

# NORSOK M-501

## Coatings System Guide



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This document provides an example list of approved and recommended systems. Alternative systems are available and further advice can be gained by contacting [International Paint - Norsok information](#).

## Protective Coatings

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# NORSOK Coating System 1

## Pre-qualification required

For structural steel and exteriors of equipment, vessels, piping & valves (not insulated) in a pre-qualified coatings system, the approved topcoat may be substituted by another pre-qualified topcoat provided the intermediate is the same and the DFT of the topcoats are equal.

Please consult your International® protective coatings representative for further advice on other coatings options.

Carbon Steel <120°C (Zinc epoxy systems)			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interzinc® 52		75
	Intershield® 300		150
	Interfine® 878		60
		<b>Total</b>	<b>285</b>
Sa2.5	Interzinc® 52		60
	Intergard® 475HS		160
	Interthane® 990		60
		<b>Total</b>	<b>280</b>
Sa2.5	Interzinc® 52		60
	Intergard® 475HS		150
	Interfine® 979		100
		<b>Total</b>	<b>310</b>
Sa2.5	Interzinc® 52		75
	Intergard® 475HS		200
	Interfine® 878		60
		<b>Total</b>	<b>335</b>
Sa2.5	Interzinc® 52		60
	Intercure® 200HS		150
	Interfine® 979		100
		<b>Total</b>	<b>310</b>
Sa2.5	Interzinc® 52		60
	Intergard® 475HS		150
	Interfine® 979		100
		<b>Total</b>	<b>310</b>
Sa2.5	Interzinc® 52		60
	Intergard® 410		150
	Interfine® 979		100
		<b>Total</b>	<b>310</b>

## Protective Coatings

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# NORSOK Coating System 1

Carbon Steel <120°C (Zinc Silicate Systems)			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interzinc® 22		60
	Intergard® 475HS		160
	Interfine® 691		60
		Total	280

Carbon Steel <120°C (Zinc-Free Systems)			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interplate® 11 (sweep blast)		15
	Intershield® 300		125
	Interzone® 505		500
	Interzone® 505		500
		Total	1,125
Sa2.5	Interplate® 11 (sweep blast)		15
	Interzone® 1000		750
	Interzone® 1000		750
		Total	1,500
Sa2.5	Interzone® 1000		500
	Interzone® 1000		500
		Total	1,000
Sa2.5	Interzone® 762		500
	Interzone® 762		500
		Total	1,000
Sa2.5	Intershield® 300		125
	Interzone® 505		325
		Total	450

## Protective Coatings

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# NORSOK Coating System 2

## Pre-qualification not required

Please consult your International® protective coatings representative for further advice on other coatings options.

### Sealer for TSA or alloys of aluminium or carbon steel >120°C

SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Intertherm® 50	Total	1

<sup>1</sup> Sealers for TSZ or alloys of Zinc will use an intermediate and topcoat which has been pre-qualified as Coating System Number 1.

### Sealer for TSA or alloys of aluminium or carbon steel <120°C

SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Intergard® 269	Total	1

<sup>1</sup> Sealers for TSZ or alloys of Zinc will use an intermediate and topcoat which has been pre-qualified as Coating System Number 1.

### TSZ or alloys of Zinc

SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Intergard® 269 <sup>2</sup>		-
	Interplus® 356		125
	Interfine® 1080		75
		Total	200
Sa2.5	Intergard® 269 <sup>2</sup>		-
	Intershield® 300		125
	Interfine® 878		75
		Total	200
Sa2.5	Intergard® 269 <sup>2</sup>		-
	Intergard® 475HS		125
	Interfine® 691		75
		Total	200

<sup>2</sup> For sealers and tie coats thinning will be required.

## Protective Coatings

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# NORSOK Coating System 3

## System 3B requires pre-qualification

Please consult your International® protective coatings representative for further advice on other coatings options.

3A Potable Water Tanks <sup>3</sup>			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interline® 850		100
	Interline® 850		100
	Interline® 850		100
		<b>Total</b>	<b>300</b>
Sa2.5	Interline® 925		300
	Interline® 925		300
		<b>Total</b>	<b>600</b>

- <sup>3</sup> Solvent based epoxies must be three coats at 100 µm each.  
Solvent free epoxies must be two coats at 300 µm each.

