*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