



IMS INSTITUTE
BELGRADE

ATC (The Accreditation Body of Serbia)
01-058
ACCREDITED TESTING
LABORATORY
SRPS ISO/IEC 17025:2006

Institute for Testing of Materials Belgrade
Central laboratory for Material Testing
Laboratory for waterproofing and anti-corrosion protection

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TEST REPORT

No. UIV 036/16

Object of testing: One-component quick-drying coating for metal "COOL 3x1"

Client:

"NEVENA COLOR" d.o.o.
Đorđa Stamenkovića bb
16000 Leskovac

Request/Bid/Contract:

Client: - from 25.01.2016
IMS no.: 41-977 of 26.01.2016

Content:

3 pages in total

Sampling done by:

-

Report approved by:

Laboratory for waterproofing and anti-corrosion protection

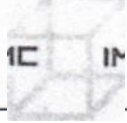
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(Round stamp; text of the stamp: IMS INSTITUTE, Bulevar Vojvode

Mišića 43, BELGRADE

Verica Laninović, MSc in Engineering





1. GENERAL INFORMATION

1.1. Subject of testing

One-component quick-drying coating for metal "COOL 3x1 "

1.2. Methods of testing

SRPS EN ISO 2431 :2007 -Paints and varnishes Determination of flow time by use of flow cups

SRPS EN ISO 2808:2011 - Paints and varnishes -Determination of film thickness

SRPS EN ISO 2811-1:2014 - Paints and varnishes - Determination of density - Part 1: Pycnometer method

SRPS EN 2812-2:2011- Paints and varnishes- Determination of resistance to liquids-Part 2: Water immersion method

SRPS EN ISO 3251 :2012 -Paints, varnishes and plastics -Determination of non-volatile-matter content

SRPS EN ISO 4624:2005 - Paints and varnishes - Pull-off test for adhesion

SRPS ISO 6270-1:2000 - Paints and varnishes -Determination of resistance to humidity.Continuous condensation

SRPS EN ISO 9117-1:2010 - Paints and varnishes - Drying tests -Part I: Determination of through-dry state and through-dry time

1.3. Measuring and control equipment

Digital thermometer without probe type 213/2, no record number
"Erichsen" pycnometer, 50 ml, Mod. 290/11, no record number
"Kern" digital analytical scale, record no.: IMS 10478
"Erichsen" viscometer with flow cups, Mod. 243/VII, no record number
RUCANOR digital stopwatch, no record number, Dryer, record no.: IMS 3383
Device for determining the drying time of paints and varnishes, no record number
Pull-off tester, "Dyna Z 16" type, "Proceq", record no.: IMS 10539
Digital dry coating thickness gauge, record no.: IMS 10075

Humidity chamber, record no.: IMS 3398

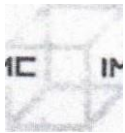
1.4. Sample for testing

Sample label: One-component quick-drying coating for metal "COOL 3x1 "
Manufacturer: "NEVENA COLOR" Leskovac
Date and place of sampling: The client submitted the sample to the laboratory on 05.02.2016 (sample reception record LZ 259 no. 017/16-UIV)
Amount of the sample sent for testing: cca 2 kg

2. TEST RESULTS

Characteristic	Test results
Densi ml	1.24
Flow time, s ISO Ø6	118.1
Content of non-volatile substances* mas %	59.70±0.91
Thru -d state achieved after	4 h 30 min substrate metal

*expanded measurement uncertainty is expressed with $k=4.3$ which provides a confidence level of 95%



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Results of untreated plate testing (after 7 days)

Characteristic	Plate 1	Plate 2	Plate 3
Dry film thickness, μm	83	89	86
SRPS EN ISO 4626 (adhesion)	3.73	3.31	2.90
Result	100% coating separation		

Results after the test in a humidity chamber	Plate 1	Plate 2	Plate 3
	test duration: 48 hours		
SRPS EN ISO 4628 -2 formation of blisters	0 none		
SRPS EN ISO 4628 -3 corrosion	Ri 0 0% rusted surface		
SRPS EN ISO 4628 -4 cracks	0 invisible at 1 Ox ma ification		
SRPS EN ISO 4628 -5 flakin	0 invisible at 1 Ox ma • fication		
film thickness,	91	90	84
SRPS EN ISO 4626 adhesion	1.97	1.88	1.11

Result	100% coating		
Results after water immersion	Plate 1	Plate 2	Plate
	test duration: 24 hours		
SRPS EN ISO 4628 —2 formation of blisters	0 none		
SRPS EN ISO 4628-3 corrosion	Ri 0 0% rusted surface		
SRPS EN ISO 4628-4 (cracks)	0 invisible at 1 Ox mification		
SRPS EN ISO 4628-5 flaking	0 invisible at 1 Ox mification		
D film thickness,	84	92	86

3. INTERPRETATION OF TEST RESULTS

On the basis of test results for one-component quick-drying coating for metal "COOL 3x1", manufactured by "NEVENA COLOR" Leskovac, it was found that the tested characteristics were in accordance with the values indicated in the technical specifications submitted by the client ("COOL 3x1", Specifications).

The system MEETS the requirements of the standard SRPS ISO 12944-6 for the category of atmospheric corrosivity C2 - lifespan (6 to 9 years).

NOTE: The interpretation of test results is not in the scope of the laboratory accreditation.

The results presented refer exclusively to the tested sample. We do not accept any responsibility regarding the credibility of sampling, except when sampling is carried out in the presence of a representative of the Laboratory. The report must not be duplicated except in whole, without the permission of the Central Laboratory for Material Testing.

Belgrade, 23.05.2016

Head of Testing
(Signature illegible)
Milorad Đusić, engineer

TEST REPORT

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The end of translation-

I, the undersigned court authorized translator, appointed by the decision of the Ministry of Justice of the Republic of Serbia no. 760-06-197/2002-04 dated 02.10.2002, hereby certify that this translation fully corresponds to the Serbian original.

Belgrade, 15.12.2017.

Court Authorised English Translator/Interpreter,

Milena Kovačević