3B Ballast Water Tanks / Internal Seawater Filled Compartments			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Intershield® 300		125
	Intershield® 300		150
		<b>Total</b>	<b>275</b>
Pre-rusted steel	Intershield® 300		125
	Intershield® 300		150
		<b>Total</b>	<b>275</b>
Sa2.5	Interplate® Zero		15
	Intershield® 300		150
	Intershield® 300		150
		<b>Total</b>	<b>315</b>
Sa2.5	Interplate® 997		15
	Intershield® 300		175
	Intershield® 300		175
		<b>Total</b>	<b>365</b>
Sa2.5	Interbond® 808		150
	Interbond® 808		150
		<b>Total</b>	<b>300</b>
Pre-rusted steel	Interbond® 808		150
	Interbond® 808		150
		<b>Total</b>	<b>300</b>
Sa2.5	Interplate® 997 (sweep blast)		20
	Intergard® 423		150
	Intergard® 423		150
		<b>Total</b>	<b>300</b>
Sa2.5	Interplate® 11 (sweep blast)		15
	Intergard® 343		150
	Intergard® 343		150
		<b>Total</b>	<b>300</b>

## Protective Coatings

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# NORSOK Coating System 3

## 3C Tanks for Stabilized Crude, Diesel & Condensate

SURFACE PREP	COATING SYSTEM		DFT $\mu\text{m}$
Sa2.5	Intershield® 300		150
	Intershield® 300		150
		Total	300

## 3D Process Vessels <0.3 MPa <75°C

SURFACE PREP	COATING SYSTEM		DFT $\mu\text{m}$
Sa2.5	Enviroline® 376F-30		500
		Total	500
Sa2.5	Interline® 994		125
	Interline® 994		125
		Total	250
Sa2.5	Interline® 399		125
	Interline® 399		125
		Total	250

## 3E Process Vessels <7 MPa <80°C

SURFACE PREP	COATING SYSTEM		DFT $\mu\text{m}$
Sa2.5	Enviroline® 405HT		500
		Total	500
Sa2.5	Enviroline® 376F-30		500
		Total	500
Sa2.5	Interline® 994		125
	Interline® 994		125
		Total	250
Sa2.5	Interline® 399		125
	Interline® 399		125
		Total	250

## 3F Process Vessels <3 MPa <130°C

SURFACE PREP	COATING SYSTEM		DFT $\mu\text{m}$
Sa2.5	Enviroline® 405HT		500
		Total	500
Sa2.5	Interline® 994		90
	Interline® 994		90
	Interline® 994		90
		Total	270

## Protective Coatings

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# NORSOK Coating System 4

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## Pre-qualification required

Please consult your International<sup>®</sup> protective coatings representative for further advice on other coatings options.

For walkways, escape routes & lay down areas		
SURFACE PREP	COATING SYSTEM	DFT $\mu\text{m}$
Sa2.5	Interplate <sup>®</sup> 11 (sweep blast)	15
	Intershield <sup>®</sup> 300	175
	Intershield <sup>®</sup> 300	175
	GMA734 Aggregate <sup>4</sup>	-
	Intergard <sup>®</sup> 740	100
	<b>Total</b>	<b>3,000</b>
Sa2.5	Interzone <sup>®</sup> 954	900
	Interzone <sup>®</sup> 954	500
	GMA734 Aggregate <sup>4</sup>	-
	Intergard <sup>®</sup> 740	50
	<b>Total</b>	<b>3,000</b>

<sup>4</sup> Aggregate particle size will be 1 mm to 3 mm.

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## Protective Coatings

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# NORSOK Coating System 5

## Pre-qualification required

Please consult your International® protective coatings representative for advice on Chartek® DFT which will vary depending on steel size and fire duration requirements or for further advice on other coatings options.

5A Under epoxy based fire protection			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Intergard® 251		50
	Chartek® 7		-
		<b>Total</b>	-
Sa2.5	Interzinc® 52		60
	Intergard® 269		25
	Chartek® 7		-
		<b>Total</b>	-
Sa2.5	Interzinc® 52		60
	Intergard® 269		25
	Chartek® 8		-
		<b>Total</b>	-

## Protective Coatings

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# NORSOK Coating System 6

## Pre-qualification not required

Please consult your International® protective coatings representative for further advice on other coatings options.

### Un-insulated stainless steel protection <120°C

SURFACE PREP	COATING SYSTEM		DFT µm
Sweep blast	Intergard® 269		40
	Intergard® 475HS		125
	Interthane® 990		60
		<b>Total</b>	<b>225</b>
Sweep blast	Intergard® 269		40
	Intershield® 300		125
	Interfine® 878		60
		<b>Total</b>	<b>225</b>

### Insulated stainless steel protection <120°C

SURFACE PREP	COATING SYSTEM		DFT µm
Sweep blast	Intertherm® 228		100
	Intertherm® 228		100
		<b>Total</b>	<b>200</b>

### Galvanized steel protection <120°C

SURFACE PREP	COATING SYSTEM		DFT µm
Clean with alkaline detergent followed by hosing with fresh water	Intergard® 269		40
	Intergard® 475HS		125
	Interthane® 990		60
		<b>Total</b>	<b>225</b>
Clean with alkaline detergent followed by hosing with fresh water	Intergard® 269		40
	Intershield® 300		125
	Interfine® 878		60
		<b>Total</b>	<b>225</b>

### Stainless steel protection >120°C

SURFACE PREP	COATING SYSTEM		DFT µm
Sweep blast	Intertherm® 228		125
	Intertherm® 228		125
		<b>Total</b>	<b>250</b>

## Protective Coatings

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# NORSOK Coating System 7

## Pre-qualification required

For Splashzone coating system shall fulfill the ageing resistance pre-qualification requirements for coatings System Number 1.

