

December 7, 2001

**POSITION OF THE NATIONAL
PAINT AND COATINGS ASSOCIATION CONCERNING THE JULY 2001
ANNUAL STATUS REPORT ON RULE 1113 - ARCHITECTURAL COATINGS**

The National Paint and Coatings Association has been extensively involved with the development of Rule 1113, including its May 14, 1999 revisions. When the South Coast Air Quality Management District (SCAQMD) Board adopted the amendments, District staff was directed to develop a work plan to implement the amendments. The work plan included annual status reports or updates concerning the activities of various implementation workgroups, and status reports concerning technology assessments of the low VOC coatings mandated by the May 14 rule amendments.

The staff has involved us and others in the various work groups and we hope that the solid working relationship we have established will continue. However, we do have differences with some of the staff's statements, conclusions, or expectations in the July 2001 Staff Report.

We have said this many times before but it bears repeating here.

A broad category of coating, such as stains or primers, often includes a variety of different coatings technologies and formulations to meet the different performance requirements of the wide ranging substrates and application environments. For example, stains include exterior and interior applications; some are opaque while others are semitransparent. The application requirements and performance requirements of these coatings differ widely. While a lower VOC waterborne semitransparent stain might be adequate for exterior siding or deck stains, it may not be adequate for interior application because of the greater need for a more aesthetic finish.

In discussing stains at page 10, the Report notes that the CARB survey showed that 25.47% of all the types of stains sold in California met the 250 g/l limit adopted for July 2002 and that this constitutes 52.8% of the gallons of stain sold. On that basis the Report states, "(A)gain, these numbers sufficiently support the proposed limit as to the availability and use of such stains." Later, however, the Report states that "there has been some discussion as to the feasibility of such a limit with regards to interior stains" and notes that they will be assessed further.

The Report does not indicate that, pending the outcome of the additional assessments, the limit as it applies to interior semitransparent stains should be held in abeyance. Staff seems to rely heavily on the percentage of "stains" that were at or below the limit to decide the matter, irrespective of recommended

substrates, application and performance characteristics, and even when it notes that further assessments are needed for interior stains.

The Master Painters Institute (MPI) data is referred to in the Report. MPI's list of available stains provides an example of why we are concerned about the way the Report treats available information concerning technology. For example, the MPI List of Products does not appear to have transparent or semitransparent stains that are water borne products which could meet the 2002 limit of 250 g/l. All of the semitransparent stains on the MPI list are solvent borne materials which apparently would exceed the 250 g/l limit. Moreover the only stain listed by MPI explicitly as a water borne stain is an exterior solid color latex stain. Even here MPI cautions that the products are not intended for use over unsealed woods that may be prone to extractive bleeding, e.g. cedar or redwood.

Similarly, with respect to primers, we do not believe that a decision should be made concerning the general availability of stain blocking specialty primers on the basis of the information in the Staff Report. As noted in the Staff Report at page 10, this category has not been specifically studied as a separate category. To fill this void, the Staff Report relies upon the products of various manufacturers which purport to provide some level of stain blocking on their label. In some cases, the only claim to be a primer.

Before these products – or any for that matter – can serve as a basis for concluding that they represent technology that is sufficient for all stain blocking requirements, there should be a thorough evaluation of the coatings, including whether they block all the stains with only one coat or require several in some cases. In this connection the MPI notes that while waterborne primers are available for addressing tannin bleed through,

“The difficulty has been to develop primers that will work under all application and exposure conditions. Wet or damp wood, low film build, contact with masonry, lack of back priming, leaky siding laps and humid conditions during painting are all negative factors.”

We agree with the Staff Report's conclusion that there is still a great deal of work that has to be done before firm conclusions can be reached on these and other coatings. This includes the KTA-Tator laboratory technology assessments due in December 2001 and the National Technical Systems field exposure evaluations due in 2002.

The Staff Report also makes reference to “receiving and evaluating the results from a number of field applications being conducted by manufacturers and end users.” We hope by this that the Report means that field application tests for the coatings will finally be undertaken. Such tests are critical to evaluating the performance of coatings as they are applied in the field under various climactic and real world application conditions. The SCAQMD had planned to conduct this

important test in addition to laboratory tests and field exposure tests but has not done so to date. We also strongly believe that these tests should be peer reviewed.

We also note that the Staff Report states that with respect to the "essential public services" coating, the lower VOC materials are being tested in a number of venues and environments and that interpretation of preliminary results "is considered premature at this time." (Staff Report at page 6.) Notwithstanding this, it should be noted that the Metropolitan Water District of Southern California in March 19, 2001 comments concerning the Sacramento AQMD's consideration of the CARB SCM, stated, "(P)reliminary results from current tests being conducted at Metropolitan of the lower VOC coatings indicate a *high rate of poor performance.*" (Emphasis added)

All of this invites caution. As a result, we do not share the Staff Report's overly optimistic conclusion that, "(T)he results up to now are promising and confirm the performance of many low-VOC coatings on a variety of substrate and under different environmental conditions."

We suggest that the following be done to ensure an adequate evaluation of the technological feasibility of the limits at issue:

- 1) The field application tests should be undertaken as originally planned.
- 2) The KTA-Tator study should be completed and the results published.
- 3) An overview and full progress report should be made of all of the testing activities involving the low VOC essential public service coatings being conducted by various public utilities.
- 4) Establish a firm date sufficiently in advance of the compliance date of July 1, 2002 to make a final determination concerning the technological feasibility of the VOC limits at issue.
- 5) Provide industry and other interested parties with an adequate opportunity to review all of the technology assessments and to file formal comments before conclusions are made by the district.

ATTACHMENT F

**SUMMARY OF ROHM AND HAAS SPRING HOUSE MEETING
(6/12/01)**

COMMENTS ON THE ROHM & HAAS SPRING HOUSE MEETING 6/12/01

The Spring House meeting at the Rohm & Haas Technical Center in Spring House, Pa was organized by Bob Nelson and others in the National Paint and Coating Association (NPCA) with help from industry representatives to give the OTC Workgroup members a grounding in what it takes to make a good coating and, of course, to make their point that some of the proposed VOC limits are onerous and must be revised as they will result in lower quality coating material which they may be unwilling to market.

Attendees included:

Gene Pettingill	DNREC	Bob Nelson	NPCA	George Daisey	Rohm & Haas
Gene Higa	MD	Alison Keane	NPCA	Bill Hill	Rohm & Haas
Eddie	MD	Paul Sara	Valspar	Pat Finegan	Rohm & Haas
???	MD	Madelyn Harding	Sherwin-Williams	Art Lemain	Rohm & Haas
Terry Black	PA	Tom Brice	Duron	Jeremy Ventnor	Rohm & Haas
Alan Wellinger	NJ	Jim Sell	NPCA	B. Ritchey	Rohm & Haas
Judy Rand	NJ			Ruth Ubia	Rohm & Haas
Dan Brinsko	NY			Nadine	Rohm & Haas
				Stacey	Rohm & Haas
				Joan	Rohm & Haas

Comments

1. The presentations were pretty basic stuff sort of pitched toward the layman (which most of us must seem like) and the supporting comments from NPCA and industry reps were reminiscent of a patient parent bringing an unruly child to heel. However, all in all, I came away with a new appreciation for the difficulty in juggling all the many ingredients in a coating formulation to optimize a slew of properties while achieving an economical coating formulation with desired performance and low VOC's.

They don't seem to have developed a system that allows one to adequately predict what a pinch of this or that additive will do to the resulting formulation and it takes years of testing through exposure of painted panels to determine success or failure (though they must have some form of accelerated testing in an environmental chamber to give rough, fast guidance).

2. They made the point that "Gee Wiz, guys, we don't put VOC's in the formulations cause we want to. VOC's cost money. We add VOC's to impart properties that are required to have a successful coating. We can save money by cutting back or eliminating VOC's but the resulting coating won't perform as the customer expects and we lose out to the competition."
3. VOC's get into formulations not only as the solvent or co-solvent but also through the addition of pigments (some of which are dispersed in glycols for example) and additives.
4. Oxo, an exempt compound, is not a satisfactory co-solvent since it really isn't that effective in formulations, it smells bad and it's expensive. Can be used in industrial applications but not in the home.
5. Sherwin-Williams makes the point that some low VOC formulations, meeting our limits, can provide successful coatings for most, but not all, of what they consider a complete product line. For example, some colors may be unavailable because they introduce extra VOC's that throw the composition out of limits. They will not market a product that isn't a full product line for fear the consumer will not like it.

