



TECHNICAL REPORT

RANGHAYE SANATI IRAN Co. (RSI Co.)

PRE-QUALIFICATION OF THE COATING SYSTEM

Coating System No. 7A:

Glass Flake Epoxy REP-312 (500 μm) /

Glass Flake Epoxy REP-312 (500 μm) /

Polyurethane Topcoat RPU-307 (50 μm)

according to System No. 7A

NORSOK M-501 REV.6 – 2012 STANDARD

REFERENCE No.: LS-139901053

DATE OF ISSUE: MAR. 09, 2022

TESTED AND PREPARED BY:

METRA Material Testing Laboratory Department

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Amirkabir Paint Research Institute

موسسه تحقیقاتی رنگ امیرکبیر - مترا

شماره ثبت: ۱۶۹۷۳

6. Test Results

The results of the examination of the test panels are schematically given in Tables 6-1, 6-2 & 6-3., and more detailed in Appendix B. Photo documentation of the tested panels is given in Appendix C.

Table 6-1. Results of examination after Ageing Resistance test

Test Parameter	Test Methods	
	Ageing test (ISO 20340)	
	Criterion	Result
Pull-Off test (ISO 4624)	minimum 5 MPa and maximum 50% reduction from original value	Passed
Overcoatable adhesion (ISO 4624)	minimum 5 MPa	Passed
Blistering (ISO 4628-2)	0 (S0)	Passed
Rusting (ISO 4628-3)	Ri 0	Passed
Cracking (ISO 4628-4)	0 (S0)	Passed
Flaking (ISO 4628-5)	0 (S0)	Passed
Corrosion from scribe line	$M \leq 8$ mm for 2-mm-wide scribe line	Passed

Table 6-2. Results of examination after Sea Water Immersion test

Test Parameter	Test Methods	
	Sea Water Immersion test (ISO 20340)	
	Criterion	Result
Pull-Off test (ISO 4624)	minimum 5 MPa and maximum 50% reduction from original value	Passed
Overcoatable adhesion (ISO 4624)	minimum 5 MPa	Passed
Blistering (ISO 4628-2)	0 (S0)	Passed
Rusting (ISO 4628-3)	Ri 0	Passed
Cracking (ISO 4628-4)	0 (S0)	Passed
Flaking (ISO 4628-5)	0 (S0)	Passed
Corrosion from scribe line	$M \leq 8$ mm for 2-mm-wide scribe line	Passed

Table 6-3. Results of examination after Cathodic Disbonding test

Test Parameter	Test Methods	
	Cathodic Disbonding test (ISO 15711)	
	Criterion	Result
Cathodic Disbondment	No disbonding with an equivalent diameter > 20mm	Passed



TECHNICAL REPORT

RANGHAYE SANATI IRAN Co. (RSI Co.)

PRE-QUALIFICATION OF THE COATING SYSTEM

Coating System No. 7B:

Glass Flake Epoxy REP-312 (500 μm) /

Glass Flake Epoxy REP-312 (500 μm) /

according to System No. 7B

NORSOK M-501 REV.6 – 2012 STANDARD

REFERENCE No.: LS-139901053

DATE OF ISSUE: MAR. 10, 2022

TESTED AND PREPARED BY:

METRA Material Testing Laboratory Department

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Amirkabir Paint Research Institute

سازمان تحقیقاتی رنگ امیرکبیر - مآ

شماره ثبت: ۱۲۹۷۳

6. Test Results

The results of the examination of the test panels are schematically given in Tables 6-1, 6-2 & 6-3., and more detailed in Appendix B. Photo documentation of the tested panels is given in Appendix C.

Table 6-1. Results of examination after Ageing Resistance test

Test Parameter	Test Methods	
	Ageing test (ISO 20340)	
	Criterion	Result
Pull-Off test (ISO 4624)	minimum 5 MPa and maximum 50% reduction from original value	Passed
Overcoatable adhesion (ISO 4624)	minimum 5 MPa	Passed
Blistering (ISO 4628-2)	0 (S0)	Passed
Rusting (ISO 4628-3)	Ri 0	Passed
Cracking (ISO 4628-4)	0 (S0)	Passed
Flaking (ISO 4628-5)	0 (S0)	Passed
Corrosion from scribe line	$M \leq 8$ mm for 2-mm-wide scribe line	Passed

Table 6-2. Results of examination after Sea Water Immersion test

Test Parameter	Test Methods	
	Sea Water Immersion test (ISO 20340)	
	Criterion	Result
Pull-Off test (ISO 4624)	minimum 5 MPa and maximum 50% reduction from original value	Passed
Overcoatable adhesion (ISO 4624)	minimum 5 MPa	Passed
Blistering (ISO 4628-2)	0 (S0)	Passed
Rusting (ISO 4628-3)	Ri 0	Passed
Cracking (ISO 4628-4)	0 (S0)	Passed
Flaking (ISO 4628-5)	0 (S0)	Passed
Corrosion from scribe line	$M \leq 8$ mm for 2-mm-wide scribe line	Passed

Table 6-3. Results of examination after Cathodic Disbonding test

Test Parameter	Test Methods	
	Cathodic Disbonding test (ISO 15711)	
	Criterion	Result
Cathodic Disbondment	No disbonding with an equivalent diameter > 20mm	Passed



TECHNICAL REPORT

RANGHAYE SANATI IRAN Co. (RSI Co.)

PRE-QUALIFICATION OF THE COATING SYSTEM

Coating System No. 1:

Zinc Ethyl Silicate Primer RHR-102 (75 μm)/

Epoxy Tie-Coat REP-301 (30 μm)/

H.B. Epoxy REP-207 (2 \times 100 μm)/

Polyurethane Topcoat RPU-307

according to System No. 1

NORSOK M-501 REV.6 – 2012 STANDARD

REFERENCE No.: LS-139901053

DATE OF ISSUE: JAN. 25, 2022

TESTED AND PREPARED BY:

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شماره ثبت: 139901053

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Rusting (ISO 4628-3)	Ri 0	Passed
Cracking (ISO 4628-4)	0 (S0)	Passed
Flaking (ISO 4628-5)	0 (S0)	Passed
Corrosion from scribe line	M≤8 mm for 2-mm-wide scribe line	Passed

Table 6-2. Results of examination after Sea Water Immersion test

Test Parameter	Test Methods	
	Sea Water Immersion test (ISO 20340)	
	Criterion	Result
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PRE-QUALIFICATION OF THE COATING SYSTEM

Coating System No. 1:

Zinc Ethyl Silicate Primer RHR-102 (75 μm)/

Epoxy Tie-Coat REP-301 (30 μm)/

Glass Flake Epoxy REP-312 (500 μm)/

Polyurethane Topcoat RPU-307 (50 μm)

according to System No. 1

NORSOK M-501 REV.6 – 2012 STANDARD

REFERENCE No.: LS-139901053

DATE OF ISSUE: FEB. 14, 2022



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