



nora[®] marine

High-performance IMO-certified floor coverings for use in the international shipbuilding and offshore industry

nora[®]
by Interface[®]

Secure floorings even during heavy seas

The shipbuilding and offshore industry demand unique and specific flooring solutions. For more than 70 years, nora systems has developed rubber floor coverings that solve the daily challenges faced by customers. Our flooring solutions are the result of extensive experience in rubber materials and close partnerships with planners and users. nora floor coverings meet the specific demands made on floor coverings for interior use in all types of vessels (e.g. passenger liners/ferries, cruisers, tankers, container and marine ships) as well as in the offshore industry worldwide.



nora marine floorings

To meet the increasingly stringent requirements of the international shipbuilding and offshore industry, nora offers a specialized product range. These products exceed existing requirements according to the IMO Resolution MSC.307 (88)-(FTP-Code 2010) Annex 1, Part 2, Part 5. norament® 920 is a 4 mm thick high-performance flooring that withstands the most demanding requirements in heavy-use areas. noraplan® marine is available as standard colours in the noraplan signa and noraplan stone design. This flooring provides all required properties as increased slip protection or a high abrasion resistance. The portfolio is complemented by the norament 920 stairtreads as the optimum solution for smart and robust stairwells.





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Surfaces for every application

The material properties of rubber floorings are perfectly suited to meet the needs of various applications. Safety benefits offered by nora floorings include anti-slip surfaces and excellent fire-protection properties. For particularly demanding environments such as control rooms, nora offers electrostatically dissipative flooring solutions that resist most oils and greases. For high-traffic areas, our floorings are extremely durable as well as ergonomic for excellent walking and standing comfort. For ease of maintenance, the surfaces require no coating to allow for fast, efficient cleaning. We offer a selection of IMO-certified and Coast Guard Approved flooring solutions to meet the demands of different applications like:

Crew Quarters

The crew quarters area of ships should provide a comfortable and relaxing environment while meeting a number of marine regulatory specifications. Our highly functional floor coverings have an ergonomic design to provide a comfortable working and living environment for all crew members.

Control Rooms

A ship's control room is where the most crucial challenges are met. Rubber floor covering solutions from nora will help you meet those needs. Our rugged, slip-resistant floor coverings are designed to enhance personnel safety by reducing the risks of falls, oil and grease spills and other hazards. The electrostatically dissipative properties of rubber floorings help reduce risks associated with electronic malfunction.

Bridges

The flooring of the bridge of a ship needs to be tough enough to withstand constant use. A slip-resistant surface is also vital for both captain and crew to keep their footing. Slip-resistant and extremely durable, nora marine flooring solutions maximise safety and provide rugged performance for the bridge of ships – a critical area of every vessel.



© Ingrid Fiebak

Surfaces for passenger areas

nora also offers ideal solutions for passenger areas with high customer traffic, such as:

Stairwells

The anti-slip and fire protective properties of rubber make nora floorings the ideal solution for stairwells and high traffic zones such as entrance areas and hallways. Noise-abating nora floor coverings help reduce footfall sound for a less distracting environment. Additionally, the dirt-repellent properties of nora floor coverings allow for quick, easy maintenance in high-traffic areas.

Galley Areas

Shipboard restaurant areas and canteen corridors are meeting places that should evoke a pleasant, welcoming ambience to patrons and crew. Still, the floorings must address heavy traffic. nora floor coverings set the tone of your ship's restaurant while also providing resistance to wear and spills, both in the kitchen and in the dining room. Available in a wide variety of attractive styles, nora marine floorings offer an easy maintenance for a perfect blend of beauty, comfort and safety.

Wellness and fitness areas

In these areas, floor coverings must be both extremely durable yet also contribute to creating an inviting ambience. nora rubber floorings are designed to be strong and long-lasting. They protect your joints by absorbing the impact of movement and provide cushioning. They also have excellent anti-slip properties, making them safe to walk on. Plus, they make walking a comfortable experience without causing fatigue.