To get around this problem, they desperately want a permanent averaging provision in the rule. I would suggest compromising on their position as to having a "complete" product line.

6. They talked a lot about low VOC's leading to poor freeze/thaw stability for the formulation in the can. Additives to improve freeze/thaw seem to harm other properties. Another example of the problem in balancing

all the properties as VOC's are lowered.

7. The industry reps generally took the position best exemplified by Paul Sara's comment. He said that low VOC coatings can be made but that performance deteriorates and that the better paint "the kind of paint we all like to use" has higher VOC's.

The tone of the industry comments was that lower VOC coatings can be made but that they can't be made to work at the same high performance levels that customers expect. Low VOC coatings result in too many unattractive trade-offs. You end up with lower scrub resistance, poorer freeze/ thaw stability, application difficulties that result in a coating job that is not as esthetically pleasing, etc. They were more of the opinion that this can't be done which contrasts sharply with the attitude I found in other manufacturers around the country I've talked to. People like Furr International, Behr Process, CPC Corp, Target Coatings, Borden Chem & Coatings, Sound Specialty Coatings and Watson Coating all have good, water-based coatings, equivalent to the best solvent-based coating formulations (they say) and have an attitude that low VOC's are gonna happen and they want to be there with high performing water-based products. The NPCA guys, Sherwin-Williams, Duron and Valspar are looking back not forward, they want to tell us why it won't work not how it might be made to work.

When I mention this stuff to them they say they aren't familiar with all the competition products but that some are undoubtedly good, but that generally low VOC stuff is lower quality than they would like to sell.

8. Valspar and Sherwin-Williams say they make in-compliance formulations for California (and presumably for New York and a few other states with rules more stringent than the federal rule) but do not market them nationwide. The formulations perform so poorly, they will not sell them elsewhere. In some cases they have elected to not provide certain products to California because the performance is so poor they don't want to sully their reputation. They both say product complaints from California are way above the national average.
9. Valspar says stains have to be low solids to perform properly (I agree) and that you can't just increase solids to get lower VOC's. The lower limit is about 380 g/l. When you try to make say a 250 g/l coating by increasing solids, it works ok at the time, but after 6 months in the can its set up solid and is unworkable.

Water-based stains don't work well (they say) because water causes the wood grain to rise with resultant sanding and recoat problems (and recoating increases VOC emissions), and the water doesn't draw the stain into the wood (to release the inner beauty of the wood) but sort of generates a surface film. Funny, but many of the manufacturers I've talked to make water-based stains (and varnishes) that are great (they say) and are used commercially for fine furniture, shutters, floors, etc. Who do you believe ?

10. Personally, I don't dispute the fact that water-based coatings may require certain trade-offs in properties and that the final coating may, in some cases (particularly stained/varnished wood), may look different but, I can't believe the trade-offs and changed "looks" are unacceptable, particularly when weighed against the goal of cleaner air for our children ! I pointed this out to Madelyn and others and got no comment.
11. When we toured the paint panel exposure "farm", I saw a number of examples of formulations Rohm & Haas were testing that were low VOC and looked pretty good (of course, the exposure test does not look at all variables necessary to categorize a coating as commercially successful).

Rohm & Haas, as a good supplier to the coating industry, didn't contradict anything that the industry reps said and didn't volunteer information on formulations they are testing. They did say that on occasion they have developed super formulations (VOC content not specified) but that their customers weren't interested cause the price was too high. IF we talk about higher cost formulations with low VOC's that preserve the performance of today's solvent-based products, hopefully, industry would be careful about rejecting such formulations out-of-hand. Consumers may be willing to pay that price for cleaner air.

12. At the end of the "show", I asked if someone was going to make a specific proposal to modify which coating categories and by how much with supporting data as to why the change was required. Bob Nelson said he would issue a proposal by 7/4/01. He was waiting to complete the calculations to show the impact of their

proposal on the resulting VOC reduction benefit. I asked who he would send it to. At first he said "to everyone in the group including Rob" (Sliwinski). Then he said he would address it to me since Delaware was likely to be the first to come out with the rule and cc everyone else (I think he was pulling my chain because of the discussion we had at the last Delaware Public Meeting on the AIM rule).

ATTACHMENT G

**MPI APPROVED PRODUCT LIST
INTERIOR ALKYD, GLOSS**



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MPI #48 - Interior Alkyd, Gloss

A white, or colored, solvent based, gloss alkyd paint for use on primed new, or previously sealed interior wood and metal surfaces. Primarily used on trim, doors and frames.

[Gloss must be 70 to 85 units @ 60 degrees and fineness of grind - 6 Hegman units. Characteristics reviewed include consistency/viscosity, dry time, fineness of grind, hiding power by contrast ratio method, reflectance, flexibility, scrubability, sealing properties, water resistance and resistance to yellowing in an ammonia atmosphere. See MPI 'Detailed Performance' Specs for complete details, specific requirements, and/or reference specs.]

MPI VOC Ranges (g/L)
 <251
 251-380="
 381-450 =
 Blanks may indicate no information available

Listing Brand	Label	Product Name	Code	VOCs
California Paints CGI	Larcoloid	Alkyd/Urethane	211XX-Series	
Cloverdale Paint		Marine & Trim Enamel	111 Series	
Color Your World	Metal Clad	Alkyd Gloss	8400	
Columbia Paint CGI	Premium Pro	Alkyd Interior/Exterior Gloss Enamel	04-761-WB	
Coronado Paint	Super Kote 5000	High Gloss Alkyd Enamel	123 Line	
Dunn-Edwards	Rancho	Quick Dry Alkyd Gloss Enamel	QD 60	
Farrell-Calhoun CGI		Interior High Gloss Alkyd Enamel	580	
General Paint CGI	Premium	Premium Super Gloss Enamel	02 Line	
ICI Dulux Paints	Devoe Coatings	Interior Alkyd Gloss	4308 Series	
ICI Dulux Paints	Devshield	Int/Ext Alkyd Gloss Enamel	4328-0100	
ICI Dulux Paints	Devguard	Alkyd Industrial Gloss Enamel	4308-0100	
ICI Dulux Paints	Ultra-Hide	Int. Plyurethane Floor Enamel	3118-0100	
Insl-x	Check Rust	Insl-Thane	GU-2510	
Kelly-Moore		Kel-Cote Quick Dry Alkyd Gloss Enamel	1031	
Miller Paint	Miller Paint	Spar Enamel	2510	
Northern Paint	Colorlox	Alkyd Gloss Enamel	25 Line	
Para Paints		Premium Interior Alkyd Gloss	400	
PPG	Speedhide	Interior Alkyd Gloss	6-282 Series	
Sherwin Williams	ProMar 200	Alkyd Gloss	B35-200 Series	

Sico Coatings	Sico Expert	Interior Gloss Alkyd	889-111
Spectra-Tone CGI	Jobmaster Tough	Quick Drying Alkyd Gloss	32
Vista Paint CGI		Coverall High Gloss	5000



ATTACHMENT H

**MPI APPROVED PRODUCT LIST
FLOOR AND PORCH COATINGS**



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MPI #68 - Interior/Exterior Latex Porch and Floor Enamel - Gloss

A water based, acrylic co-polymer emulsion type, gloss or semi-gloss pigmented coating. Specified for use on interior and exterior wood and concrete floor surfaces in residential and light traffic commercial and industrial locations. This coating will be used as a "self priming" material on bare concrete. Designed to be used with or without non-slip aggregate. Application methods will include using brushes, rollers, and airless and conventional spray equipment.

[Characteristics reviewed include gloss levels minimum of 70 units @ 60 degrees for gloss, 35-70 units @ 60 degrees for semi-gloss. See MPI 'Detailed Performance' Specs for complete details, specific requirements, and/or reference specs.]

MPI VOC Ranges (g/L)	<201 =		201-300 =		301-400 =		Blanks may indicate no information available
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Listing Brand	Label	Product Name	Code	VOCs
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MPI #59 - Interior/Exterior Floor Enamel - Low Gloss

A solvent based, alkyd type, pigmented, gloss enamel for wood and concrete floors and can be used for metal decking (low traffic). Paint systems using this coating will be specified for new and repainting work in residential, commercial and light industrial applications.

