Gray.....	6.00	5.90
31020	Opex Dust Proof Gray.....	6.00	5.90
31021	Opex Beaver Brown.....	6.00	5.90
31022	Opex Eric Blue.....	6.00	5.90
29059	CPE 142 Opex Chassis Black.....	2.80	2.50

A good black for use on chassis frames and under parts of automobile.

Opex Automotive Enamels for spraying should be reduced equal parts with Opex Thinner No. 10, Rx 04510, or Opex Binder Thinner No. 2, Rx 04502. Air-dries in from fifteen to twenty minutes, but approximately one hour should be allowed before applying the next coat. Do not overlook the fact that as Opex Automotive Enamels will stand at least 100 percent reduction for spraying, that the cost ready for use figuring the Opex Enamel at \$6.00 per gallon and Opex Thinner No. 10 at \$2.25 per gallon, is but \$4.12 1/2 per gallon. You will find competitive automobile Pyroxylin Enamels are supplied in much lighter consistency and do not stand nearly the reduction that our goods do. Remember, our Opex Automotive Enamels have considerably greater natural gloss prior to polishing than any other Pyroxylin Enamel now on the market. This is a very important point.

OPEX CLEAR FINISHES FOR NATURAL WOOD FINISHES (Automobile Interiors)

		1's	5's
Rx 04543	Opex Wood Sealer No. 43 used under No. 44.....	\$3.05	\$2.95
Rx 04544	Opex Wood Finishing Lacquer No. 44.....	3.05	2.95

A very durable high-grade clear finish to be used over sealer No. 43 shown above.

SHERWIN-WILLIAMS PRODUCTS**OIL LIQUID SANDING SURFACER**

New No.	Old No.		1's	5's
28007	18838	Oil Liquid Sanding Surfacers Red	3 00	2 80
28008	18826	Oil Liquid Sanding Surfacers Dark Gray	3 00	2 90
28009	18847	Oil Liquid Sanding Surfacers Light Gray	3 50	3 40

An Oil Liquid Sanding Surfacers that is ready for spraying as it comes in the package. If reduced, turpentine only must be used. Air dries in six hours so that two coats a day may be applied. Force dries in two hours at 150 degrees F. After drying it is water sanded with fine sandpaper to a smooth uniform surface. The Red Oxide Oil Liquid Sanding Surfacers is non-bleeding.

OPEX METAL PRIMERS—LACQUER PRIMERS

			1's	5's
28501	AE 316	Opex Metal Primer Red	3 35	3 25
04564		Opex Metal Primer Clear	2 95	2 85

Opex Metal Primer air-dries in from ten to fifteen minutes, but for best results one hour should be allowed before the next coat is applied. Reduction for spraying, one part of Opex Thinner No. 10 Rx 04510 to two parts of Primer. Opex Metal Primer should be used only on new work and not for use over old paint or varnish. We produce special finishes for use over old paint and varnish which are listed later in this price list.

It is absolutely understood that the word "Opex" will be used only on goods that are of a pyroxylin nature. Our Oil Primer, Surfacers and Fillers do not carry the "Opex" label. This in order to distinguish between the two types of materials.

OPEX GLAZING PUTTY—LACQUER PUTTY

			One lb. tube
28705-Y6444	Opex Glazing Putty Light		75
28706-Y6445	Opex Glazing Putty Dark		75

Opex Glazing Putty is our answer to the call from Opex Headquarters shops for a quick drying glazing putty in full keeping with present day finishing schedules. This excellent new product is offered the trade in handy economical one lb. (approximately) zinc tubes and the material can be squeezed onto the glazing knife just like tooth paste on a tooth brush. It is quick and easy to use for a fast hard and solid surfacing.

This product is used for the same purpose as the Oil Glazing Putty No. 16, excepting that it is of a pyroxylin nature. Is used for spot glazing and puttying. Dries in 15 to 20 minutes, although an hour should be allowed prior to the application of the next coat. Should only be thinned with Thinner No. 10, Rx 04510, or Binder Thinner No. 2, Rx 04502. Do not thin with any other material.