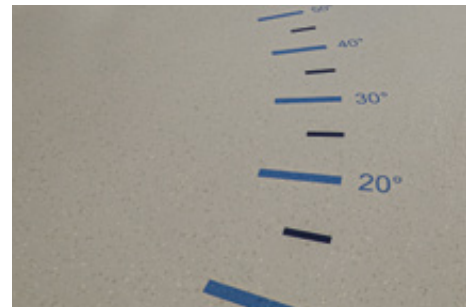
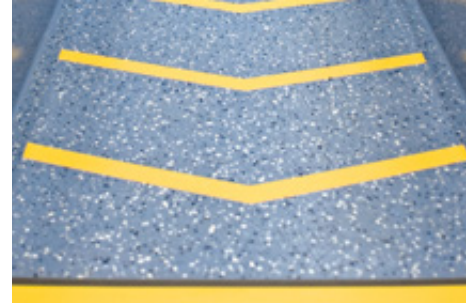
Unleash your creativity with nora[®] inlays

Limitless room to play with your flooring design

nora inlays give you unlimited possibilities for elevating your space. Create patterns, effects, wayfinding systems, or brand-specific elements – your imagination can be boundless.

Take advantage of vast design freedom for your floors. Use the floor as an identifier within large areas, incorporate wayfinding systems or warnings, or even colour code spaces so that visitors instantly know where they stand. The wide spectrum of colour options available offers you a great range of combination possibilities.

The ground-breaking nora Inlay Center produces complex logos, difficult fonts, and signs using modern inlay technology. Everything is produced individually, precisely down to the millimeter. An individualised installation plan is included so that the installation can be accomplished quickly and easily.



© Jack Lever | Thomas Goos | Jukka-Pekka Juvonen



nora standard marine range

norament® 920



0884



0749



0702



0862



1346



0866



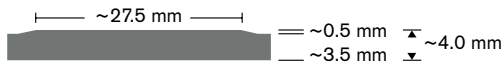
Special designs of norament 920 such as hammerblow structure are subject to minimum order quantities.

norament 920

6

Art. 920/354

□ ~1,006 x 1,006 mm, uni-coloured, round pastilles

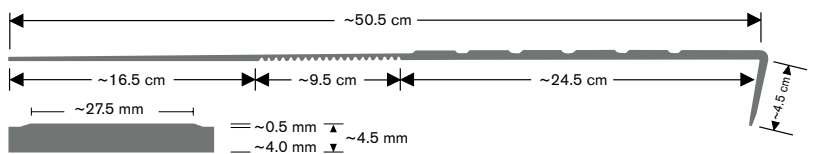


Stairtread norament 920

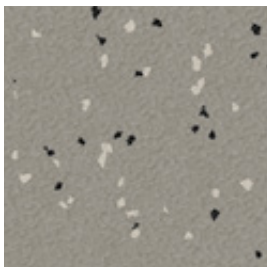
5

Art. 465 – width 1,285 mm

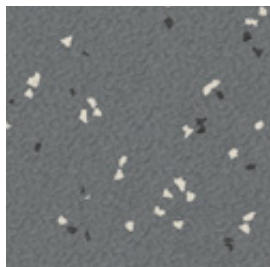
└ Stairtread norament 920 colours available.



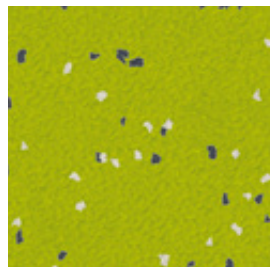
noraplan® stone marine



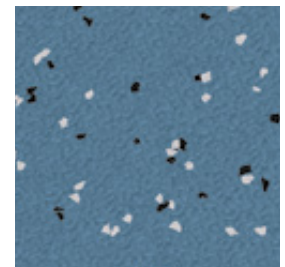
1146



1862



6607



1279

noraplan stone marine

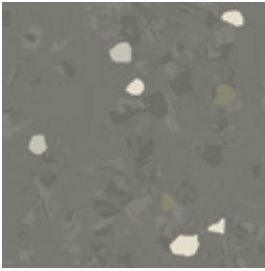
4

Art. 186A

○ ~1.22 m x 15.0 m



noraplan® signa marine



7033



7038



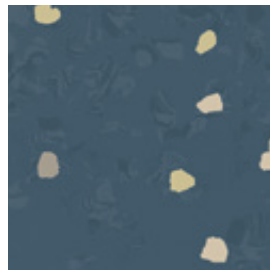
7054



7058



7065



7046



7061



7072

noraplan signa marine



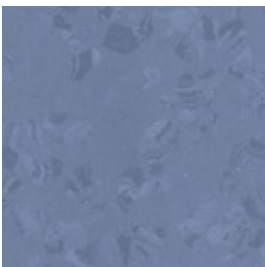
Art. 185A

~1,22 m x 15,0 m

~2.0 mm

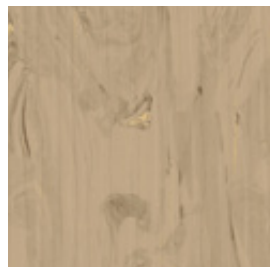
nora special marine range

noraplan® sentica marine



6530

noraplan® valua marine

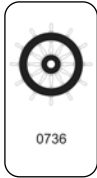


6718

The shown colours are just examples. For the entire range please visit: www.nora.com/marine.