This coating will be used as a "self priming" material on both bare wood and concrete. Designed to be used with or without non-slip aggregate. Application methods will include using brushes, rollers, and airless and conventional spray equipment.

[Characteristics reviewed include hiding power, gloss levels of minimum 70 units @ 60 degrees, and dry hard. See MPI 'Detailed Performance' Specs for complete details, specific requirements, and/or reference specs.]

MPI VOC Ranges (g/L) <401 = 401-420 = 421-450 = Blanks may indicate no information available

Listing Brand	Label	Product Name	Code	VOCs
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MPI #60 - Interior/Exterior Latex Porch and Floor Enamel - Low Gloss

An abrasion-resistant, latex type, pigmented paint for new interior horizontal concrete surfaces not prone to water permeation from below.

Coating must be alkali and water resistant to incidental splash and spillage. Primarily specified for use in low to medium traffic, residential and commercial locations.

Surface preparation requires removal of all previous sealers and water retaining materials applied to the concrete. Smooth concrete must be acid etched. This coating is "self priming". Designed to be used with or without non-slip aggregate. Application methods will include using brushes, rollers, and airless and conventional spray equipment.

[Characteristics reviewed include hiding power and gloss levels of minimum 25-50 units @ 60 degrees. See MPI 'Detailed Performance' Specs for complete details, specific requirements, and/or reference specs.]

MPI VOC Ranges (g/L) <101 101-200=" 201-400 = Blanks may indicate no information available

Listing Brand	Label	Product Name	Code	VOCs
Coronado Paint	Tough Shield	Acrylic Floor & Patio Coating	52-1	
General Paint	General Paint	Acrylic Latex Int/Ext Porch & Floor Enamel	41-010	
ICI Dulux Paints	Ultra Hide	Interior/Exterior 100% Acrylic Floor Enamel	3018-0100	
Insl-x	Hot Trax	Latex Satin Concrete & Garage Floor Paint	HT-F309	
Sherwin Williams	Sherwin Williams	Acrylic Latex Floor Enamel	A24A11	



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MPI #27 - Exterior/Interior Alkyd Floor Enamel, Gloss

A solvent based, alkyd type, gloss enamel designed to be a durable, abrasion-resistant coating for wood decks, stairs and steps. This coating can be used with or without non-slip aggregate. Specified for use as a "self priming" material when applied to new or bare wood surfaces. Paint systems using this coating will be specified for new and repainting work in residential, commercial and light industrial applications. Application methods will include brushes, rollers, and airless and conventional spray equipment.

[See MPI 'Detailed Performance' Specs for complete details, specific requirements, and/or reference specs.]

MPI VOC Ranges (g/L) <401 401-420=" 421-500 = Blanks may indicate no information available

Listing Brand	Label	Product Name	Code	VOCs
Color Your World		Alkyd Porch & Floor	4600	
General Paint	General Paint	Urethane Int/Ext Porch & Floor Enamel	42-010	
Glidden Paint	Ultra	Urethane Floor Enamel	33800	
InsL-x	Check Rust	InsL-Thane	GU-2510	

ATTACHMENT I

ICI GRIPPER STAIN KILLER PDS

Available through

Dulux Paint Centers

ULTRA-HIDE®
 Aquacrylic GRIPPER
 Stain Killer Primer-
 Sealer

3210-1200

FINISHES PAINTING 1059000

Products of ICI Paints World Group

Dulux Paint Centers

Dulux Paint Centers
 Products of ICI
 Paints World Group

FINISHES PAINTING 1059000

Product Description

Our professional best waterborne acrylic bonding primer, fast drying, primer-sealer and stain killer for use on all wood, masonry or previously painted surfaces. Suitable for interior or exterior applications. Provides excellent adhesion to a variety of surfaces including drywall, wood, cured plaster, masonry or galvanized metal and aluminum. An excellent stain killer for water stains, lipstick, smoke, ink, crayons and knots or sap streaks. Resists nail head and tannin staining over woods such as redwood or cedar. Resists checking and cracking when used over bare exterior plywood, T-1-11, Douglas Fir or yellow pine. **Highly alkali resistant. May be applied to new concrete or masonry surfaces with a pH up to 13.0 and prior to a 30 day cure.**

Features

- Interior/exterior usage
- Blocks stains
- High hiding
- Excellent sealing
- Excellent adhesion and hide
- Low odor
- Quick drying and recoat
- Easy application
- Moisture and alkali resistant up to 13.0 pH
- Good stain resistance over cedar and redwood
- Multiple surface usage
- Low VOC
- Performance alternate for Federal Paint Specification TT-P-650D

Composition

- Waterborne Acrylic Resin
- Titanium Dioxide and Extender Pigments
- Not manufactured with lead or mercury containing materials.

Performance Data

Property	Test Method	Results
Dry Opacity (Hiding)	ASTM D 2805	Excellent, 0.96
Directional Reflectance	ASTM E 97	92%
Adhesion	ASTM D 3359	Excellent, 5A

Specifications

Color: White (tintable, limit 2 oz/gal)
Finish: Flat
Clean-up Solvent: Soap and water
Density: 11.2 lbs/gal (1.34 kg/L)
VOC: 0.79 lbs/gal (95 g/L)
Solids:
 Volume - 50% ± 1%
 Weight - 63% ± 1%
Practical Coverage:
 Apply at 300-450 sq ft/gal (7-11 m²/L).
 Actual coverage may vary depending on substrate and application method.
Flash Point: None
Dry Time 77°F (25°C) & 50% RH:
 To touch - 30 minutes
 To recoat - 1 hour
Shelf Life:
 1 year minimum - unopened

Flexibility

ASTM D 522, 1/8" mandel

Excellent, no cracking or flaking

General Surface Preparation

All surfaces must be sound, dry, clean and free of oil, grease, dirt, mildew, form release agents, curing compounds, loose and flaking paint and other foreign substances.

NEW SURFACES: Concrete, Masonry and Plaster - Cure at least three days before painting, poured in place concrete must cure for at least seven days. pH must be 13.0 or lower. Roughen slick poured or precast concrete by acid etching or sandsweeping. Follow acid manufacturer's application and safety instructions. Rinse thoroughly with water and allow to dry. Must be internally dry. Remove loose aggregate. Prime concrete and plaster with this product. Fill masonry block with latex filler 3010 or 4000. **Drywall** - Remove sanding dust. Prime with this product. **Wood** - Interior, sand smooth. Dust clean.

Prime with this product. Exterior, counter sink nails. Fill with latex-type caulk. Prime with this product. **Steel** - Prime steel with waterborne metal primer 4020 or solventborne metal primer 4160 or 4100. **Galvanized Metal and Aluminum** - Prime bare galvanized metal and aluminum with this product.

PREVIOUSLY PAINTED SURFACES: Wash to remove contaminants. Rinse thoroughly with water and allow to dry. Sanding not required if the surface is properly and thoroughly cleaned (scuff sanding is required only on glossy, hard, slick or dense surfaces which are subject to high levels of moisture). Remove loose paint. Prime bare areas with primer specified under **NEW SURFACES**.

Directions For Use

TINTING: May be tinted with up to two oz/gal of ICI Colorants.

APPLICATION: Mix thoroughly before use. May be applied by brush, roller or spray. Brushing is the preferred method of application over chalky substrates. For spray application, use a .015" tip. Seals water stains, inks, crayon, ballpoint pen marks, lipstick, bleeding paints, knots, sap streaks, smoke stains. Some stains may require a second coat. Some highly water sensitive stains may require the application of solventborne Stain JAMMER 1110 for best results. If painting will be interrupted for more than 15 minutes, keep brushes and rollers wet by wrapping them with tinfoil or plastic wrap. This will prevent the paint from drying in the equipment and will make clean up much easier when the job is

finished. For exterior applications, stop painting at least two hours before you expect heavy dew, rain, or temperatures below 45°F (7°C).

SPREAD RATE: Apply at 300-450 sq ft/gal (7-11 m²/L). Actual coverage may vary depending on substrate and application method.

DRYING TIME: At 77°F (25°C) and 50% R.H., dries to touch in 30 minutes and to recoat in one hour. For maximum stain resistance, allow four hours before topcoating. Low temperature, high humidity, thick films or poor ventilation will increase these times.

