



UNITED COATINGS, INC.

Research and Development Center
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LABORATORY REPORT

Number 081D-88

Date 12-19-88

SUBJECT:

Uniflex 255: Resistance to Intermittent Contact with Selected Chemicals

PURPOSE:

To examine Uniflex 255 for application as a deck coating to resist chemical spillage. Visual evaluations were to be made at intervals of 4 hours, 48 hours, 1 week, 2 weeks, and 30 days.

PROCEDURE:

Uniflex 255 was applied in two coats 24 hours apart over flexboard sealed with Uni-Tile Sealer. Panel was cured for 1 week at ambient conditions before exposure to various concentrations of acids and bases. Reagents were applied as small pools then covered with watch glasses. Pools were wiped away at specific intervals and coating evaluated for deterioration or other effects. Fresh reagents were then re-applied for continued exposure.

RESULTS:

Concentrated 37% Hydrochloric Acid:

4 hours - coating softened
24 hours - coating softened, tacky
48 hours - no change from 24 hours
1 week - no change from 24 hours
2 weeks - no change from 24 hours
30 days - coating soft, somewhat dry & flaky

10% Hydrochloric Acid:

4 hours - no visible effects
24 hours - coating softened
48 hours - no change from 24 hours
1 week - coating softened, tacky
2 weeks - no change from 1 week
30 days - no change from 1 week

Concentrated 98% Sulfuric Acid:

4 hours - coating completely destroyed

30% Sulfuric Acid:

4 hours - coating softened
24 hours - no change from 4 hours
48 hours - no change from 4 hours
1 week - coating completely destroyed

3% Sulfuric Acid:

4 hours - no visible effects
24 hours - coating slightly discolored & softened
48 hours - no change from 24 hours
1 week - coating completely destroyed

Concentrated 90% Nitric Acid:

4 hours - coating completely destroyed

40% Nitric Acid:

4 hours - coating discolored & softened
24 hours - coating completely destroyed

10% Nitric Acid:

- 4 hours - coating slightly discolored
- 24 hours - coating soft & tacky
- 48 hours - coating completely destroyed

Concentrated Glacial Acetic Acid

- 4 hours - coating slightly discolored, softened
- 24 hours - coating swollen & peeling away from substrate
- 48 hours - no change from 24 hours
- 1 week - no change from 24 hours
- 2 weeks - no change from 24 hours
- 30 days - coating completely destroyed

5% Glacial Acetic Acid:

- 4 hours - coating slightly discolored
- 24 hours - no change from 4 hours
- 48 hours - no change from 4 hours
- 1 week - no change from 4 hours
- 2 weeks - no change from 4 hours
- 30 days - coating completely destroyed

Saturated Sodium Hydroxide:

- 4 hours - coating yellowed
- 24 hours - no change from 4 hours
- 48 hours - no change from 4 hours
- 1 week - no change from 4 hours
- 2 weeks - coating yellowed & softened
- 30 days - coating completely destroyed

10% Sodium Hydroxide:

- 4 hours - no visible effects
- 24 hours - coating slightly yellowed
- 48 hours - no change from 24 hours
- 1 week - no change from 24 hours
- 2 weeks - no change from 24 hours
- 30 days - coating yellowed & softened

Saturated Ammonium Hydroxide:

4 hours - no visible effects
24 hours - no change from 4 hours
48 hours - no change from 4 hours
1 week - no change from 4 hours
2 weeks - no change from 4 hours
30 days - no change from 4 hours

10% Ammonium Hydroxide:

4 hours - no visible effects
24 hours - no change from 4 hours
48 hours - no change from 4 hours
1 week - coating slightly yellowed
2 weeks - no change from 1 week
30 days - no change from 1 week

12.5% Sodium Hypochlorite:

4 hours - no visible effects
24 hours - no change from 4 hours
48 hours - no change from 4 hours
1 week - no change from 4 hours
2 weeks - no change from 4 hours
30 days - no change from 4 hours

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