

VINICOR[®] -marine

primer

(TS 20.30.12-004-67503963-2018)



Description

The high solids epoxy primer can be used in thick coating systems, supplied in two packs. Nonsensitive to surface treatment, can be applied on solid corrosion and/or old coating products.

The coating is resistant to the impact of sea and fresh water, oil, petroleum products, and other media, rapid temperature changes from -50°C to +60°C.

Purpose and Scope

Protection against corrosion of underwater and above-water hull parts, strake, variable water lines and superstructures of the ships of unrestricted navigation area, and any other structures operated in sea and fresh water and atmospheric conditions.

Suitable for carbon and stainless steels, fiberglass and carbon fiber, aluminum and concrete.

Used as:

- Independent coating
- Priming layer in complex coating systems with VINICOR-marine, VINICOR-62, POLYTON-UR (UF) enamels, VINICOR, VINICOR-acryl-51, VINICOR-nord enamel primers, and other enamels and enamel primers on vinyl-epoxy, epoxy-urethane, epoxy, acrylate and polyurethane bases.

▪ As a tie (adhesive) layer for underwater hull parts and variable water line area between an epoxy coating and antifouling enamel.

During operation in the atmosphere at intensive UV radiation, chalking is common for the coating like for any other epoxy material.

Certification, tests

Certificate of state registration No. RU.77.01.34.008.E.003250.12.21 dated 20.12.2021

VINICOR-marine coating system has expert opinions of Kurchatov Institute, National Research Center, Prometei, CRISM, and decision of Section No. 5 of the Joint Committee for acceptance of coating materials on their application in shipbuilding and repair.

Certificate of the Voluntary Certification System of the RUSSIAN RIVER REGISTER No. ROSS RU.RO00.N00432.

Specifications

Finish coat color	reddish-brown, grey, as well as other colors upon agreement with the customer
Finish coat gloss	matte
Primer density, g/cm ³	1.4 ± 0.1
Primer viscosity	thixotropic
Pot life @ (20 ± 2)°C, min., h	4
Non-volatile matter content	
- by volume, % (vol.)	63.0 ± 2.0
- by weight, % (wt)	78.5 ± 3.5
Drying time to degree 3 (GOST 19007) @ (20 ± 2)°C, h, max	6
Dry film thickness, μm	50 - 240
Wet film thickness, μm	80 - 380
Theoretical consumption for a single layer, g/m ²	105 - 510

Surface treatment

Carbon steel surfaces

- Degrease the metal surface to the first degree according to GOST 9.402
- Blast clean from scale, rust and old paint traces to degree 2 per GOST 9.402 (Sa 2 ½ or Sa 2 per ISO 8501-1); in case of painting repair, can be cleaned from rust mechanically to degree 3 or 4 minimum as per GOST 9.402 (Sa 2 or St 2 as per ISO 8501-1).
- Dedust.

Aluminum and stainless steel surfaces:

- Degrease the metal surface to the first degree according to GOST 9.402
 - Blast clean by non-metal grinding agent that provides a surface with a sharp profile.
- Alternatively, grind the surface manually or mechanically by non-metal grinding agents or sandpaper
- Dedust.

Before applying the second layer, the coating shall be dry, clean and free of oil and dust.

Fiberglass

- Degrease the surface to degree 1 as per GOST 9.402
- Clean the surface from drips, pitch streaks, adhered fibers, reinforcing glass cloth by grinding
- Dedust.

Concrete surface:

Prepared for application of the paint coating shall be uniformly rough, have no protruding rebars, cracks, potholes, blowholes, sags, sheared ribs, oil spots, dirt or dust.

Operating procedure:

- Remove dirt, oil and grease contamination
- Remove lime (cement) milk, destroyed or peeling layers of concrete and old coatings by abrasive cleaning, grinding or brushing
- Dedust
- Repair cracks and chips.

The concrete base shall be cured for at least 28 days after concrete placement and before application of the primer; after application of levelling compounds – according to the regulatory documentation of the mixture manufacturer. Surface humidity (in a 20 mm thick surface layer) shall not exceed 4%.

