

# TECHNICAL SPECIFICATION N° GA24E/20

Under water area and appendages GELCOAT - EPOXY - CARBON FIBRE



POLISHING ANTIFOULING PROFESSIONAL EXPLORER

DRY DOCKING INTERVAL

② 24 mois

Specification N°	GA24E/20	Désignation	Under water area and appendages GELCOAT - EPOXY - CARBON FIBRE
Original emission	September 2018	Application method	Airless spray gun
Brings up-to-date origin	November 2020	Antifouling	Polishing Antifouling Professional Explorer
Writter	S. Llorens	Dry Docking Interval	24 mois

# **TECHNICAL SPECIFICATION N° GA24E/20**



**Under water area and appendages GELCOAT - EPOXY - CARBON FIBRE** 

Position under water area and appendages

## Under water area and appendages GELCOAT - EPOXY - CARBON FIBRE

# **ODRY DOCKING INTERVAL 24 months )** POLISHING ANTIFOULING PROFESSIONAL EXPLORER

#### Surface preparation

Remove oil and grease, etc...with PROFESSIONAL DEGREASER. All under water area to be by high-pressure fresh water cleaned (min 250 bar) to remove salts and contamination. When the surface is dry: block sand with 180-220 grit paper move dust or sweep blasting in order to obtain roughness surface. Clean thorougly and allow to dry completely.

#### Applicaton method



# Airless spray gun

Steps	Code	Product	Color	Coats	Nozzle orifice	Nozzle pressure (bar)	DFT per coat (µ)	WFT per coat (µ)	Theoretical spreading rate (m²/L)**		coating 23°C		coating 15°C	ı	coating 0°C	Thinner
										Min.	Мах.	Min.	Мах.	Min.	Мах.	
1	EPGREY	PROFESSIONAL EPOXY PROTECT	GREY	FC or TU	1880-2680	165	130	290	3,3	16h	1 month	24h	1 month	30h	1 month	ETCLEAR 10%
2	EPWHITE	PROFESSIONAL EPOXY PROTECT	WHITE	FC or TU	1880-2680	165	130	290	3,3	16h	1 month	24h	1 month	30h	1 month	ETCLEAR 10%
3	PPGREY	PROFESSIONAL PRIMER PROTECT	GREY	FC or TU	2180-2680	211	70	210	4,4	3h	1 month	3h	1 month	6h	1 month	AFTCLEAR 10%
	EBLACK ENAVY EWHITE ERED EGREY EGREEN	PROFESSIONAL EXPLORER	BLACK NAVY WHITE RED GREY GREEN	FC	517-521	176-220	90	160	6	6h	*	18h	*	20h	*	AFTCLEAR 5%
4	EBLACK ENAVY EWHITE ERED EGREY EGREEN	PROFESSIONAL EXPLORER	BLACK NAVY WHITE RED GREY GREEN	FC	517-521	176-220	90	160	6	*	*	*	*	*	*	AFTCLEAR 5%
	TINDOORANG	ı				1			1		Dryin	g time b	efore undo	cking		
5	5 UNDOCKING							23°	<b>°C</b> - 8h	15°	<b>C</b> - 24h	10°	<b>C</b> - 28h			

<sup>\*</sup> No maximum overcoating interval, but after prolonged exposure to polluted atmosphere, remove accumulated contamination by high pressure fresh water cleaning.



<sup>\*\*</sup> Loss factor 20% not included.



