



COMMERCIAL TESTING COMPANY

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Report Number 17-12082

DELIUS GmbH
Bielefeld, Germany

Test Number 4840-9160-1217R
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Stain Resistance

Test Method: The material was tested in accordance with Federal Specification CCC-W-408D, *Wall Covering, Vinyl-Coated*, which covers the classification of wall covering according to its serviceability in use. A sample from an area with as many different printed colors as possible, as well as the ground, is exposed to the following reagents: (1) Distilled water, 75 ± 5°F; (2) Distilled water, 120 ± 5°F; (3) Ethyl alcohol; (4) Vinegar, 3 % acetic; (5) Alkali solution; (6) Hydrochloride, 5 %; (7) Soap solution; (8) Detergent solution; (9) Pure orange juice; (10) Butter; (11) Catsup; and (12) Tea. Immediately after application, the reagent is covered with a watch glass and allowed to stand for a period of 24 hours. After removal of the watch glass, the wall covering is cleaned using, as appropriate, hot or cold distilled water, 50 % ethyl alcohol, or with the specified detergent solution. The specimen shall show no evidence of appreciable change to the decorative surface.

Material Tested: The client submitted a sample of vinyl wall covering identified as **20 oz. Printed and Embossed Type II Non-woven Backed Commercial Vinyl Wallcovering (YM)**.

Test Data:

Reagent	Rating	Reagent	Rating
(1) 75°F distilled water	5	(7) standard soap solution	5
(2) 120°F distilled water	5	(8) detergent solution	5
(3) 50% ethyl alcohol	5	(9) orange juice	5
(4) vinegar	5	(10) butter	5
(5) 1% NaOH solution	5	(11) catsup	5
(6) 5% HCl	5	(12) tea	4-5

Note: The rating system is based on the AATCC *Nomenclature for Subjective Rating Processes* in which a rating of 5 = negligible or no staining, 4 = slight staining, 3 = noticeable staining, 2 = considerable staining, and 1 = severe staining. A rating of less than 4 is considered "appreciable" in relation to severity of change.

Test Result: The material tested, **20 oz. Printed and Embossed Type II Non-woven Backed Commercial Vinyl Wallcovering (YM)**, meets Type II requirements for stain resistance of Federal Specification CCC-W-408D. Overall classification can not be based on a single performance property.

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(Authorized Signature)

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