

Corrosion Resistance

Test Method

The Testing was conducted by placing five drops on each reagent on the material and covering with a 25 mm watchglass for nonvolatiles. Volatile chemicals were tested by placing a cotton ball saturated with the reagent in a one-ounce bottle and inverting on the material's surface.

The reagents were left on the material for a test period of 24 hours. The reagents were then washed off with water, cleaned with detergent and naphtha, and rinsed with clean water. The surface of the material was then dried with a towel, and the evaluation made in accordance with the rating systems described below.

Evaluation Ratings

No Effect (NE) - No detectable change

Excellent (EX) - Slight detectable change in color or gloss, but no change to the function or life of the material.

Good (G) - A clearly discernable change in color or gloss, but no significant impairment of function or life.

Fair (F) - Objectionable change in appearance due to surface discoloration or etch, possibly resulting in deterioration of function over an extended period of time.

Failure (FL) - Pitting, cratering or erosion of material. Obvious and significant deterioration.

Chemical	Concentration	Result
1. Hydrochloric Acid	37%	NE
2. Sulfuric Acid	33%	NE
3. Sulfuric Acid	77%	NE
4. Sulfuric Acid	96%	EX
5. Formic Acid	90%	EX
6. Nitric Acid	20%	NE
7. Nitric Acid	30%	EX
8. Nitric Acid	70%	EX
9. Hydroflouric Acid	48%	NE
10. Phosphoric Acid	85%	NE
11. Chromic Acid	60%	G
12. Acetic Acid	98%	G
13. Sulfuric (77%) & Nitric (70%) Acids	Equal Parts	EX
14. Ammonium Hydroxide	28%	NE
15. Sodium Hydroxide	10%	NE
16. Sodium Hydroxide	20%	NE
17. Sodium Hydroxide	40%	NE

18. Sodium Hydroxide	Flake	NE
19. Sodium Sulfide	Saturated	EX
20. Zinc Chloride	Saturated	NE
21. Tincture of Iodine		G
22. Silver Nitrate	Saturated	G
23. Methyl Alcohol		NE
24. Ethyl Alcohol		NE
25. Butyl Alcohol		NE
26. Benzene		NE
27. Xylene		NE
28. Toluene		NE
29. Gasoline		NE
30. Dichlor Acetic Acid		NE
31. Dimethylformamide		NE
32. Ethyl Acetate		NE
33. Amyl Acetate		NE
34. Acetone		NE
35. Chloroform		EX
36. Carbon Tetrachloride		EX
37. Phenol	90%	NE
38. Cresol		NE
39. Formaldehyde	37%	NE
40. Trichloroethylene		NE
41. Ethyl Ether		NE
42. Furfural		G
43. Methylene Chloride		EX
44. Mono ChloroBenzene		NE
45. Dioxane		NE
46. Methyl Ethyl Ketane		NE
47. Acid Dichromate		EX
48. Hydrogen Peroxide		NE
49. Napthalene		NE