OPEX SANDING SURFACERS—LACQUER SURFACERS

New No.	Old No.		1's	5's
28701	AE 295	Opex Surfacers Light	4 25	4 15
28702		Opex Surfacers Dark	4 25	4 15

Opex Surfacers Light Rx 28701, and Opex Surfacers Dark, Rx 28702, are supplied in heavy consistency and for spraying should be reduced with equal parts of Opex Thinner No. 10, Rx 04510, or Opex Binder Thinner No. 2, Rx 04502. If to be applied over an undercoating of an oil nature such as our Oil Primers and Sealers No. 36 or No. 12, the material should preferably be reduced with our Opex Binder Thinner No. 2, Rx 04502. In other words, when any first coat of Opex (Pyroxylin) material is applied over an oil primer or varnish surfacer, either old or new, this first coat of Opex should be reduced to proper consistency with Opex Binder Thinner No. 2 Rx 04502.

These two surfacers are designed for use over either the Oil Primers and Sealers or over the Opex Metal Primer Red. When applying over Oil Primer and Sealer, the first coat should be a very light or so-called dust coat. Subsequent coats can be applied more heavily. Always bear in mind that when applying Opex or pyroxylin materials over a primer, sealer, surfacer, etc., of an oil nature that the first coat should be put on very lightly as in this manner the solvents in the Opex finishes will not be present in sufficient volume to attack the oil undercoatings.

OPEX BINDER SURFACERS—LACQUER SURFACERS

			1's	5's
28703	Opex Binder Surfacers Light		4 90	4 80
28704	Opex Binder Surfacers Dark		4 90	4 80

The Opex Binder Surfacers are used where an Opex finish is to be built over a surface previously painted or varnished and differ from the Opex Surfacers Light, Rx 28701 and Opex Surfacers Dark, Rx 28702, in that they are constructed in such a manner as to have the least possible effect on the old painted or varnished surface.

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SHERWIN-WILLIAMS PRODUCTS

The Opex Binder Surfacer Light, Rx 28703, and Opex Binder Surfacer Dark, Rx 28704, are supplied in heavy consistency and for spraying should be reduced with at least equal parts of Opex Binder Thinner No. 2, Rx 04502. Under no condition should these goods be reduced with any other thinner, as in doing so the value of the Opex Binder Surfacer for use over old paint will be minimized, if not entirely destroyed. In applying over the old painted or varnished surface after it has been properly prepared, spray on a very light dust coat which can be followed with heavier subsequent coats. Opex Binder Surfacers air-dry in fifteen to twenty minutes, but approximately one hour should be allowed between coats. Do not forget that these Binder Surfacers should be reduced only with Opex Binder Thinner No. 2, Rx 04502, and nothing else. Be sure to caution everyone using the Binder Surfacers regarding this point.

Inasmuch as our company is the only one that has successfully introduced to the trade a Binder Surfacer for use over the old paint and varnish finish, we have a mighty effective exclusive selling feature in this particular product. Its use not only permits the refinishing shop to use lacquers without the necessity of using the burn-off in every case, but consequently enables the refinisher to turn out a finished job in half or less the usual time, and at considerable less expense to the motor car owner. Its use also enables the motor car dealer to use lacquers on used cars where they could not use them where the burn-off process is used on account of the additional time and expense involved. It behooves every representative to strenuously push this product to the automotive trade.

The Opex Binder Surfacer is not in any sense a cure-all and can not be used where the old paint is too badly cracked or ready to fall off. The old finish must necessarily be in good condition.

Being a heavy pigmented material, a slight adjustment in the gum is usually required. Cut down on the material—have it wet enough to flow on but not so it will run. The customary air pressure is needed to break it up thoroughly.

The Opex Binder Surfacer offers a new market to the refinishing shop and motor car dealer for finished jobs cheaper and quicker, particularly for the lower priced cars and used cars.