The special marine products have to be produced with a minimum quantity of 600 m².

All noraplan marine floorings can be ordered as nora nTx floorings with self-adhesive backing. Minimum order quantity 600 m².



Product information

norament® 920

norament 920 is an one-coloured rubber flooring for extremely heavy traffic areas. **norament 920** is largely resistant to oils and greases and offers all the advantages our customers rightfully expect from a resilient floor covering, too. Exposure to extreme stresses impairs neither the functionality nor its visual appearance. The floor covering is extremely fire-resistant and free of PVC, other halogenated polymers and phthalate plasticizers.

Technical data Properties acc. to EN 12199	Test method	Requirements	Average test results from running production
Thickness	EN ISO 24346	Mean value \pm 0.20 mm of nominal value	4.0 mm
Thermal conductivity	EN 10456	$\lambda = 0.17$ W/(m·K)	Fulfilled
Dimensional stability	EN ISO 23999	\pm 0.4 %	\pm 0.3 %
Cigarette-burn resistance	EN 1399	Procedure A (stuffed out) \geq level 4 Procedure B (burning) \geq level 3	Fulfilled
Flexibility	EN ISO 24344, procedure A	Mandrel diameter 20 mm, no fissuring	Fulfilled
Hardness	ISO 48-4	\geq 75 Shore A	83 Shore A
Residual indentation	EN ISO 24343	Mean value \leq 0.25 mm	0.15 mm
Abrasion resistance at 5 N load	ISO 4649, procedure A	\leq 250 mm ³	130 mm ³
Colour fastness to artificial light	ISO 105-B02, procedure 3, test conditions 6.1 a)	At least level 6 on the blue scale, \geq level 3 on the grey scale	Grey scale \geq 3 acc. to ISO 105-A02

Additional technical data

Weight	EN ISO 23997		\sim 6.50 kg/m ²
Tear strength	ISO 34-1, method B, procedure A	Mean value \geq 20 kN/m	42 kN/m
Slip resistance	DIN EN 16165		R9**
Improvement in footfall sound absorption	ISO 10140-3		12 dB
Effect of chemicals	EN ISO 26987		Resistant depending on concentration and time of exposure**
Electrostatic behaviour when being walked upon	EN 1815		Antistatic charging $<$ 2 kV
Dielectric strength	EN 60243-1, VDE 0303, part 21		50 kV
Electrical insulation properties	EN 1081 R1		$>$ 10 ⁹ Ohm

Fire behaviour/smoke behaviour

Fire behaviour	EN 13501-1		B ₁ -s1
	EN 45545	Hazard Level	HL3 **
	UIC 564-2/12		Class A
	UK Defence Standard 07-247, Annex A		Category A1
Fire behaviour, sea going vessels (surface flammability)	IMO Res. MSC.307 (88) – (F.T.P. Code 2010)		Fulfilled (glued with nora PU 102 or UZIN KR 430)
Smoke density and toxicity, sea going vessels			

Approvals

EU-Type Examination Certificate for use on board of sea going vessels in compliance with directive 2014/90/EU	Certificate No. 124041-04
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Colour variations due to different production batches as well as technical alterations to improve the product have to be accepted.

* In case of increased impact of oils, greases, acids, alkalis and other aggressive chemicals as well as light oils and fuels - please contact us.

** Tested and certified by an independent testing institute.

EN 12199: Specification for homogeneous and heterogeneous profiled elastomer floor coverings.

Standard article: Tiles 1006 mm x 1006 mm // article 920/354 // uni-coloured, round pastilles

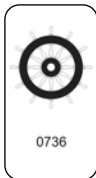
Special article: Delivery with hammerblow surface upon request.

Custom-made designs and colours of **norament® 920** are subject to minimum order quantities.

Further product information is available on www.nora.com/marine.



Carbon Neutral Floors™



Product information

noraplan® marine Designs: signa, sentica, stone and valua

noraplan marine are single-layered rubber floor coverings available in rolls and tiles in the above-named designs. **noraplan stone** has a mat, reflection-breaking surface. The designs **signa** and **sentica** are available with a smooth surface. The linear surface of **noraplan valua** completes the product range. The nora rubber floor coverings are extremely fire-resistant and free of PVC, other halogenated polymers and phthalate plasticizers.

