

## TEST REPORT No. 342563

**Place and date of issue:** Bellaria-Igea Marina - Italy, 31/05/2017

**Customer:** NORD RESINE S.p.A. - Via Fornace Vecchia, 79 – 31058 SUSEGANA (TV) - Italy

**Date test requested:** 15/03/2017

**Order number and date:** 72578, 15/03/2017

**Date sample received:** 16/03/2017

**Test date:** from 03/04/2017 to 26/05/2017

**Purpose of test:** performance analysis on products and systems for environments with food

**Test site:** Istituto Giordano S.p.A. - Blocco 4 - Via San Mauro, 8 - 47814 Bellaria-Igea Marina (RN) - Italy

**Sample origin:** sampled and supplied by the Customer

**Identification of sample received:** No. 2017/0564

### Specimen name\*

The test sample is called "NORDPUR SW".

### Description of specimen\*

The test sample consists of a two component polyurethane finishing formulation water intended for environments with food.

(\*) according to that stated by the Customer.

Comp. FM  
Revis. OF

This test report consists of 4 sheets.  
This document is the English translation of the test report No. 342563 dated 31/05/2017 issued in Italian; in case of dispute the only valid version is the Italian one. Date of translation: 23/06/2017.

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**Normative references.**

The test was performed according to the requirements of the following standards:

- standard UNI 11021:2002 dated 01/12/2002 “Paints and varnishes - Coating material and coatings systems for rooms with the presence of foodstuff - Requirements and test methods”;
- HACCP - Decreto Legislativo n. 193 dated 06/11/2007 “Attuazione della direttiva 2004/41/CE relativa ai controlli in materia di sicurezza alimentare e applicazione dei regolamenti comunitari nel medesimo settore” (*“Implementation of Directive 2004/41/EC on controls on food safety and application of Community rules in the same sector”*);
- standard UNI 10792:1999 dated 31/12/1999 “Paints and varnishes - Wall paints for interiors, white or light coloured - Determination of dirt pick-up”;
- standard UNI 10560:1996 dated 31/07/1996 “Paints and varnishes. Emulsion paints for interior masonry. Wet scrub resistance. Brush method.”;
- standard UNI EN ISO 4628-2:2016 dated 07/04/2016 “Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 2: Assessment of degree of blistering”;
- standard UNI EN 4628-4:2016 dated 07/04/2016 “Paints and varnishes - Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 4: Assessment of degree of cracking”;
- standard UNI EN 4628-5:2016 dated 07/04/2016 “Paints and varnishes - Evaluation of degradation of coatings. Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 5: Assessment of degree of flaking”.

### Test method

The test sample was submitted to:

- determination of dirt pick-up according to the requirements of the standard UNI 10792:1999;
- cession odor according to the requirements of appendix “A” “Metodo per la determinazione della cessione di odore di pitture e vernici” (*“Method for the determination of the sale the smell of paints and varnishes”*) of the standard UNI 11021:2002;
- determination of the resistance to washing in accordance with the requirements of the standard UNI 10560:1996;
- determination of cleanability according to the requirements of the standard UNI 11021:2002;
- resistance to specific washing agents with detergent type “A”, “B”, “C” in accordance with the requirements of standard UNI 11021:2002;
- resistance to particular agents of disinfection with “D-type disinfectant” in accordance with the requirements of the standard UNI 11021:2002;
- resistance to thermal shock, 2 h at a temperature of -20 °C and 2 h at a temperature of 20 °C, in water for n. 10 cycles, in accordance with the provisions of the UNI 11021:2002;
- determination of the anti-mold strength of paints and varnishes in accordance with the requirements of Appendix “C” “Metodo per la determinazione del potere antimuffa di pitture e vernici” (*“Method for determining the anti-mold strength of paintings and paints”*) of the standard UNI 11021:2002 for the strain *Aspergillus Niger* and *Penicillium SPP.*

### Test result.

Test	Result	Limits
determination of dirt pick-up	$\Delta L < 0,5$	$\Delta L \leq 3,0$
cession odor	$< 0,5$	$\leq 1$
determination of the resistance to washing	$> 5000$	$\geq 5000$
cleanability	$\Delta E < 0,5$	$\Delta E \leq 3,0$

Test	Result	Limits
resistance to detergent "A" active chlorine (UNI 11021:2002 paragraph 8.4)	no alteration after immersion for 24 h	no alteration
	blistering = 0	blistering = 0
	cracking = 0	cracking = 0
	flacking = 0	flacking = 0
resistance to detergent "B" alkaline degreasing (UNI 11021:2002 paragraph 8.4)	no alteration after immersion for 24 h	no alteration
	blistering = 0	blistering = 0
	cracking = 0	cracking = 0
	flacking = 0	flacking = 0
resistance to "C" detergent descaling acid (UNI 11021:2002 paragraph 8.4)	no alteration after immersion for 24 h	no alteration
	blistering = 0	blistering = 0
	cracking = 0	cracking = 0
	flacking = 0	flacking = 0
resistance to disinfectant "D" (UNI 11021:2002 paragraph 8.5)	no alteration after immersion for 24 h	no alteration
	blistering = 0	blistering = 0
	cracking = 0	cracking = 0
	flacking = 0	flacking = 0
resistance to thermal shock	no alterations after 10 cycles	no alteration
	blistering = 0	vescicamento = 0
	cracking = 0	cracking = 0
	flacking = 0	flacking = 0
anti-mold strain power Aspergillus Niger	on nutritive soil = 0 no development	≤ 1
	in the presence of high humidity = 0 no development	≤ 1
anti-mold strain power Penicillium SPP	on nutritive soil = 0 no development	≤ 1
	in the presence of high humidity = 0 no development	≤ 1

Test Technician:  
Dott. Oscar Filippini

Head of Chemical Laboratory:  
Dott. Oscar Filippini

Chief Executive Officer

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