Before applying the second layer and before applying the top coat, the coating shall be dry, clean and free from oil and dust.

Instruction for use

- Before use, mix the base thoroughly until homogenous
- While continuously stirring, add hardener to the base and mix thoroughly (the base/hardener ratio is indicated on the container and in the material quality certificate).
- Dilute to the viscosity suitable for application, as required
- Before application, the finished material shall be cured for 15-20 minutes under a closed lid.

When arranging painting operations, reduction of the paint mix (after mixing the components) pot life at high temperatures shall be taken into account.

The recommended temperatures for application of the material in shop and field conditions are +5°C to +35°C and the maximum relative air humidity 85% (application at temperatures from -5°C is acceptable). The temperature of the surface to be painted shall be at least 3°C above the dew point.

The temperature of the primer prepared for application shall be at least 15°C.

It is recommended to apply the primer in 1-2 layers by airless/pneumatic spraying, with a brush/roller.

Recommended application parameters:

Airless spraying

Recommended thinners	SOLVIN-12, SOLVIN-15
Amount of thinner	up to 7% by weight
Pressure	15 - 21 MPa (150 - 210 bar)
Nozzle diameter	0.015" - 0.021" (0.38 mm - 0.53 mm)

Pneumatic application

Recommended thinners	SOLVIN-12, SOLVIN-15
Amount of thinner	up to 7% by weight
Pressure	0.2 - 0.4 (2 - 4 bar)
Nozzle diameter	1.8 - 2.2 mm

Brush/roller

Recommended thinners	SOLVIN-12, SOLVIN-15
Amount of thinner	up to 7% by weight

Equipment cleaning

SOLVIN-12, SOLVIN-15, 646, R-4 solvents

The coating is dried naturally, the parameters are provided in the following table:

Drying stage	Time, h (hours), @ ambient air temperature, °C								
	-5	0	+5	+10	+15	+20	+25	+30	+35
Hardening time at DFT 100 µm									
To degree 1 as per GOST 19007, min.	24	12	9	6	4.5	3	2	1.5	1
To degree 3 as per GOST 19007, h	96	48	36	16	12	6	5	3	2
Minimum time to overcoating, h	96	48	36	16	12	6	5	3	2
Complete hardening, days	182	96	72	32	8	7	6	5	4

The above-mentioned hardening time shall be assumed as a guideline (the hardening time depends on surface and ambient air temperatures, material dilution ratio, coating thickness, ventilation efficiency and relative air humidity), the actual time shall be determined experimentally, when painting in specific conditions.

The maximum overcoating interval for VINIKOR-marine primer is 6 months. If the maximum overcoating interval is exceeded, the coating shall be roughened by light blasting or mechanical tool, before the next layer can be applied.

Packaging and storage

The material is supplied complete: base and hardener packed in metal buckets and metal cans, respectively, depending on the weight of the kit.

Storage conditions shall be in accordance with GOST 9980.5 (at ambient temperatures -40°C to +35°C). During storage, protect containers with material components from heat, precipitation and direct sunlight.

The guaranteed shelf life is determined by guaranteed shelf life of the base (24 months) and hardener (12 months) from the date of manufacture.

Safety precautions

During the use of the product, observe the relevant industry standards and requirements, as well as the precautions indicated on the container label.

Use personal protective equipment (goggles, masks, respirators), avoid inhalation of solvents during evaporation and contact of the material or its components with skin, mucous membranes of eyes and respiratory tract; use indoors only if sufficient ventilation is provided.

The material and its components (base and hardener) are flammable! Hardened coating is not harmful for health.

The information provided is general in nature and does not take into account the specifics of a particular work site. The use of the material for any purpose not specified herein or under the impact of any other factors shall be approved by VMP in a written form. In its absence, the manufacturer is not responsible for improper use of the material, and the buyer loses the right to make claims and have the claims satisfied related to the quality of the resulting coating.



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