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NL INDUSTRIES, INC.

Public Affairs & Corporate Communications Department

"ONCOR"

45X[®]

BASIC SILICATE WHITE LEAD



A Pigment Development of
NATIONAL LEAD COMPANY

N L I 003269

"ONCOR" 45X[®]

BASIC SILICATE WHITE LEAD

"ONCOR" 45X, an active film forming white pigment, is the oldest of a series of "ONCOR" pigment products available to the paint manufacturer. The word "ONCOR" literally means that the active useful component of the product, in this case basic silicate white lead, is present and available to serve its function as the outer surface of the pigment particle—the inner core being inert and acting simply as a carrier.

"ONCOR" 45X is used in multiple pigment exterior paint coatings, both water base and solvent base.

The physical properties and composition of basic silicate white lead "ONCOR" 45X are as follows:

Specific Gravity	4.0
Weight per U. S. Gallon, lbs.	33.3
Bulking Value (U. S. Gal./lb.)	0.03
Oil Absorption (gms. per 100 gms.)	15
Color	0
Tinting Strength	70
Hiding Power complete over black and white (sq. ft. per lb.)	10
Retained on #325 sieve, %	0.1
Lead Oxide (PbO), %	47.9
Silicon Dioxide (SiO ₂), %	47.9
Sulfur Trioxide (SO ₃), %	4.2

"ONCOR" 45X, as represented by the above analysis, conforms to the requirements of specifications for basic silicate white lead, 48% PbO type.

In water base coatings (oil, alkyd, and the several types of high polymer latices), "ONCOR" 45X functions efficiently to arrest and tie-up unsightly water soluble stains from white pine, cedar, and redwood siding and shingles which are liberated during application of the water base paints or from the passage of moisture through these permeable coatings. The normal procedure is to include from one pound to one-and-one-half pounds of "ONCOR" 45X per gallon in the water base coating which is expected to be applied next to bare wood or onto previous coatings already affected by staining. The amount used will depend on the

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particular vehicle—some being more susceptible to attack than others—as well as the concentration of staining material in the wood.

Another advantage to the use of "ONCOR" 45X in water base coatings, aside from its use in undercoats for stain control, is the improved brightness and apparent resistance to mildew contributed by the presence of this pigment in water base finish coats.

When used in oil base systems, both undercoats and finishes, the unique property of this pigment is its low specific gravity. It has the lowest specific gravity of all the active white lead pigments which means that fewer pounds are required for an equivalent volume of pigment. For example, 100 pounds of "ONCOR" 45X is equivalent in volume to 161 pounds of basic sulfate white lead or 169 pounds of basic carbonate white lead. As a result, a combination of "ONCOR" 45X and lead free zinc oxide is more economical than a corresponding leaded zinc oxide.

"ONCOR" 45X is a unique pigment. Lead silicate pigments which are simply compositions of lead silicate in pigment form do not possess low specific gravity or the other advantages exhibited by "ONCOR" 45X.

"ONCOR" 45X may be used to replace basic carbonate white lead in exterior primers and in multiple pigment house paints to obtain coatings of comparable performance characteristics. It may replace the basic sulfate white lead content of multiple pigment paints, whether the basic lead sulfate is present as such or as a component of leaded zinc oxide. In this type of replacement, because of the higher basicity of "ONCOR" 45X, the active film forming content of the formula is increased above what it was originally, thus producing a stronger, more durable paint film. In addition, the use of "ONCOR" 45X results in savings to the paint manufacturer.

Experience over the years has indicated that tinted exterior house paints pigmented with "ONCOR" 45X show resistance to color fading and film breakdown equal to similar paints pigmented with basic carbonate white lead. Appearance and durability characteristics of white exterior house paints pigmented with "ONCOR" 45X are superior to those of similar house paints pigmented with basic sulfate white lead. Thus, "ONCOR" 45X combines in one pigment all the best properties of white lead pigments of the older types.

"ONCOR" 45X has proven to be the most versatile and economical white lead pigment which can be successfully used in formulating exterior coatings, including exterior primers, house paint whites and tints, and water base coatings.

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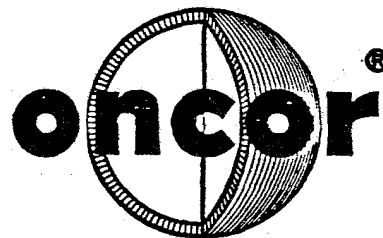
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