*The following are liner surface performance requirements, which the specifier may wish to insert into Part 1 of the fume hood specification.*

**1. LINER SURFACE PERFORMANCE REQUIREMENTS**

 A. Test procedure:

 1. Test No. 1 - Spills and Splashes:

 a. Suspend in a vertical plane a 42" (horizontal) by 12" (vertical) panel divided into 3/4" wide vertical columns, each column numbered 1 through 49.

 b. Apply five drops of each reagent listed with an eye dropper.

 c. Apply liquid reagents at top of panel and allow to flow down full panel height.

 (CAUTION! Flush away any reagent drops.)

 2. Test No. 2 - Fumes and Gases:

 a. Divide 24" x 12" panel into 2" squares, each square numbered 1 through 49.

 b. Place 25 milliliters of reagent into 100 milliliter beakers and position panel over beaker tops in the proper sequence. Note: Beaker pouring lip permits atmospheric oxygen to enter and participate in the reaction of the reagent fumes.

 3. After 24 hours remove panel, flush with water, clean with naphtha and detergent, rinse, wipe dry and evaluate.

 B. Evaluation ratings: Change in surface finish and function shall be described by the following ratings:

 1. No Effect: No detectable change in surface material.

 2. Excellent: Slight detectable change in color or gloss, but no change to the function or life of the work surface material.

 3. Good: Clearly discernible change in color or gloss, but no significant impairment of work surface function or life.

 4. Fair: Objectionable change in appearance due to surface discoloration or etch, possibly resulting in deterioration of function over an extended period.

 5. Failure: Pitting, cratering or erosion of work surface material; obvious and significant deterioration.

 C. Test Results: "P" Fume Hood Liner

 REAGENT LIST Test No. 1 Test No. 2

 *Concentrations by Wt. Rating Spills Fumes*

 1. Sodium Hydroxide Flake --- No Effect

 2. Sodium Hydroxide, 40% Excellent No Effect

 3. Sodium Hydroxide, 20% Excellent No Effect

 4. Sodium Hydroxide, 10% Excellent No Effect

 5. Ammonium Hydroxide, 28% No Effect No Effect

 6. Eldorado - Plus (Solution) No Effect No Effect

 7. Chloroform Excellent No Effect

 8. LpH SE (Solution) No Effect No Effect

 9. Trichloroethylene Excellent No Effect

 10. Monochlorobenzene Excellent No Effect

 11. Tincture of Iodine Excellent Excellent

 12. Methyl Alcohol No Effect No Effect

 13. Ethyl Alcohol No Effect No Effect

 14. Butyl Alcohol No Effect No Effect

 15. Phenol, 85% Excellent No Effect

 16. Cresol Excellent No Effect

 17. Sodium Sulfide, Saturated Good No Effect

 18. Furfural Fair No Effect

 19. Dioxane No Effect No Effect

 20. Zinc Chloride, Saturated No Effect No Effect

 21. Benzene Excellent No Effect

 22. Toluene Excellent No Effect

 23. Xylene Excellent No Effect

 24. Gasoline Excellent No Effect

 25. Naphthalene Excellent No Effect

 26. Methyl Ethyl Ketone Excellent No Effect

 27. Acetone Excellent No Effect

 28. Ethyl Acetate Excellent No Effect

 29. Amyl Acetate Excellent No Effect

 30. Ethyl Ether Excellent No Effect

 31. Silver Nitrate, 10% Good No Effect

 32. Di Methyl Formamide No Effect Excellent

 33. Formaldehyde, 37% No Effect No Effect

 34. Formic Acid, 88% No Effect No Effect

 35. Acetic Acid, Glacial No Effect No Effect

 36. Dichloro Acetic Acid, 93% Excellent Excellent

 37. Chromic Acid, Saturated Good No Effect

 38. Phosphoric Acid, 85% No Effect No Effect

 39. Sulfuric Acid, 33% No Effect No Effect

 40. Sulfuric Acid, 77% Excellent No Effect

 41. Sulfuric Acid, 93% Good No Effect

 42. Hydrogen Peroxide, 30% No Effect No Effect

 43. Acid Dichromate Excellent No Effect

 44. Nitric Acid, 20% Excellent No Effect

 45. Nitric Acid, 30% Excellent No Effect

 46. 40 & 47 Equal Parts Excellent Good

 47. Nitric Acid, 70% Excellent Good

 48. Hydrochloric Acid, 37% No Effect Excellent

 49. Hydrofluoric Acid, 48% No Effect Failure

 END OF SECTION