OPEX AUTOMOTIVE LACQUER ENAMELS

31001	Opex Auto White.....			
31002	Opex Century Yellow Medium.....			
31003	Opex Tudor Gray.....			
31004	Opex Pearl Gray Deep.....			
31005	Opex Lenox Blue.....			
31006	Opex Gray Dark.....			
31007	Opex Pelham Blue.....			
31008	Opex Naird Green.....			
31009*	Opex Thistle Green.....			
31010	Opex Gray Green Light.....			
31011	Opex Sage Brush Green Light.....			
31012*	Opex Dover Gray.....			
31013	Opex Hampton Gray.....			
31014	Opex Coach Black.....			
31015	Opex Fawn Gray.....			
31016	Opex Yellow Cab Yellow.....			
31017	Opex Victoria Blue Deep.....			
31018	Opex Gray Green Deep.....			
31019*	Opex Elephant Gray.....			
31020	Opex Dust Proof Gray.....			
31021	Opex Beaver Brown.....			
31022	Opex Erie Blue.....	qts.	1's	5's
31023	Opex Orinoco Vermilion.....	6 80	6 00	5 80
31024	Opex Mephisto Red.....			
31025	Opex Rolls Royce Blue.....			
31026	Opex Neptune Blue.....			
31028	Opex Nash Blue.....			
31029	Opex Brewster Green Deep.....			
31030	Opex Brewster Green Medium.....			
31031*	Opex Taxicab Green.....			
31032*	Opex Brilliant Green.....			
31033	Opex Virginia Cream.....			
31034	Opex Havana Brown.....			
31035	Opex Packard Brown.....			
31036	Opex Sudan Brown.....			
31038	Opex French Gray.....			
31039	Opex Sahara Gray.....			
31041	Opex Cadillac-Buckingham Gray.....			
31042	Opex Overland Blue.....			
31044	Opex Packard Blue.....			
31045	Opex Chrysler Biege.....			
31046	Opex Channel Green (Ford 1926).....			
31049	Opex Marmon Blue.....			
31051	Opex Moleskin Gray (Ford, 1926).....			
31052	Opex Drake Green (Ford, 1926).....			
31047	Opex Windsor Maroon (Ford 1926).....	9 80	9 00	8 80
31048	Opex Rich Wine.....			

*To be discontinued when present stocks are exhausted.

29059	CPE 142 Opex Chassis Black.....	2 75	2 55
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A good black for use on chassis frames and under parts of automobiles.

SHERWIN-WILLIAMS PRODUCTS

OPEX THINNERS

		1's	5's	Drums
Rx 04510	Opex Thinner No. 10.....	\$2.25	\$2.15	\$2.05

Opex Thinner No. 10 should be used for thinning all Opex or products of a Pyroxylin nature, excepting where the first Opex or Pyroxylin coat is applied over an oil paint or varnish surface, either new or old, in which case only our Opex Binder Thinner No. 2, Rx 04502, should be used.

		1s	5s	Drums
Rx 04502	Opex Binder Thinner No. 2.....	\$3.25	\$3.15	\$3.05

This Thinner must be used exclusively where any Opex Surfacers, Enamels, etc., for automobile work are used over either oil undercoatings or other old paint or varnish surfaces which are being prepared for a lacquer finish. When reduced with Opex Binder Thinner No. 2, Rx 04502, somewhat better results will be obtained under certain conditions, namely a little more level and better top finish and far less possible trouble with polishing. The use of Binder Thinner No. 2, Rx 04502, eliminates the necessity of using retarder.

		1s	5s	Drums
Rx 04506	CPL 55 Opex Remover and Cleaner..	\$1.25	\$1.15	\$1.05

This material is designed only for washing out air guns and general clean-up work around the shop. *Must not be used for thinning any Opex Finishes.*

		1s	5s	Drums
Rx 04511	CPL 96 Opex Retarder Thinner.....	\$2.30	\$2.20	\$2.10

Designed for use in damp weather when Pyroxylin materials generally are subject to blushing or frosting. If this occurs reduce with a special thinner made of one part of Opex Retarder and three parts of Opex Thinner No. 10, or Opex Binder Thinner No. 2.

OPEX STRIPING ENAMELS

31402	Yellow Striping Enamel.....	\$0.75 per half-pint
31403	Black Striping Enamel.....	.75 "
31404	Medium Blue Striping Enamel.....	.75 "
31405	White Striping Enamel.....	.75 "
31406	Red Striping Enamel.....	.75 "
31407	Green Striping Enamel.....	.75 "
31408	Ivory Striping Enamel.....	.75 "
31409	Light Gray Striping Enamel.....	.75 "
31410	Light Blue Striping Enamel.....	.75 "

The standard package will be half-pint varnish cans. Goods however, can be supplied in gallon packages if desired. The material should be reduced but slightly for striping. Use either Thinner No. 10, Rx 04510, or Binder Thinner No. 2, Rx 04502.

Directions for use of all Opex Finishes and Oil Undercoatings for use under Opex Finishes as listed in this price list, have full and complete instructions on the can as to their use, reduction, etc. *Caution all your customers to carefully follow our instructions in which case satisfactory results are bound to be secured.*