CLEAN-UP: Clean spatter and equipment immediately with warm, soapy water

Precautions

WARNING! CAUSES EYE BURNS. CAUSES SKIN AND RESPIRATORY TRACT IRRITATION. HARMFUL IF SWALLOWED. CONTAINS ETHYLENE GLYCOL WHICH CAN CAUSE EVERE KIDNEY DAMAGE WHEN INGESTED AND HAS BEEN SHOWN TO CAUSE BIRTH DEFECTS IN LABORATORY ANIMALS. CONTAINS CRYSTALLINE SILICA WHICH CAN CAUSE LUNG CANCER AND OTHER LUNG DAMAGE IF INHALED. OVEREXPOSURE MAY CAUSE LIVER, KIDNEY, BLOOD DAMAGE. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN.

NOTICE: Products in this series may contain solvents. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. Products in this series may contain chemicals subject to California Proposition 65. For emergency information call (800) 545-2643. For additional safety information, refer to the Material Safety Data

Sheet for this product. If sanding is done, wear a dust mask to avoid breathing of sanding dust. Do not breathe vapors or spray mist. If you experience eye watering, headaches, or dizziness, leave the area. If properly used, a respirator may offer additional protection. Obtain professional advice before using. Close container after each use. **FIRST AID:** In case of skin contact, wash off quickly with plenty of soap and water, remove contaminated clothing. For eye contact flush immediately with large amounts of water, for at least 15 minutes. **Obtain emergency medical treatment.** If swallowed, **obtain medical treatment immediately.** If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, **get medical help.** **KEEP FROM FREEZING.** **Note: These warnings encompass the product series. Prior to use, read and follow product specific MSDS and label information.**

DS51-0896

Shipping

FREIGHT CLASSIFICATION:

Paint, Freezable

FLASH POINT:

None

PACKAGING:

1 quart (0.946 L)

1 gallon (3.785 L)

5 gallons (18.925 L)



From the Makers of Dulux, Sinclair, Glidden & Devco Coatings
ICI Paints, 925 Euclid Ave., Cleveland, Ohio. 44115 1-800-
984-5444
www.iciduluxpaints.com

LIMITATION OF LIABILITY To the best of our knowledge, the technical data contained herein are true and accurate at the date of issuance but are subject to change without prior notice. We guarantee our product to conform to the specifications contained herein. **WE MAKE NO OTHER WARRANTY OR GUARANTEE OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.** Liability, if any, is limited to replacement of the product or refund of the purchase price. **LABOR OR COST OF LABOR AND OTHER CONSEQUENTIAL DAMAGES ARE HEREBY EXCLUDED.**

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02819A

ATTACHMENT J

ICI INTERIOR VAPOR SHIELD PDS

Available through



GLIDDEN CUSTOM SHIELD
Interior Vapor Barrier Latex Primer-Finish

1220-XXXX

FINISHED PAINTING (099000)

Products of ICI Paints World Group

Dulux Paint Centers

Dulux Paint Centers
Products of ICI Paints World Group

FINISHED PAINTING (099000)

Product Description

Provides a high hiding flat finish with good touch-up properties. Specifically designed to provide one coat application in manufactured housing facilities. Walls and ceilings coated with this product meet HUD specification requirement of 24 CFR 3280.504 for a vapor barrier when applied at a coverage rate of 160-200 sq ft/gal to smooth surfaces. May be topcoated with latex or alkyd paints in any desired finish.

Features

- A one-coat vapor barrier primer/finish system - When applied according to specifications.
- Good coverage/high hide
- Flat finish with good touch-up
- Meets HUD specification requirement of 24 CFR 3280.504
- Fast dry time
- Low odor and VOC

Composition

- Styrene-Acrylic Resin
- Titanium Dioxide and Extender Pigments
- Not manufactured with lead or mercury containing materials.

General Surface Preparation

All surfaces must be sound, dry, clean and free of oil, grease, dirt, mildew, form release agents, curing compounds, loose and flaking paint and other foreign substances.

NEW SURFACES: Concrete, Masonry and Plaster - Cure at least 30 days before painting. pH must be 10.0 or lower. Roughen slick poured or precast concrete by acid etching or sandsweeping. Follow acid manufacturer's application and safety instructions. Rinse thoroughly with water and allow to dry. Must be internally dry. Remove loose aggregate. Prime concrete and plaster with this product. Fill masonry block with latex filler 3010 or 4000. **Drywall** - Remove sanding dust. Prime with

Specifications

Color: White, tintable (limit 4 oz/gal)
Finish: Flat
Clean-up Solvent: Soap and water
Density: 11.2 lbs/gal (1.34 kg/L)
VOC: 0.85 lbs/gal (102 g/L)
Solids: Volume - 33% ± 1%
 Weight - 50% ± 1%
Practical Coverage: For vapor barrier protection, apply in a continuous film at 160-200 sq ft/gal (4-5 m²/L) or 8-10 wet mils. This will achieve a dry film thickness of 2.6-3.3 mils.
Flame Spread Rating: Class A (0-25) over non-combustible surfaces
Flash Point: None
Dry Time 77°F (25°C) & 50% RH: To touch - 30-60 minutes
 To recoat - 2-4 hours

this product. **Wood** - Sand smooth and dust clean. Prime with this product. **Steel** - Prime steel with waterborne metal primer 4020 or solventborne metal primer 4160 or 4100. **Galvanized Metal and Aluminum** - Prime bare galvanized metal and aluminum with this product.

PREVIOUSLY PAINTED SURFACES: Wash to remove contaminants. Rinse thoroughly with water and allow to dry. Dull glossy areas by light sanding. Remove sanding dust. Remove loose paint. Prime bare areas with primer specified under **NEW SURFACES**. Porous flat finishes must be sealed with this paint.

Directions For Use

TINTING: May be tinted toward the finish coat color with up to four oz/gal of ICI Colorants.

SPREADING RATE: For vapor barrier protection, apply in a continuous film at 160-200 sq ft/gal (4-5 m²/L) or 8-10 wet mils. This will achieve a dry film thickness of 2.6-3.3 mils.

APPLICATION: Mix thoroughly before use. Apply by using airless spray, with or without backroll, for best results. Standard brush and roll application may also be used (multiple coats may be required to obtain recommended film thickness to achieve vapor barrier properties). No thinning required. For airless spray, use a .015" tip. Adjust pressure as needed.

Do not apply when the surface or air temperature is below 50°F (10°C). Provide good ventilation and warmth for normal drying.

DRYING TIME: At 77°F (25°C) and 50% R.H., dries to touch in 30 to 60 minutes and to recoat in two hours. Low temperature, high humidity, thick films or poor ventilation will increase these times.

CLEAN-UP: Clean immediately with warm, soapy water.

Precautions

WARNING! CAUSES EYE, SKIN AND RESPIRATORY TRACT IRRITATION. MAY BE HARMFUL IF SWALLOWED. WHEN TINTED, CONTAINS ETHYLENE GLYCOL WHICH CAN CAUSE SEVERE KIDNEY DAMAGE WHEN INGESTED AND HAS BEEN SHOWN TO CAUSE BIRTH DEFECTS IN LABORATORY ANIMALS. USE ONLY WITH ADEQUATE VENTILATION. KEEP OUT OF THE REACH OF CHILDREN. For emergency information call (800) 545-2643. If sanding is done, wear a dust mask to avoid breathing of sanding dust. Do not breathe vapors or spray mist. If you experience eye watering, headaches, or dizziness, leave the area. If properly used, a respirator may offer additional protection. Obtain professional advice before using. Close container after each use. **FIRST AID:** In case of skin contact, wash off quickly with plenty of soap and water, remove contaminated clothing. For eye contact flush immediately with large amounts of water, for at least 15 minutes. **Obtain emergency medical treatment.** If swallowed, **obtain medical treatment immediately.** If inhalation causes physical discomfort, remove to fresh air. If discomfort persists or any breathing difficulty occurs, **get medical help.** **KEEP FROM FREEZING** Note: These warnings encompass the product series. Prior to use, read and follow product-specific MSDS and label information.

DS10-0397

Shipping

FREIGHT CLASSIFICATION:

Paint, Freezable

FLASH POINT:

None

PACKAGING:

5 gallons (18.925 L)

55 gallons (208.175 L)

Dulux Paint Centers

From the Makers of Dulux, Sinclair, Glidden & Devco Coatings
ICI Paints, 925 Euclid Ave., Cleveland, Ohio. 44115 1-800-
984-5444

www.iciduluxpaints.com

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ATTACHMENT K

COMMENT LETTERS FROM NPCA MEMBER COMPANIES

BY FEDERAL EXPRESS NO.