Please consult your International® protective coatings representative for further advice on other coatings options.

7A Splashzone			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interplate® 11 (sweep blast)		15
	Interzone® 1000		750
	Interzone® 1000		750
		<b>Total</b>	<b>1,500</b>
Sa2.5	Interplate® 11 (sweep blast)		15
	Intershield® 300		125
	Interzone® 505		500
	Interzone® 505		500
		<b>Total</b>	<b>1,125</b>
Sa2.5	Interzone® 1000		500
	Interzone® 1000		500
		<b>Total</b>	<b>1,000</b>
Sa2.5	Interzone® 762		500
	Interzone® 762		500
		<b>Total</b>	<b>1,000</b>

7B Submerged <50°C			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interzone® 954		200
	Interzone® 954		200
		<b>Total</b>	<b>400</b>
Sa2.5	Interzone® 1000		400
	Interzone® 1000		400
		<b>Total</b>	<b>800</b>
Sa2.5	Intershield® 300		200
	Intershield® 300		200
		<b>Total</b>	<b>400</b>
Sa2.5	Interseal® 670HS		175
	Interseal® 670HS		175
		<b>Total</b>	<b>350</b>
Sa2.5	Intershield® 300		125
	Interzone® 505		325
		<b>Total</b>	<b>450</b>
Sa2.5	Interplate® 11 (sweep blast)		15
	Intershield® 300		125
	Interzone® 505		325
		<b>Total</b>	<b>450</b>
Sa2.5	Interplate® 317 (sweep blast)		15
	Intergard® 343		175
	Intergard® 343		175
		<b>Total</b>	<b>350</b>

## Protective Coatings

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# NORSOK Coating System 7

## Pre-qualification required

Please consult your International® protective coatings representative for further advice on other coatings options.

7B Submerged <50°C (continued)			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interplate® 317 (sweep blast)		15
	Intergard® 423		200
	Intergard® 423		200
		<b>Total</b>	<b>415</b>
Sa2.5	Interplate® 997 (sweep blast)		15
	Interseal® 670HS		225
	Interseal® 670HS		225
		<b>Total</b>	<b>450</b>
Sa2.5	Interplate® 997 (sweep blast)		15
	Interzone® 954		250
	Interzone® 954		250
		<b>Total</b>	<b>500</b>

7C Submerged >50°C			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interzone® 954		200
	Interzone® 954		200
		<b>Total</b>	<b>400</b>
Sa2.5	Interzone® 1000		400
	Interzone® 1000		400
		<b>Total</b>	<b>800</b>

Systems with Foul Release antifouling for System 7B <sup>5</sup>			
SURFACE PREP	COATING SYSTEM		DFT µm
Sa2.5	Interzone® 954		200
	Interzone® 954		200
	Intersleek® 717		100
	Intersleek® 737		100
	Intersleek® 970		150
		<b>Total</b>	<b>750</b>
Sa2.5	Intershield® 300		200
	Intershield® 300		200
	Intersleek® 737		100
	Intersleek® 970		150
		<b>Total</b>	<b>650</b>

<sup>5</sup> Alternative antifouling systems should be discussed with your International Paint representative.

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# NORSOK Coating System 8

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## Pre-qualification not required

Please consult your International<sup>®</sup> protective coatings representative for further advice on other coatings options.

### Structural carbon steel with operating temperatures <80°C in internal and fully dry ventilated areas

SURFACE PREP	COATING SYSTEM		DFT $\mu\text{m}$
Sa2.5	Interseal <sup>®</sup> 670HS		150
		Total	150
Sa2.5	Intergard <sup>®</sup> 345		150
		Total	150
Sa2.5	Intergard <sup>®</sup> 410		150
		Total	150
Sa2.5	Interzinc <sup>®</sup> 52		60
	Intergard <sup>®</sup> 269		25
		Total	85

## Protective Coatings

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# NORSOK Coating System 9

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## Pre-qualification not required

Please consult your International<sup>®</sup> protective coatings representative for further advice on other coatings options.

### Bulk supplied carbon steel valves with operating temperature up to 150°C

SURFACE PREP	COATING SYSTEM		DFT $\mu\text{m}$
Sa2.5	Intertherm <sup>®</sup> 228		100
	Intertherm <sup>®</sup> 228		100
		Total	200

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