Technical data Properties acc. to EN 1817	Test method	Requirements	Average test results from running production
Thickness	EN ISO 24346	Mean value \pm 0.15 mm of nominal value	2.0 mm
Thermal conductivity	EN 10456	$\lambda = 0.17$ W/(m·K)	Fulfilled
Dimensional stability	EN ISO 23999	\pm 0.4 %	\pm 0.3 %
Cigarette-burn resistance	EN 1399	Procedure A (stubbled out) \geq level 4 Procedure B (burning) \geq level 3	Fulfilled
Flexibility	EN ISO 24344, procedure A	Mandrel diameter 20 mm, no fissuring	Fulfilled
Hardness	ISO 48-4	\geq 75 Shore A	91 Shore A
Residual indentation	EN ISO 24343	Mean value \leq 0.15 at thickness < 2.5 mm	0.03 mm
Abrasion resistance at 5 N load	ISO 4649, procedure A	\leq 250 mm ³	189 mm ³
Colour fastness to artificial light	ISO 105-B02, procedure 3, test conditions 6.1 a)	At least level 6 on the blue scale, \geq level 3 on the grey scale	Grey scale \geq 3 acc. to ISO 105-A02

Additional technical data

Weight	EN ISO 23997		~ 3.36 kg/m ²
Tear strength	ISO 34-1, method B, procedure A		20 kN/m
Slip resistance	DIN EN 16165		R9** R10** (reflection-breaking surface)
Improvement in footfall sound absorption	ISO 10140-3		6 dB
Effect of chemicals	EN ISO 26987		Resistant depending on concentration and time of exposure**
Electrostatic behaviour when being walked upon	EN 1815		Antistatic, charging < 2 kV
Dielectric strength	EN 60243-1, VDE 0303, part 21		43 kV
Electrical insulation properties	EN 1081 R1		> 10 ¹⁰ Ohm

Fire behaviour/smoke behaviour

Fire behaviour	EN 13501-1		C _s -s1, bonded
	DIN 5510-2		SF3**
	ASTM E-648/ISO 9239-1	Federal Railroad Administration	Class 1 (\geq 0.50 W/cm ²)
Smoke toxicity	ISO 5659-2	DIN 5510-2	FED \leq 1**
Fire behaviour, sea going vessels (surface flammability)	IMO Res. MSC.307 (88) – (F.T.P. Code 2010)		Fulfilled (glued with UZIN KR 430)
Smoke density and toxicity, sea going vessels			
Oxygen index	ISO 4589		28%

Approvals

EU-Type Examination Certificate for use on board of sea going vessels in compliance with directive 2014/90/EU	Certificate No. 124117-03
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Colour variations due to different production batches as well as technical alterations to improve the product have to be accepted.

* In case of increased impact of oils, greases, acids, alkalis and other aggressive chemicals as well as light oils and fuels - please contact us.

** Tested and certified by an independent testing institute.

EN 1817: Specification for homogeneous and heterogeneous smooth elastomer floor coverings.

Standard measures: Rolls 1.22 m x 15 m // tiles 610 mm x 610 mm

Special measures: Delivery upon request.

Custom-made designs and colours of **noraplan® marine** with smooth or reflection-breaking surface are subject to minimum order quantities. Unless agreed otherwise, the sort statement PQC009 is applicable in its current version.

Further product information is available on www.nora.com/marine.



Carbon Neutral Floors™

06/2023

nora[®] nTx: The revolutionary quick installation system

nora nTx is a unique technology for professional installers to lay nora rubber floor coverings. Ingeniously simple: nora nTx floor coverings bring a self-adhesive backing along from the factory. The flooring is cleanly and safely installed in only a few steps and immediately ready for use. The challenges of conventional laying processes – such as applying the correct amount of adhesive or ensuring sufficient wetting, drying and waiting time before and after laying – are all a thing of the past. And the result is just as durable, sturdy and safe as you would expect from nora floor coverings. All noraplan marine products can be ordered as noraplan marine nTx floorings. Furthermore, old or damaged floorings can be quickly replaced with the self adhesive nTx technology – during ongoing operations.

Fast

The self-adhesive nora nTx floor coverings can be laid with no drying or waiting time – during ongoing operations. And they can be used immediately after installation.