August 28, 2001

Mr. Robert R. Thompson, Hearing Officer
State of Delaware
Delaware Department of Natural Resources and Environmental Control
R&R Building, 89 Kings Highway
Dover, Delaware 19901

**RE: Proposed Regulation-Architectural & Industrial Maintenance
Regulation, No. 41, Limiting Emissions Of Volatile Organic Compounds
From Consumer And Commercial Products, Section 1-Architectural And
Industrial Maintenance Coatings**

Dear Mr. Thompson,

The Sherwin-Williams Company appreciates having the opportunity to discuss the proposed Regulation-Architectural & Industrial Maintenance Regulation, No. 41, Limiting Emissions Of Volatile Organic Compounds From Consumer And Commercial Products, Section 1-Architectural And Industrial Maintenance Coatings, limit the VOC (volatile organic compound) content of architectural, industrial maintenance, and traffic coatings. We will divide our discussion into several sections:

TECHNICAL ISSUES

1. Coatings For Interior Wood Substrates
2. Primers For Exterior Wood Surfaces
3. Semi-Transparent Water-borne Stains
4. Floor Coatings
5. Problems With The NTS Study Cited By California

ADMINISTRATIVE ISSUES

1. Reports
2. Averaging
3. Future Regulatory Status
4. Emission Reductions
5. Administrative Record

The Sherwin-Williams Company is one of the largest coating manufacturers in the world, with 1999 annual sales over five billion dollars. We maintain manufacturing facilities and company-owned and operated Stores throughout the country. These stores are the exclusive distributors / retailers for the Sherwin-Williams brand. In addition to this distribution, our products, under a variety of additional brand names, are distributed through mass merchandisers, do-it-yourself outlets, hardware stores, and by independent distributors. Our product lines include some of the

brands best known to the American people, including – but not limited to – Minwax®, Thompsons®, Pratt & Lambert®, Martin-Senour®, Dutch Boy®, Rust Tough®, Cuprinol®, and H&C®. In the architectural and industrial maintenance product areas these coatings are used for their decorative and protective properties.

Perspective

The proposed rule is based on the rule adopted by the Ozone Transport Commission (OTC) as a Model Rule, which was based on the model rule published by STAPPA/ALAPCO, which in turn was based on the California Suggested Control Measure. Thus, Delaware has relied upon the information submitted in these previous rule developments, even though neither of them is held to any legislative requirements. For this reason, we are including by reference our comments on the STAPPA/ALAPCO model rule submitted to the OTC Stationary Source Committee work group during their discussions. See Attachment 1.

TECHNICAL ISSUES

COATINGS FOR INTERIOR WOOD SUBSTRATES

As we have previously discussed in meetings with the OTC Stationary Source Work Group and with Delaware (see, for example, our letter dated August 10, 2001) for architectural coatings, water-borne coatings are frequently not appropriate for direct application to bare wood. Inherently, water causes a number of problems. These include grain raising, lapping when semi-transparent stains are applied, panelization when applied to maple wood floors, lack of depth in the final appearance of the sealed, stained, and varnished substrate, inability to seal the wood and prevent staining from coming through, etc.

Grain raising is the consequence of water contacting bare wood. When it occurs, the grain as well as the individual wood fibers are raised above the surface of the wood, producing a rough appearance. Sanding will not remove the raised grain without destroying the underlying wood substrate.

Lapping is the defect which occurs when coatings, especially water-borne stains are applied to substrates. The following explains: a painter will apply the stain to each section as far as his arm will reach...he then moves and applies the coating to the next section of wood. The section where he has overlapped can show lap marks or lapping, due to having the extra layer of stain. There is no way to apply coatings without such a lap area; coating manufacturers can only work to reduce the effect of this overlap. Water-borne stains show such lap marks to a much greater extent than solvent-borne coatings.

Panelization is a condition where localized excessive cracks develop between some strip flooring boards while adjacent boards remain tightly bonded together with no apparent separations. The Maple Flooring Manufacturers Association (MFMA) provides the important insights into this failure mode:

“Panelization (or sidebonding) ... has gained increasing attention as new EPA V.O.C. regulations have begun to affect the availability of traditional oil-based floor finishing products in many areas of the country....the problem has **been most closely associated with the use of water-based sealers and finishes** on raw (untreated) maple strip flooring

in areas of the country which experience distinctly different seasonal moisture conditions.”

The MFMA considered this issue to be of sufficient importance that it surveyed its members on the subject. Sixty-nine percent of the respondents had experienced panelization failures. The majority of the projects where panelization was observed were for large area installations of over 1000 square feet (84 percent of the jobs). Of the respondents answering the question “My experience with panelization during new installations have occurred primarily when using

----“oil-modified finish”
or ----“water based finish,”

the responses were **100% “water based finish” and 0% “oil-modified finish.”** The responses for panelization during recoating operations and during resurfacing operations were identical: in each case, **100% occurred when using water based coatings.** In response to the question “have you developed any solutions to the panelization/sidebonding problems you have experienced in the past” 15 respondents said yes and provided their solutions. Of the 12 unique solutions offered, eleven mentioned not using waterbased sealers and eight mentioned avoiding water-borne finish coats if at all possible (**most won’t use water-borne at all**).

The MFMA annually issues an “Athletic Flooring Sealer and Finish Specification and Conformance List” which provides a list of products which comply with the MFMA specifications for sealers and for finishes. **There are no water-borne sealers on this approved product listing.** In addition, there is a special note prior to the water-borne finishes listings:

“The use of water based finishes has occasionally produced a sidebonding effect which may result in localized excessive cracks between the boards. The MFMA recommends that you consult with your MFMA flooring contractor and finish manufacturer to obtain their procedures for sealing and finishing a raw maple strip floor with water-based products.”

Such a cautionary note clearly indicates that the use of water-borne finishes, even with solvent-borne sealers, is of special concern.

Photographs, from the Maple Flooring Manufacturers Association, showing the effect known as panelization were shown at the Hearing and are enclosed. [See Attachment 2.] Arrows are used to point to the cracks from panelization failure. The arrows labeled “A” show two sections where the strength of the sidebonding caused cracking of the actual wood panel. The only solution to a floor which has failed by panelization is replacement of the entire floor.

Panelization is a problem in geographical areas of the country which experience temperature and humidity variations, like the northeast, and is more of a problem in large area (square footage of floor coated) applications, such as gymnasium floors. Thus, this problem will effect professional flooring contractors more severely than do-it-yourselfers. At the Hearing it was suggested that flooring professionals would need to adjust their schedules to the temperature and humidity. However, this places an unreasonable burden on them. For much of the Northeast, and

especially for Delaware, waiting for low humidity and moderate temperatures may mean waiting for another season, and being unable to coat wood floors during the prime painting season, summer. For schools, gymnasium floors are installed and improved during the summer season, when they are not in use. Thus, this suggestion is impractical to both the flooring professionals and to their major customers.

As stated above, Delaware has based its proposal on the Ozone Transport Commission (OTC) Model Rule, and since this Model Rule was taken from the California Suggested Control Measure (SCM), it is important to evaluate the raw data used in the California development to insure that performance assumptions are supported by the facts. [The OTC Model Rule is identical to the California SCM with just two exceptions: the industrial maintenance limit in the OTC Model Rule is higher than in California's SCM, and OTC Model Rule did not include the flexibility option (by averaging over-compliant products with those which can not comply) which was included in the California SCM.] For these reasons it is important to consider the data available from California before rule adoption.

