

## TEST DATA SHEET

Chemical resistance of finish, acid, solvents, bases and salts

**Description**

1. Cabinet Base/Shelf/Steel Drawers
2. Drawer and Door Front (Midmark)
3. Drawer and Door Pull (Midmark)
4. Drawer (Midmark)

**Material Tested**

- Paint  
 Polymer-covered Front  
 Polystyrene  
 Polystyrene

Testing of these parts consisted of soaking a 1/2" x 1/2" specimen in the chemicals for a period of one hour. The specimens were then removed from the chemical bath, rinsed with cold water and washed with detergent and warm water at 150° F (65° C). Surfaces of the samples were then examined under 100 foot candles of illumination for changes in gloss or softening of film.

#	Solution	(1)	(2)	(3)	(4)
1.	37% Hydrochloric Acid	A	A	A	A
2.	20% Hydrochloric Acid	A	A	A	A
3.	10% Hydrochloric Acid	A	A	A	A
4.	70% Sulfuric Acid	A	A	A	A
5.	25% Sulfuric Acid	A	A	A	A
6.	30% Nitric Acid	A	A	A	A
7.	10% Nitric Acid	A	A	A	A
8.	75% Phosphoric Acid	A	A	A	A
9.	25% Phosphoric Acid	A	A	A	A
10.	98% Acetic Acid	B	A	A	A
11.	50% Acetic Acid	A	A	A	A
12.	Ethyl Alcohol	B	A	A	A
13.	Butyl Alcohol	A	A	A	A
14.	Methyl Alcohol	A	A	A	A
15.	Ethyl Acetate	B	A	A	D
16.	Ethyl Ether	B	A	A	D
17.	MEK	B	A	A	D
18.	Toluene	A	A	A	D
19.	Acetone	B	A	A	C
20.	Benzene	A	A	A	D
21.	Carbon Tet	A	A	A	D
22.	37% Formaldehyde	A	A	A	C
23.	Gasoline	A	A	A	C
24.	Naphtha	A	A	A	B
25.	Kerosene	A	A	A	B
26.	Xylene	B	A	A	D
27.	Glycerin	A	A	A	C
28.	Furfural	B	B	A	C
29.	40% Sodium Hydroxide	A	A	A	A
30.	10% Sodium Hydroxide	A	A	A	A
31.	28% Amm. Hydroxide	A	A	A	A
32.	40% Pot. Hydroxide	A	A	A	A
33.	10% Pot. Hydroxide	A	A	A	A

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#	Solution	(1)	(2)	(3)	(4)
34.	Sat. Zinc Chloride	A	A	A	A
35.	Sat. Sodium Chloride	A	A	A	A
36.	Sat. Sodium Sulfide	A	A	A	A
37.	Sat. Sodium Carbonate	A	A	A	A
38.	88% Formic Acid	N/A	N/A	A	A
39.	5% Hydrogen Peroxide	N/A	N/A	A	A
40.	Common Bleach	A	N/A	A	A

**Key**

- A. No change in gloss, discoloration or softening of surface.
- B. Slight discoloration, change in gloss or temporary softening of surface.
- C. Definite change in gloss, discoloration or softening of surface resulting in permanent distortion of original appearance.
- D. Severe attack on surface.

**ADHESION AND FLEXIBILITY**

Three samples were subjected to the ASTM B3359-93, method B, cross cut tape (adhesion) test. The samples were scribed with two sets of eleven parallel lines which were 1 mm apart and which intersect each other at 90°, thus forming a grid of 100 squares. Each scribe line was deep enough to cut completely through the coating. The resulting area was then brushed lightly with a soft brush, checked for depth of cuts, and then tape was applied to the area to meet the ASTM requirement. The tape was seated using a pencil eraser and then pulled off at an angle as close to 180° as possible. The grid area was then examined and rated according to ASTM 3359-93, par. 12.9. This procedure was repeated in two other locations on each sample.

Result: tape adhesion rating of 5B (no paint removed)

**HARDNESS**

Three samples were subjected to the ASTM D3363-92a, Film Harness by Pencil Test. Pencil leads, honed to a circular diameter, were pushed across the surface of each sample at a 45° angle using enough pressure to crumble the lead. The distance of the resulting mark was a minimum of .25 inches. The pencil lead push test was repeated, starting with 5H lead, then with successively softer lead, until the surface was (1) not gouged and (2) not scratched. The pencil hardness at which each condition was observed is reported in the test data.

Result: Gouge rating of 2H  
Scratch rating of F

**CLEANING**

Regular care should be maintained by wiping with a damp cloth or sponge using a mild soap and water solution. The drawer may also be removed for cleaning.

**QUESTIONS**

For assistance, please call the Midmark Casework Customer Experience department at 1-800-643-6275, ext. 108914.