# **PROFESSIONAL EPOXY PROTECT**

Two-component epoxy primer

### **TECHNICAL DATA SHEET**

DESCRIPT	ION	Quick-drying, high performance epoxy primer that is easy to apply. It is suitable for substrates requiring a very high level of protection, above and below the waterline (steel, aluminium, composites, carbon and wood). Can be used on zones both in and out of the water. Optimised formula to allow for a longer period between coats.
Thinner /	Cleaner	Thinner: PROFESSIONAL EPOXY THINNER Cleaner: Use PROFESSIONAL EPOXY THINNER for equipment cleaning.
Surface co	onditions	Steel / Alloy / Iron / Lead / Aluminium: For Aluminium, Lead and Zinc/Galvanised Steel. Degrease with PROFESSIONAL DEGREASER. Sand using 60-120 grade paper. For Steel, grit blast to Sa 2.5 - near white surface metal. Clean thoroughly and allow to dry completely.
		<b>Wood/Plywood</b> : Degrease with PROFESSIONAL DEGREASER. Sand smooth with 80-180 then 280 grade paper. Remove sanding dust by brushing or dusting. Wipe down with PROFESSIONAL DEGREASER and allow to dry completely.
		<b>GRP</b> , <b>EPOXY</b> , <b>CARBON FIBRE</b> : Degrease with PROFESSIONAL DEGREASER. Sand using 180-220 grade paper. Clean thoroughly and allow to dry completely.
INSTRUCT	IONS FOR USE	
	Mixing	Mixing Stir or shake individual components thoroughly. Add Curing Agent to the Base, stir and leave for 10 minutes to allow dispersion.  Other For maximum performance to be achieved, the curing temperature should be above 10°C.
A + B	Mixing ratio	3/1
ļμm	Dry Film Thickness (DFT)	60 microns dry by roller/brush (120 microns wet) 130 microns dry by airless spray gun (290 microns wet)
RECOMM	ENDATIONS	
Ö	Conditions	Temperature: 15-35°C (10°C min)  Ventilation and Humidity Control: Ensure adequate ventilation during use
	Application Methods	Airless spray gun, roller, brush.  Airless spray gun: Pressure 165 bar. Tip Size: 1880-2680
	Number of Coats	1-5 by roller depending on substrate and use 1-3 by airless spray gun depending on substrate and use



# PROFESSIONAL EPOXY PROTECT

Two-component epoxy primer

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Drying Times (touch dry)

1 hour: at 23°C



Overcoating Times (with itself)

**APPLICATION WITH ROLLER OR BRUSH** 

3 hours min – 1 month max: at 23°C 8 hours min. – 1 month max: at 15°C 12 hours min. – 1 month max: at 10°C APPLICATION WITH AIRLESS SPRAY GUN

16 hours min – 1 month max: at 23°C

16 hours min – 1 month max: at 23°C 24 hours min. – 1 month max: at 15°C 30 hours min. – 1 month max: at 10°C

Overcoating Times (with Polishing Antifouling Professional Explorer, Hard Antifouling Professional Racing ou Professional Epoxy Protect) 3 hours min. – 7 hours max: at 23°C\*
6 hours min. – 8 hours max: at 15°C\*
10 hours min. – 24 hours max: at 10°C\*

\*without sanding. If exceeded, apply one coat of PROFESSIONAL PRIMER PROTECT and PROFESSIONAL EXPLORER or PROFESSIONAL RACING. 6 hours min. – 14 hours max: at 23°C\* 8 hours min. – 18 hours max: at 15°C\* 14 hours min. – 30 hours max: at 10°C\*

\*without sanding. If exceeded, apply one coat of PROFESSIONAL PRIMER PROTECT and PROFESSIONAL EXPLORER or PROFESSIONAL RACING.



Theoretical spreading rate

By roller/brush: 9m²/L per coat

By airless spray gun: 3.3m<sup>2</sup>/L per coat



Volatile Organic Compounds

VOC (As Supplied): 464 g/L



Colours

**Base (Component A):** Grey or White **Curing (Component B):** Clear

and 35°C. Keep out of direct sunlight.

#### **GENERAL INFORMATION**



Storage

Exposure to air and extremes of temperature should be avoided. For the full shelf life of this product to be realized ensure that between use the container is firmly closed and the temperature is between 5°C

This product should be kept in securely closed containers.

Transportation
Compatibility /
Substrates

This product should be kept in securely closed containers during transport.

Suitable for all listed substrates (of Surface conditions)

Suitable for all listed substrates (cf Surface conditions). Do not apply over one pack products.

Shelf Life 2 years

Safety Precautions

Comply with all local safety, disposal and transportation regulations. Check the Material Safety Data Sheet (MSDS) and label of the individual products carefully before using the products. The MSDS's are available on our website or on request. The information

given in this sheet is not exhaustive and can be modified when necessary. **Disposal:** Do not discard tins or pour paint into water courses, use the facilities provided. It is best to allow paints to harden before disposal. Remainders of this product

cannot be disposed of through the municipal waste route or dumped without permit. Disposal of remainders must be arranged for in consultation with the authorities.