California sales information is available through the California Air Resources Board 1998 Architectural Coating Survey Final Report. The following important facts can be discerned from this report:

1. Sanding Sealers: Sales weighed average VOC content is 648 grams per liter. Less than 20% of the sales in California comply with a VOC content less than 550 g/l. **Less than 5% comply with the Delaware proposed limit of 350 g/l.**
2. Varnishes: Sales weighted average VOC content is 406 g/l. **Over 70% of the varnishes sold in California are solvent-borne, with a sales-weighted average VOC content of 463 g/l, even though a limit of 350 g/l has been in effect for over 10 years.** This shows that additional time has not and will not solve the basic technical issues resulting in the poor performance of, and lack of customer satisfaction with, water-borne varnishes.
3. Clear and semi-transparent stains: Sales-weighted average VOC content is 387 g/l. Sales-weighted average VOC content of all solvent-borne clear and semi-transparent stains is 449 g/l and **the sales-weighted average VOC content of all interior clear and semi-transparent stains is over 510 g/l. Less than 12% of all clear and semi-transparent stains meet the Delaware proposed limit of 250 g/l.**

It is noteworthy, that the sales weighted average VOC content of these product categories exceed the current VOC limits in California which have been in effect since the early 1990's.

This data clearly shows that The Sherwin-Williams Company is not alone with our concerns over the lack of complying products to meet the new limits for these three categories. In addition, the National Paint & Coatings Association, representing over 80-85% of the market in architectural and industrial maintenance coatings, has recommended higher limits for these categories of coatings

To better visualize the performance differences between water-borne and solvent-borne systems, demonstration panels were presented at the Hearing. The critical performance differences shown included the following observations:

1. Lapping [the overlap area when a semi-transparent stain is applied]: the water-borne semi-transparent stain showed lap marks at times as low as 2 minutes between applications, with severe marks showing at 4-6 minutes. In contrast the solvent-borne semi-transparent stain showed no lap marks throughout the period of the test, which went for a total time between applications of 8 minutes.
2. Grain-raising: all water-borne coatings (sanding sealer, semi-transparent stain, and varnish) resulted in severe grain raising.
3. Appearance: the final appearance of both the varnished (only) and the system (sealed, stained, and varnished) were distinctly different between the water-borne and solvent-borne systems, with the water-borne system showing an appearance without depth, reminiscent to the photographed-type of wood appearance found on artificial substrates and not expected on a natural wood substrate.

We recommend the limits for these three categories be raised to the limit recommended by the National Paint and Coatings Association:

Sanding Sealers	550 g/l
Varnishes	450 g/l
Stains – Clear & Semi-Transparent	550 g/l

These limits would protect the performance of products in these categories. These products in turn would protect the investment in flooring and home appurtenances (e.g. doors, moldings, window sills, trim, banisters, stairs, etc.) that would be jeopardized by products forced to comply with proposed limits. Also, it is evident from the California sales data that the state is not receiving the published emission reductions, and that Delaware will not receive the reductions calculated based on an overly optimistic VOC content limit.

If this is an impossibility, **at a minimum** we recommend three new categories be developed that specifically addresses our concerns for professional applications: a professional varnish, a professional sanding sealer, and a professional semi-transparent stain. We would recommend the following definitions and requirements:

1. “Professional varnish” means a varnish which is formulated and labeled specifically for application by professional contractors and includes the statement “For Professional Use” on the label.
2. “Professional sanding sealer” means a sanding sealer which is labeled and formulated for application by professional contractors and includes the statement “For Professional Use” on the label.
3. “Professional semi-transparent stain” means a stain which is formulated for application by professionals to change the color of a surface but not conceal the surface and includes the statement “For Professional Use” on the label.”
4. “Professional clear stain” means a clear stain which is formulated for application by professionals includes the statement “For Professional Use” on the label.
5. “Stain means a coating that produces a dry film with minimal coloring.”
6. “Clear means allowing light to pass through, so that the substrate may be distinctly seen.”

We recommend the following VOC content limits:

<u>VOC Limits:</u>	<u>g/l, less water and exempt compounds and excluding any colorant added to tint bases</u>
Professional varnish	450
Professional sanding sealer	550
Professional semi-transparent stain	550
Professional clear stain	550

We want to stress that considering the very low complying market shares of these products in California, it is apparent that there are not currently available products which sufficiently meet the performance requirements of these products. This is also evident from consideration of the sales weighted averages for each of these coating categories which exceed the VOC content limits that have been effective in most California districts since 1990. Time has not resulted in complying products which can satisfy the marketplace needs for performance.

PRIMERS, SEALERS AND UNDERCOATERS FOR EXTERIOR WOOD SURFACES

The proposal has a limit of 200 g/l for primers, sealers, undercoaters, quick dry primers, quick dry sealers, quick dry undercoaters, and sanding sealers, eliminating all solvent-borne primers from the market. The national rule has a limit of 350 g/l for primers and undercoaters, a limit of 400 g/l for sealers, and a limit of 450 for quick dry primers, quick dry sealers, and quick dry undercoaters. In addition, the national rule has a limit of 550 g/l for sanding sealers. We consider this a critically serious problem: painting systems depend upon the primer system to perform. For the Sherwin-Williams brand, we exclusively recommend alkyd primers under all of our water-borne exterior latex coatings. [The only exception is under the LowTemp35® coatings we recommend the LowTemp 35® primer. There are compatible problems between the LowTemp 35® topcoat and solvent-borne primers.]

There are two types of exterior wood surfaces: "real" wood boards and sheets of composition boards. The latter are made of resin, wax, surfactants, and wood fibers, flakes, particles, chips, or etc. When water-borne systems are in direct contact with this substrate, wax can bleed through, surfactants can leach out, and swelling can occur. All of these product problems can be solved by application of a solvent-borne primer prior to topcoating with a water-borne paint.

At the hearing, we showed an exposure panel comparing the performance of our standard exterior water-borne primer [A100® Exterior Latex Primer] to our standard exterior solvent-borne primer [A100® Exterior Oil Primer] under an exterior latex topcoat. The exposure panel was prepared in the laboratory by applying A100® Exterior Latex Primer to one half of the board, and applying A100® Exterior Oil Primer to the other half. After both had dried completely, the entire board was topcoated with A100® Exterior Latex Satin House Paint. After complete drying, the board was placed on exterior exposure in Medina, Ohio for 82 months. The panel reveals some of the performance issues associated with latex primers in direct contact with bare woods: bleed through of tannins and poor protection of the substrate were revealed. In addition to the problems associated with bare wood boards, wood composites have additional problems. Wood composition boards contain wax, surfactants, and wood fibers. Without a

proper primer these composition woods can have wax bleeding and surfactants leaching out of the wood and through the topcoat, as well as edge swelling and failure. All of these problems can be avoided if an appropriate solvent-borne primer is used.

The VOC content for the coatings used in this study are:

A100® Exterior Latex Primer	121 g/l
A100® Exterior Oil Primer	325 g/l
A100® Exterior Latex Satin House Paint	112 g/l

It is important to note that The Sherwin-Williams Company products recommend the use of our solvent-borne primer under all exterior latex topcoats being applied to wood and wood composition boards. [For use over plywood we recommend our A100® Exterior Latex Primer.] Data sheets showing these recommendations are included in Attachment 1.

As part of these comments, we are incorporating by reference the comments we submitted to Mr. John Elston on January 11, 2001.

We recommend a limit of **350 g/l for exterior wood primers, sealers, and undercoaters**. [This can be accomplished by adding Exterior Wood Primers, Sealers and Undercoaters to the definition for Specialty Primer category in the proposal.]

SEMI-TRANSPARENT WATER-BORNE STAINS

In addition to the performance issues associated with all water-borne stains, we have an additional problem when it comes to water-borne stains with a VOC limit of 250 g/l. Many of water-borne semi-transparent stains exceed the 250 g/l limit; many even exceed 350 g/l. However, in use these coatings will emit from each can no more VOC's than the stains at 250 g/l. In most cases these stains will emit significantly less. Our water-borne coatings are formulated for the desired properties; reducing the VOC content, while reducing our costs, also reduces the quality. I have attached Table 1 [Attachment 3], showing a variety of our water-borne semi-transparent stains: most do not comply with the proposed 250 g/l limit. Although all of the stains on application emit less than 120 g/l and thus, would seem to be perfect candidates for the low solids category, the solids content is too high to meet the definitional requirement for this category. Our laboratory has determined that lower solids will cause more problems with lapping, so reducing solids to fit into the low solids category does not make sense.

California has formed a work group to consider the issues surrounding the calculation of VOC content which causes the discrepancy between the VOC content (e.g. 250 g/l) and the VOC amount that is actually emitted in water-borne coatings. It is expected that the resolution will solve the problem addressed above.

We recommend a small change to the definition for low solids coatings:

“Low-solids coating” means a coating containing 0.12 kilogram or less of solids per liter (1 pound or less of solids per gallon) of coating material or a water-borne clear or semi-transparent stain.

