KYNAR500/PVDF PAINT SPECIFICATIONS

All info provided by paint/metal supplier. Visual communication design by Lux Architectural Products

DRY FILM THICKNESS

1400: This test method covers the nondestructive measurement of the dry film thickness of electrically nonconductive coatings applied over a nonferrous metal base using commercially available eddy current instruments. This test method is intended to supplement manufacturers' instructions for the manual operation of the gages, and is not intended to replace them.
1005: This test method covers the measurement of film thickness of dried films of paint, varnish, lacquer, and related products using micrometers.

COATING TEST METHOD: ASTM D 1400 • **COATING SPECIFICATION:** 0.75-1.85 MIL

COATING TEST METHOD: ASTM D 1005 • **COATING SPECIFICATION:** 0.90-1.15 MIL

SPECULAR GLOSS

Gloss is associated with the capacity of a surface to reflect more light in directions close to the specular than in others. Measurements by this test method correlate with visual observations of surface shininess made at roughly the corresponding angles. Measured gloss ratings by this test method are obtained by comparing the specular reflectance from the specimen to that from a black glass standard. Since specular reflectance depends also on the surface refractive index of the specimen, the measured gloss ratings change as the surface refractive index changes. In obtaining the visual gloss ratings, however, it is customary to compare the specular reflectances of two specimens having similar surface refractive indices. Other visual aspects of surface appearance, such as distinctness of reflected images, reflection haze, and texture, are frequently involved in the assessment of gloss.

COATING TEST METHOD: ASTM D 523 @ 60° • **COATING SPECIFICATION:** 10-15

HUMIDITY RESISTANCE

Water can cause the degradation of coatings, so knowledge of how a coating resists water is helpful for assessing how it will perform in actual service. Failure in tests at 100 % relative humidity may be caused by a number of factors including a deficiency in the coating itself, contamination of the substrate, or inadequate surface preparation. This practice is therefore useful for evaluating coatings alone or complete coating systems. Tests at 100 % relative humidity are used for specification acceptance, quality control, and research and development for coatings and substrate treatments. Some tests are used for a pass or fail determination at an arbitrary time. A coating system is considered to pass if there is no evidence of water-related failure after a period of time. Other tests are used to monitor degree of failure as a function of exposure time.

COATING TEST METHOD: ASTM D 2247 (100% relative humidity @ 95°) • **COATING SPECIFICATION:** Passes 2,000 hrs. with no field blisters

SALT SPRAY

This practice provides a controlled corrosive environment which has been utilized to produce relative corrosion resistance information for specimens of metals and coated metals exposed in a given test chamber.

COATING TEST METHOD: ASTM B 117 (5% salt spray @ 95°) • **COATING SPECIFICATION:** Passes 1,000 hrs. with less than 5% #6 blisters

ACID POLLUTANT RESISTANCE

Resistance to various liquids used in the home is an important characteristic of organic finishes. These test methods provide the means by which the relative performance of coating systems may be evaluated. It should be recognized that continuous films are necessary for reliable results.

COATING TEST METHOD: ASTM D 1308 (20% sulfuric acid 18 hrs., 10% muriatic acid 15 minutes) • **COATING SPECIFICATION:** No effect

GRAFFITI RESISTANCE

Graffiti on building and structures is an ongoing and increasing problem. A number of coatings have been produced that are intended to be resistant to the application of a graffiti marking, or to provide a surface from which such markings can be easily removed. The procedures described in this practice provide a standard set of conditions that can be used to evaluate the graffiti resistance of a surface.

COATING TEST METHOD: ASTM D 6578 (Cleanability of Defaced Panels - spray paint, pens, etc.) • **COATING SPECIFICATION:** No effect

ABRASION RESISTANCE

These test methods cover the determination of the resistance of organic coatings to abrasion produced by abrasive falling onto coatings applied to a plane rigid surface, such as a metal or glass panel. Two test methods based on different abrasives are covered...Method A - Falling Sand Abrasion Test and Method B - Falling Silicon Carbide Abrasion Test.

COATING TEST METHOD: ASTM D 968 (to expose 5/32" of substrate) • **COATING SPECIFICATION:** 100 Litres

CHALK RESISTANCE

These test methods cover the evaluation of the degree of chalking on white or tinted exterior paint films. These test methods describe the procedures recommended for transferring the chalk to a fabric or fingertip, which is then compared to photographic reference standards, or in the case of adhesive tapes, compared to a reflectance table or photographic reference standards, to determine the degree of chalking.

COATING TEST METHOD: ASTM D 4214 (Florida Exposure @ 45° S) • **COATING SPECIFICATION:** Rating not less than 8 @ 20 yrs.

COLOR RETENTION

This practice covers the calculation, from instrumentally measured color coordinates based on daylight illumination, of color tolerances and small color differences between opaque specimens such as painted panels, plastic plaques, or textile swatches. Where it is suspected that the specimens may be metameric, that is, possess different spectral curves though visually alike in color, Practice D4086 should be used to verify instrumental results.

COATING TEST METHOD: ASTM D 2244 - Hunter Units (Florida Exposure @ 45° S) • **COATING SPECIFICATION:** Rating not greater than 5Δ Hunter Units @ 20 yrs.

ADHESION

If a coating is to fulfill its function of protecting or decorating a substrate, it must adhere to it for the expected service life. Because the substrate and its surface preparation (or lack of it) have a drastic effect on the adhesion of coatings, a method to evaluate adhesion of a coating to different substrates or surface treatments, or of different coatings to the same substrate and treatment, is of considerable usefulness in the industry. These test methods cover procedures for assessing the adhesion of coating films to metallic substrates by applying and removing pressure-sensitive tape over cuts made in the film.

COATING TEST METHOD: ASTM D 3359 (Reverse Impacted 1/16" crosshatched) • **COATING SPECIFICATION:** No adhesion loss

PENCIL HARDNESS

Pencil hardness measurements have been used by the coatings industry for many years to determine the hardness of clear and pigmented organic coating films. This test method has also been used to determine the cure of these coatings, especially when forced dried using heat. This test method covers a procedure for rapid, inexpensive determination of the film hardness of an organic coating on a substrate in terms of drawing leads or pencil leads of known hardness.

COATING TEST METHOD: ASTM D 3363 • **COATING SPECIFICATION:** HB-H

REVERSE IMPACT

Coatings attached to substrates are subjected to damaging impacts during the manufacture of articles and their use in service. In its use over many years, this test method for impact resistance has been found to be useful in predicting the performance of organic coatings for their ability to resist cracking caused by impacts.

COATING TEST METHOD: ASTM D 2794 (3,000 x inches of metal thickness) • **COATING SPECIFICATION:** No cracking or loss of adhesion

FLEXIBILITY T-BEND

Organic coatings on precoated sheet are subjected to stresses when fabricated into products by roll forming, brake bending, or other deformation processes. These stresses can exceed the flexibility or adhesive strength of the coating, resulting in fracture of the coating which exposes the substrate, or in the loss of adhesion of the coating to the substrate. This test is a means of evaluating the ability of a coating system to withstand the stresses of fabrication.

COATING TEST METHOD: ASTM D 4145 (No crack, no pick-off) • **COATING SPECIFICATION:** 2T bend, no loss of adhesion

MANDREL

Coatings attached to substrates are elongated when the substrates are bent during the manufacture of articles or when the articles are abused in service. These test methods have been useful in rating attached coatings for their ability to resist cracking when elongated. They have been useful in evaluating the flexibility of coatings on flexible substrates.

COATING TEST METHOD: ASTM D 522 (180 bend around 1/8" mandrel) • **COATING SPECIFICATION:** No cracking

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