# PROFESSIONAL PRIMER PROTECT

One-component tie coat primer

### **TECHNICAL DATA SHEET**

DESCRIPTION	Quick-drying, one-component tie coat primer for application on all substrates in underwater zones. This primer is very easy to use, and can also be used as an insulating coat over a previous antifouling product whose type is not known. Apply one or more coats depending on the level of protection required. Can be used on underwater zones.
Thinner / Cleaner	Thinner: PROFESSIONAL THINNER Cleaner: PROFESSIONAL THINNER
Surface conditions	Steel / Alloy / Iron / Lead / Aluminium: For Aluminium, Lead and Zinc/Galvanised Steel. Degrease with PROFESSIONAL DEGREASER. Sand using 60-120 grade paper. For Steel, grit blast to Sa 2.5 – near white surface metal. Clean thoroughly and allow to dry completely.
	<b>Wood/Plywood</b> : Degrease with PROFESSIONAL DEGREASER. Sand smooth with 80-180 then 280 grade paper. Remove sanding dust by brushing or dusting. Wipe down with PROFESSIONAL DEGREASER and allow to dry completely.
	<b>GRP</b> , <b>epoxy</b> , <b>carfon fibre</b> : Degrease with PROFESSIONAL DEGREASER. Sand using 180-220 grade paper. Clean thoroughly and allow to dry completely.
	OLD / AGED ANTIFOULING: In Good Condition: Remove loose material. Wash down with fresh water. Allow to dry. In Poor Condition: Remove.
INSTRUCTIONS FOR USE	
Mixing	Stir well before use.
Dry Film Thickness (DFT)	50 microns dry by brush/roller (140 microns wet) 70 microns dry by airless spray gun (210 microns wet)
APPLICATION RECOMMENDATIONS	
Conditions	<b>Temperature:</b> 15-35°C

Airless spray gun, roller, brush.

1-6 by roller depending on substrate

1-4 by airless spray gun depending on substrate

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**Number of Coats** 

**Application Methods** 

Airless spray gun: Pressure: 211 bar. Tip Size: 2180-2680.



# **PROFESSIONAL PRIMER PROTECT**

# One-component tie coat primer

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	Drying Times (touch dry)	1 hour: at 23°C
	Overcoating Times (with itself)	3 hours minimum – 1 month maximum: at 23°C 3 hours minimum – 1 month maximum: at 15°C 5 hours minimum – 1 month maximum: at 10°C
	Overcoating Times (with Polishing Antifouling Professional Explorer, Hard Antifouling Professional Racing ou Professional Epoxy Protect)	3 hours minimum – 1 month maximum: at 23°C 3 hours minimum – 1 month maximum: at 15°C 6 hours minimum – 1 month maximum: at 10°C
M <sup>2</sup>	Theoretical spreading rate	By roller/brush: 8.3m²/L per coat By airless spray gun: 4.4m²/L per coat
voc	Volatile Organic Compounds	VOC (As Supplied) 585 g/L
<b>③</b>	Colours	Grey

GENERAL II	NFORMATION	
	Storage	Exposure to air and extremes of temperature should be avoided. For the full shelf life of this product to be realized ensure that between use the container is firmly closed and the temperature is between 5°C and 35°C. Keep out of direct sunlight. This product should be kept in securely closed containers.
	Transportation	This product should be kept in securely closed containers during transport.
	Compatibility / Substrates	Suitable for all listed substrates (cf Surface conditions).  Do not overcoat with 2-component products.
	Shelf Life	2 years
	Safety Precautions	Comply with all local safety, disposal and transportation regulations. Check the Material Safety Data Sheet (MSDS) and label of the individual products carefully before using the products. The MSDS's are available on our website or on request. The information given in this sheet is not exhaustive and can be modified when necessary.
		<b>Disposal:</b> Do not discard tins or pour paint into water courses, use the facilities provided. It is best to allow paints to harden before disposal. Remainders of this product cannot be disposed of through the municipal waste route or dumped without permit. Disposal of remainders must be arranged for in consultation with the authorities.



# POLISHING ANTIFOULING PROFESSIONAL EXPLORER

High performance polishing antifouling

### **TECHNICAL DATA SHEET**

DESCRIPTION	High performance antifouling product. Its controlled polish rate makes the application of multiple coats unnecessary. Its formula offers protection for up to 24 months and it can be applied up to 6 months before launch. Suitable for application to all substrates below the waterline, including aluminium (hull, propeller, thruster).
Thinner / Cleaner	Thinning: Thinning is not recommended. Antifouling performance can be compromised if correct dry film thickness is not applied. For spray application, PROFESSIONAL THINNER can be used to ease application. Cleaner: PROFESSIONAL THINNER
Surface conditions	PREVIOUSLY ANTIFOULED SURFACE:
	In Good Condition: All fouling and contamination must be thoroughly removed including the leached layer. Use high pressure fresh water wash (3000 psi/207 bar)
	and/or scraping and wet sanding with typically 80/120 grade paper. Do not dry sand.  If old antifouling is incompatible or unknown, seal with PROFESSIONAL PRIMER
2000000 per	PROTECT. In Poor Condition: Remove all traces of antifouling.
	PRIMERS: All preparation for bare substrates is covered
	on the appropriate primer datasheet.
	BARE GRP, EPOXY, CARBON FIBRE: Prime with
	PROFESSIONAL EPOXY PROTECT or PROFESSIONAL PRIMER PROTECT.
	STEEL/ALUMINIUM/LEAD/WOOD: Prime with