FLOOR COATINGS

Although California has included a 250 g/l limit in their Suggested Control Measure, we consider this extremely problematic for the northeastern states. California does not have, for example, the wood porches that are so common in the northeast. These wood porches need the penetrating capability of solvent-borne floor paints. Infact, the testing program that is being utilized in California to confirm the limits is testing only coatings for concrete floors; no tests are being performed on floor coatings for wood substrates.

We recommend a limit of 380-400 g/l for floor paints. [The national rule provides 400 g/L for floor coatings, while NJ and the 9 counties in metro-NYC do not have a floor coating category, defaulting to the nonflat category with a limit of 380 g/l.]

PROBLEMS WITH THE NTS STUDY CITED BY CALIFORNIA

All panels prepared for the NTS Studies, including but not limited to the exterior wood and steel exposure panels, were prepared by draw down. This is not the generally accepted procedure. Normally, panels would be prepared using one or more methods of application that are used "in the field" to insure that the performance observed would be consistent with the performance actually experienced.

The films were drawn down using a single draw down rod and then the dry film thickness was measured. Normally, one would apply the coatings to the wet and dry film thickness recommended by the manufacturer.

The sizes of the exposure panels were too small in size. There were no positive nor negative controls. Normally one includes both a positive and a negative control in each set of exposures to have a baseline for comparison.

ADMINISTRATIVE REQUIREMENTS

Reports

The proposed rule requires a variety of annual reports for the sale of specific coatings [clear brushing lacquers, rust preventative coatings, specialty primers, sealers, and undercoaters, recycled coatings, bituminous roof coatings and primers]. However, there is no reason why reports are needed by the State of Delaware on these specific coating categories. Delaware has no sales history for these, or any other, coating category against which to compare this information. This requirement is arbitrary and capricious.

Averaging

As we discussed at the Hearing, the proposed limits are based on the limits adopted by the South Coast Air Quality Management District and included in the California Air Resources Board (CARB) Suggested Control Measure. However, both of these include an averaging provision to allow coatings which "over" comply to be averaged with coatings unable to meet the limits.

While the State claims that the CARB SCM's averaging provision will "sunset" on 1/1/05, the State has ignored the record of the adoption. That record clearly shows that CARB intends the SCM to continue to include a flexibility option after 1/1/05; that one idea being considered is to

change the entire SCM foundation to a reactivity basis, rather than the current organic content basis, prior to that time.

Averaging is needed to allow the sale of special coatings which satisfy particular performance needs in the marketplace. For example, The Sherwin-Williams Company offers a unique product called LowTemp 35®: this exterior latex product is specifically designed and marketed for application at lower temperatures, down to 35 degrees Fahrenheit. This is in contrast to the normal application temperatures required for latex products, which can be applied down to 50 degrees Fahrenheit. This product was formulated specifically to satisfy the need to extend the painting season as long as possible, which previously had only been satisfied by the use of solvent-borne products at high VOC contents (emitting over 3.5 pounds per gallon, 400 grams per liter). However, this product will be unavailable, unless averaging is allowed, since the VOC content of the LowTemp 35® flat is over the proposed 100 g/l limit. Rather than recommend a new category just for this product, we are recommending averaging.

One environmental advantage of this product is that it allows coating application to occur during the fall and spring, which are not part of the ozone season, rather than requiring application in summer when the ozone problem is most problematic. Thus, this product is actually beneficially when compared to other, compliant, exterior latex coatings.

Another example of the need for averaging to allow the sale of a product with special performance is Everclean® by The Sherwin-Williams Company. This interior latex product is truly washable, allowing stains and dirt to be removed from walls and trim by simply cleaning with a detergent. Unlike other products which make a variety of claims, this product actually has the clean-up performance usually found only in solvent-borne coatings. However, this product line will not be available at any sheen level (flat, satin, nor semi-gloss), since it exceeds the VOC content limits in the proposed rule. Again, rather than recommend a new category just for this product, we are recommending averaging.

One environmental advantage of Everclean® is that it allows the wall surfaces to be cleaned to a “like-new” appearance, rather than requiring an early re-coating of the paint system. Thus, it actually results in less VOC emissions than other interior latex coatings, which might be “compliant” but which can not be cleaned, and thus dirt, fingerprints, stains, and etc. result in the need for new painting.

Delaware has proposed a Consumer Products regulation based on California’s Consumer Products regulation and included all flexibility options present in California (including the California averaging provision named the Alternative Compliance Plan and the California Innovative Product Exemption), Delaware has not done comparably for the Architectural Coating regulation. This unbalanced approach to regulatory decisions is indefensible and places an unreasonable and unequal burden on the architectural coating industry.

Future Regulatory Status

During the Hearing concerns were raised that products will not exist to satisfy the performance requirements of consumers. In response, the State maintained that any problems which would occur would first occur in California, that the State will be watching what happens in California,

and that the State will react to problems observed in California. However, California has an Averaging Provision and will continue to have some sort of flexibility option. Thus, potential problems will not necessarily arise in California that may arise in Delaware.

Emission Reductions

We believe that Delaware has a significant excess in emission reductions compared to what the State needs to satisfy the SIP (State Implementation Plan) call. In addition, we would like to remind the State that in earlier discussions within the OTC work group for architectural coatings, an emission reduction of 20% was expected from adoption of this proposal. We would like to strongly recommend Delaware re-consider the proposed limits and adopt the NPCA-recommended limits which will result in emission reductions of 20-22% from this category.

In addition, we request Delaware determine the emission reductions achieved from the modifications we have recommended. We anticipate the change in emission reductions will be significantly less than the excess reductions which Delaware has proposed versus the SIP call requirements.

Administrative Record

We request Delaware identify the specific product categories manufactured or used by the commenters quoted in the State's presentation at the Hearing to support adoption of the proposed limits and used to support the proposed limits. Vague, nonspecific claims from various organizations that "they have no problem with the proposal" are not meaningful. We expect Delaware to answer the following questions:

1. What products does each commenter manufacture or use?
2. Are their products manufactured for use on stationary structures and their appurtenances or are they manufacturers of coatings for industrial (OEM-original equipment manufacturers) use?
3. Do these commenters manufacture for sale in Delaware for use as architectural coatings?
4. For each commenter, what is their material interest in this rule adoption? In what way are they an interested party?

In many cases throughout both the Hearing and the internal documentation the manufacturers quoted as having low VOC coatings and having "no trouble" with low VOC products produce coatings for application in shops as part of their production process; such coatings do not qualify as architectural coatings. Specific examples are the following:

1. Document Number 67 claims a variety of manufacturers "all have good, water-based coatings, equivalent to the best solvent-based coatings.." However, several of these manufacturers exclusively market to production facilities and shops for use in production. For example, Borden Chemical and Coatings makes UV curable coatings –these are not for use as architectural coatings.

2. Documents Number 67, 87, and 127 imply that the coatings manufactured by Fuhr International are relevant to the proposed rule. However, again, this manufacturer does not make architectural coatings. Information is at the website <http://www.paintcoatings.net/716.htm> where Fuhr states: "Fuhr International specializes in water-based paint and wood coatings for the **OEM marketplace.**" (OEM stands for Original Equipment Manufacturer.) Thus, the comments made by this manufacturer are not applicable to this rule making activity.
3. Document Number 86 provides documentation on a large number of products manufactured by Deft Coatings. However, Deft Coatings describes itself in the SE documents as "Serving the Military and Aerospace Industries" and as "Serving the Transportation / Heavy Construction Equipment and General Industrial Coating Markets."
4. Document 106 provides a set of data sheets for another manufacturer with products used primarily as industrial coatings. It is noteworthy that the instructions for use clearly indicate the need to carefully control temperature of application. For example, the data sheet for Aqua-Cote Urethane Varnish states, "Do not use when ambient room temperature is below 60° F." The data sheet for Aqua-Cote Clear Finishes also provides this caveat. This clearly supports the concerns stated at the hearing about panelization of wood floors when using water-borne systems related to application temperature and humidity issues.

No one in the industry is claiming that NO products exist within a category to meet the limits. We are only claiming that the specific products which meet the limits may not satisfy all of the performance requirements needed for all uses, conditions, and situations that a particular category. For example, while we have a large number of flat coatings meeting the 100 g/l limit, our customers can not use a flat interior, latex ceiling paint on exterior wood siding. Regardless of the VOC content of the ceiling paint, it is the wrong paint for the intended use.

