

Project No. 823-66078
Laboratory No. SPT-60104
Report Date: September 4, 1996

REPORT OF: Chemical Resistance (ASTM D 1308)
REPORT TO: Sealmark Corporation

PROCEDURE

Two (2) 12" x 12" coated steel panels were exposed to the chemicals listed below for the purpose of determining the effects each agent had on the coating. Twenty-two separate sections were marked on the two panels, having one section per chemical. Approximately 5 ml of each agent was allowed to set on the coating for 24 hours (uncovered) at room temperature, 73°F ± 5°F. At the end of the exposure, the samples were rinsed with de-ionized water and evaluated.

TEST RESULTS

Sealmark Stains - 24 Hour - Room Temperature

<u>Stain #</u>	<u>Stain Agent</u>	<u>Observations</u>
1	25% Acetic Acid	Slight loss of gloss.
2	10% Acetic Acid	Slight loss of gloss.
3	10% H ₂ SO ₄	No effect.
4	25% H ₂ SO ₄	No effect.
5	10% HCL	No effect.
6	25% HCL	No effect.
7	10% HNO ₃	100% delamination, coating bubbled up.
8	25% HNO ₃	100% delamination, coating bubbled up.
9	10% H ₃ PO ₄	No effect.

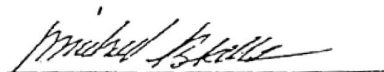
Information To Build On

Chemical Resistance (ASTM D 1308)

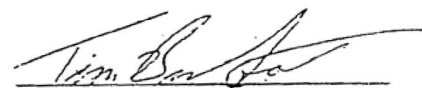
10	25% H ₃ PO ₄	No effect.
11	5% NaOH	Complete removal of coating.
12	Concentrated NaOH	Complete removal of coating.
13	5% NH ₄ OH	No effect.
14	Concentrated NH ₄ OH	No effect.
15	5% KOH	Coating removed to base 10%.
16	Concentrated KOH	Complete removal of coating.
17	MelBK	No effect.
18	Naptha	No effect.
19	MEK	No effect.
20	Isoproponal	No effect.
21	Toulene	No effect.
22	Xylene	No effect.

Sample sections 11, 12, 15, and 16 coats turned brown when exposed with staining agent.

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Chemical Symbol Explanation

H_2SO_4	Sulfuric Acid
HCL	Hydrochloric Acid
HNO_3	Nitric Acid
H_3PO_4	Phosphoric Acid
NaOH	Sodium Hydroxide
NH_4OH	Ammonium Hydroxide
KOH	Potassium Hydroxide
MIBK	Methyl Isobutyl Ketone
MEK	Methyl Ethyl Ketone