#### **INSTRUCTIONS FOR USE**

	iviixing	I noroughly stir until product is mixed to a uniform consistency before use.
	Immersion Time	8 hours minimum at 23°C
		24 hours minimum at 15°C
		28 hours minimum at 10°C
		Maximum 6 months
	Dry Film	60 microns dry by roller/brush(120 microns wet)
<b>‡</b> μm	Thickness (DFT)	90 microns dry by airless spray gun (160 microns wet)
Ţμm	Dry Film Thickness (DFT)	Maximum 6 months 60 microns dry by roller/brush(120 microns wet)

#### APPLICATION RECOMMENDATIONS

APPLICAT	TON RECOMMENDA	TIONS
_>\\<	~=≻′<= Conditions	<b>Temperature</b> : 15-35°C
	Conditions	Ventilation and Humidity Control: Ensure adequate ventilation during use.
7.5		Substrate temperature should be 3°C above dew point and maximum 35°C.
	Application	Airless spray gun, roller, brush
	Methods	Airless spray gun: Pressure 176-220 bar / 2500-3200 psi. Tip size: 517-521
		By roller/brush
		Apply 2 coats of 60 microns dry for 12 months (Total DFT of 120 microns)
		or 3 coats of 60 microns dry for 24 months (Total DFT of 180 microns).
	Number of Coats	By airless spray gun (Professional only)
		Apply 1 coat of 90 microns dry for 12 months (Total DFT of 90 microns)
		or 2 coats of 90 microns dry for 24 months (Total DFT of 180 microns).
		In all schemes, apply an extra stripe coat in areas of high wear such as chines,
		rudders, sterngear and any leading edges.



# POLISHING ANTIFOULING PROFESSIONAL EXPLORER

High performance polishing antifouling

PHYSICAL PROPERTIES		
	Drying Times (touch dry)	30 minutes: at 23°C
	Minimum Overcoating Times (with itself)	6 hours: at 23°C 18 hours: at 15°C 20 hours: at 10°C
M <sup>2</sup>	Theoretical spreading rate	By roller/brush: 8.8m²/L per coat By airless spray gun: 6m²/L per coat
voc	Volatile Organic Compounds	VOC (As Supplied) 424 g/L average VOC (EU Solvent) 298 g/Kg average EU Solvent Emissions Directive (Council Directive 1999/13/EC)
	Colours	Black Navy White Red Grey Green True colour will develop after immersion
GENERAL INFORMATION		
	Storage	Exposure to air and extremes of temperature should be avoided. For the full shelf life of this product to be realized ensure that between use the container is firmly closed and the temperature is between 5°C and 35°C. Keep out of direct sunlight. This product should be kept in securely closed containers. To prevent premature failure, ensure the correct amount of paint is applied using the coverage as a guide. Product temperature should be minimum 5°C and maximum 35°C. Ambient temperature should be minimum 5°C and maximum 35°C.
	Transportation	This product should be kept in securely closed containers during transport
	Compatibility / Substrates	Suitable for all listed substrates (cf Surface conditions) including suitably primed Aluminium/Alloy and Zinc-sprayed surfaces. Can be applied direct over most types of antifoulings, provided they are in sound condition, with the exception of PTFE antifoulings.
	Shelf Life	2 years
	Safety Precautions	Contains biocides. Antifoulings should only be wet sanded.  Never dry sand or burn off old antifoulings. Comply with all local safety, disposal and transportation regulations. Check the Material Safety Data Sheet (MSDS) and label of the individual products carefully before using the products.  The MSDS's are available on our website or on request. The information given in this sheet is not exhaustive and can be modified when necessary.  Disposal: Do not discard tins or pour paint into water courses, use the facilities provided. It is best to allow paints to harden before disposal.  Remainders of this product cannot be disposed of through the municipal waste route or dumped without permit. Disposal of remainders must be arranged for in consultation with the authorities.