Sherwin-Williams, at this time, feels it is necessary to also comment on Mr. Gene Pettingill's e-mail. (See Document Number 127.) In that document it appears that Mr. Pettingill is not interested in the sound technical reasoning proffered by the paint and coatings industry for the VOC limits, but has set out on a quest to solicit information to, as he puts it, "counter to what those other paint guys will be saying". Nowhere in Mr. Pettingill's request for information does he ask for concrete scientific evidence about the VOC limits and the quality of product for end users; and no where in this letter does Mr. Pettingill ask for unbiased and factual information. The sole purpose of Mr. Pettingill's request is to avoid looking at the evidence submitted by the paint industry and rely totally on what is commonly known as junk science in an effort to support his position. This attitude is contrary to the whole purpose of a public hearing and allows prejudicial and emotional issues to cloud what should be an otherwise productive rule making process.

The Sherwin-Williams Company is pleased to have had this opportunity to comment on the proposed Regulation-Architectural & Industrial Maintenance Regulation, No. 41, Limiting Emissions Of Volatile Organic Compounds From Consumer And Commercial Products, Section 1-Architectural And Industrial Maintenance Coatings, limit the VOC (volatile organic compound) content of architectural, industrial maintenance, and traffic coatings. We are hopeful that these comments are used to finalize a rule that will provide the needed emission reductions in a way that industry can accommodate.

If you have any questions or need additional information, please feel free to contact me at mkharding@sherwin.com, 216-566-2630, or by fax at 216-263-8635.

Sincerely,

Madelyn K. Harding, Administrator
Product Compliance & Registrations

Attachments

Cc: Mr. Gene Pettingill
Division of Air & Water Management
Delaware Department of Natural Resources and Environmental Control
Air Quality Management Section
715 Grantham Lane
New Castle, DE 19720

BY FEDERAL EXPRESS NO. _____



Benjamin Moore & Co.

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July 24, 2001

Erin Crotty, Commissioner
New York Department of Environmental Conservation
625 Broadway
Albany, New York 12233-1011

Dear Commissioner Crotty:

Thank you for meeting with me and my colleagues from the New York paint industry on Thursday, July 12. As we discussed at that time, we are particularly interested in continuing our dialogue with the NYDEC (and other OTC member states) to achieve effective AIM VOC regulations that help New York State meet its SIP requirements but also protect paint consumers from ineffective products.

Our principal concern is the OTC's reliance on data from California's South Coast Air Quality Management District. Because application conditions are so different between Los Angeles, California and most of the northeastern states, we believe logic and experience dictate the need for some adjustments to the South Coast rule that forms the basis for the OTC model.

Although products may exist below many of the published limits in the OTC model, there are situations, particularly in the Northeast, when very low VOC formulas may not work. In particular, we have concerns about freeze-thaw stability and low temperature application. Furthermore, very low VOC coatings may not accept tinting material properly reducing the range of colors available to consumers or negatively impacting the performance of these colors. One very likely result is increased VOC emissions when unacceptable paint jobs are corrected.

In short, for the reasons cited above and others, we endorse the National Paint and Coatings Association alternative limits forwarded under separate cover. We trust NYDEC will continue to work with our industry toward fair and effective VOC regulations.

Below are additional concerns, which we may not have covered adequately during our meeting. These concerns have also been shared with Mr. Bruce Carhart of the Ozone Transport Commission.

- ❖ We need for an averaging provision with a technological assessment and a mechanism to support it

The Ozone Transport Commission has elected not to adopt an averaging provision although almost every other aspect of SCAQMD Rule 1113 was adopted *verbatim*. Technology forcing VOC limits create the risk that new, untried coatings will not work as planned. VOC averaging gives manufacturers an opportunity to use known technologies in critical situations offset by innovative lower VOC technologies in less demanding situations. In this way, averaging encourages innovation while minimizing the risk of coating failure in critical application situations.

It is worth emphasizing that coatings which are technically viable in the South Coast region of California may be woefully inadequate in the northeastern US. Therefore, it is not fair to assume that the California technology assessment will adequately "prove" coatings for the Ozone Transport Commission area. In fact, we have attached an excerpt of the California Paint Council newsletter that hints at poor results for low VOC exterior coatings in the SCAQMD's technology assessment.

Recommendation: The OTC should adopt an averaging provision with a region specific technology assessment required before it sunsets.

❖ We need a provision to allow the sale of technologically innovative coatings

The proposed OTC rule is technology forcing, especially so in consideration of the climate in the northeast. Accordingly, there should be a provision in the proposed rule to allow for the sale of coatings that meet the intended VOC emissions limit but may not precisely fit the rule definitions or administrative requirements. It is difficult to be specific on this point since the coatings don't exist, but clearly there is a need to build flexibility into the rule to foster both innovation and lower VOC's.

Recommendation: The OTC should adopt an innovative technology provision to create a review and approval process for coatings that do not fit the current "template" of coatings technology.

❖ We need a variance provision

The proposed OTC rule does not contain a provision for the sale of coatings that do not meet the limits in the rule. This may be important to allow the sale of as yet unidentified niche categories which, under the present rule, would default to flat, non-flat, or high-gloss. The industry has attempted to identify such categories as magnesite cement coatings and antenna coatings but there are bound to be more that have "fallen through the cracks."

Recommendation: The OTC should adopt variance provision to permit the sale of critical coatings in categories not identified in the current rule.

❖ Deminimus Categories

Two small category issues are worth pointing out although they may only affect a very small amount of paint.

The first is shellacs. The South Coast and OTC definition of shellac, while technically accurate, is overly restrictive particularly with respect to pigmented shellacs. The definition requires that shellacs be made exclusively from the resinous secretions of the lac beetle.

Pigmented shellacs have the unique ability to hold back stain from water damage, contain odor from smoke damage, and stop bleeding from knotholes in wood. The technical distinction of this class of material, and the key to their special features, is that they are made with natural resins that are alcohol thinned and dry by evaporation of the solvent. This results in a paint film that is hard, non-porous, and quick drying.

The fact is, such coatings can be made with natural resins other than the secretions of the lac beetle. By limiting the definition, a potentially unfair restriction is placed on one paint formula versus another with no technical reason to do so. The pigmented shellacs made with either the "lac beetle" resin or its natural alternatives are indistinguishable so there is no increased likelihood of abuse of the category as a result of updating the definition to match the National Rule. No additional VOC emission would result from this change.

Recommendation: Adopt the National Rule definition for shellac.

The second category to discuss is calcimine recoater. Calcimine is a very old type of finish that dries to a powdery coating. Dry calcimine, while it can last for many years, is water-soluble so latex paint will not adhere to it. Often, the best solution is to use a flat alkyd coating over the calcimine. The alkyd penetrates the powdery surface and, because it dries by crosslinking, tightly binds the calcimine.

It's worth noting that this is a problem found in very old homes such as those that exist in significant numbers in the northeast. While the volume of calcimine recoater sold is very small it performs an important function in those communities where calcimine coating is still present. Introducing this category to be consistent with the National Rule would have a negligible impact on VOC release and would avert costly and messy paint failure over calcimine.

Recommendation: Adopt the National Rule definition for calcimine recoater.

Thank you, again, for the opportunity to share our thoughts.

Sincerely,
Benjamin Moore & Co.

A handwritten signature in cursive script that reads "Carl Minchew". To the right of the signature, there is a small circular stamp containing the initials "CB".

Carl Minchew
Director of Governmental Affairs

cc:
James Sell, NPCA
Robert Biggerstaff, DeGross, Foy, Holt-Harris, Kunz, LLP

**COMMENTS OF CALIFORNIA PRODUCTS
IN SUPPORT OF CALCIME RECOATERS**

Calcicoaters are made of limed oils using very low alkyd solids and are the only really successful way of coating over old calcimine (mostly ceilings). Since one cannot paint over calci with latex since the calci is water soluble, this limed oil coating is the only solution for many elderly owners of old home in the NE. Scraping off all calci from all ceilings is such a costly project it is out of the question budget-wise. Coating over the calci freshens up the ceiling and the cost is very low. As to volume--we only sold about 9,000 gallons in the NE during the last 12 months, so its impact on total VOC's would be minimal.