Efficient

The subfloor preparation and the installation of nora nTx require only a few steps – for more safety and more space in less time.

Economical

Laying nora nTx floorings reduces downtime, saves costs and minimises the risk of errors.

The central gauge features the nora nTx logo and the word 'economy' at the bottom.

Benefits of the self-adhesive nora nTx floorings

- Fast and simple laying in just a few steps
- Works on all types of subfloor
- No need to interrupt your daily work
- No drying or waiting time
- No odour nuisance
- Can be used immediately after laying
- Complete system from a single supplier
- Minimised downtime – economical solution

Further information is available on request or online at www.nora.com/ntx.





Product Information

noraplan® marine (933) nTx Designs: signa, sentica, stone and valua

noraplan marine (933) nTx floor coverings of the above product designs are equipped with a self-adhesive backing for a quick installation. The adhesive backing is covered by a protective film that may not be removed before laying. Dirt on the adhesive backing prevents the adherence and the flooring cannot be installed any more. noraplan nTx floor coverings must be stored in a cool, dry environment protected from direct sunlight and installed within 24 months after production date. The floor coverings are extremely fire-resistant and free of PVC, other halogenated polymers and phthalate plasticizers.

Technical data Properties acc. to EN 1817	Test method	Requirements	Average test results from running production
Thickness	EN ISO 24346	Mean value \pm 0.15 mm of nominal value	2.1 mm
Thermal conductivity	EN 10456	$\lambda = 0.17 \text{ W/(m}^2\text{K)}$	Fulfilled
Dimensional stability	EN ISO 23999	$\pm 0.4 \%$	$\pm 0.3 \%$
Cigarette-burn resistance	EN 1399	Procedure A (stubbed out) \geq level 4 Procedure B (burning) \geq level 3	Fulfilled
Flexibility	EN ISO 24344, procedure A	Mandrel diameter 20 mm, no fissuring	Fulfilled
Hardness	ISO 48-4	≥ 75 Shore A	91 Shore A
Residual indentation	EN ISO 24343	Mean value ≤ 0.15 mm	0.03 mm
Abrasion resistance at 5 N load	ISO 4649, procedure A	$\leq 250 \text{ mm}^3$	189 mm ³
Colour fastness to artificial light	ISO 105-B02, procedure 3, test conditions 6.1 a)	At least level 6 on the blue scale, \geq level 3 on the grey scale	Grey scale ≥ 3 acc. to ISO 105-A02
Additional technical data			
Weight	EN ISO 23997		$\sim 3.36 \text{ kg/m}^2$
Tear strength	ISO 34-1, method B, procedure A		20 kN/m
Slip resistance	DIN EN 16165		R 9* R 10* (reflection-breaking surface)
Improvement in footfall sound absorption	ISO 10140-3		4 dB
Effect of chemicals	EN ISO 26987		Resistant depending on concentration and time of exposure**
Electrostatic behaviour when being walked upon	EN 1815		Antistatic. Charging in case of rubber soles $< 2 \text{ kV}$
Dielectric strength	EN 60243-1, VDE 0303, Part 21		43 kV
Electrical insulation properties	EN 1081 R1		$> 10^{10} \text{ Ohm}$
Fire behaviour/smoke behaviour			
Fire behaviour, sea going vessels (surface flammability)	IMO Res. MSC.307 (88) – (F.T.P. Code 2010)		Fulfilled
Smoke density and toxicity, sea going vessels			
Approvals			
EU-Type Examination Certificate for use on board of sea going vessels in compliance with directive 2014/90/EU			Certificate No. 124174-00
Adhesive characteristics			
Description			Pressure-sensitive hot melt adhesive
Softening range			Approx. 122-134 °C
VOC			0%

Colour variations due to different production batches as well as technical alterations to improve the product have to be accepted.

*Tested and certified by an independent testing institute.

**In case of increased impact of oils, greases, acids, alkalis and other aggressive chemicals please contact us.

EN 1817: Specification for homogeneous and heterogeneous smooth elastomer floor coverings

Standard measures: Rolls 1.22 m x 15 m (2.1 mm).

Special measures: Delivery in another thickness, customized dimensions as well as in KITS upon request.

Custom-made designs and colours of **noraplan® marine (933) nTx** are subject to minimum order quantities.

Unless agreed otherwise, the sort statement PQC009 is applicable in its current version.

Further product information is available on www.nora.com/marine.



Carbon Neutral Floors™

Cover picture: © nora

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