Baltoflake Ecolife

Product description

This is a styrene free glass flake reinforced unsaturated polyester coating. It is an ultra high build, extremely abrasion resistant and fast curing barrier coating. Can be used as primer, mid coat or finish coat in atmospheric and immersed environments. Suitable for properly prepared carbon steel, stainless steel, aluminium and approved primers. It can be applied down to +5 °C surface temperature.

Typical use

Recommended for areas subject to extreme mechanical wear and harsh exposure conditions. Recommended for offshore environments, including splash zones, jetties, piles, tidal zones, decks, battery rooms, power stations, exterior of buried tanks, concrete bunds, refineries, bridges, mining equipment and general structural steel where future maintenance is challenging.

Approvals and certificates

Pre-qualified in accordance with NORSOK M-501 in selected systems

Certified in accordance with IMO 2010 FTP code – Low Flame Spread

Consult your Jotun representative for details.

Additional certificates and approvals may be available on request.

Colours

selected range of colours

Product data

Property	Test/Standard	Description
Solids by volume	ISO 3233	93 ± 2 %
Solids by weight	ISO 3233	98 ± 2 %
Gloss level (GU 60 °)	ISO 2813	matt (0-35)
Flash point	ISO 3679 Method 1	53 °C
Density	calculated	1.2 kg/l

Region	Regulation	Test Standard *	VOC Value
EU IED	Industrial Emission Directive 2010/75/EU	Calculated	17 g/l
EU IED	Industrial Emission Directive 2010/75/EU	ISO 3233	39 g/l
EU IED	Industrial Emission Directive 2010/75/EU	ISO 3233	56 g/l

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The provided data is typical for factory produced products, subject to slight variation depending on colour.

Gloss description: According to Jotun Performance Coatings' definition.

* VOC information: Theoretically and under ideal conditions unsaturated polyester products cure without any evaporation of reactive monomers or other components. This means that what is applied on a surface also remains within the coating after curing. Practically, a certain evaporation of monomer (vinyl toluene) during the application and curing process may occur. The theoretical VOC-content value in accordance with the Industrial Emission Directive 2010/75/EU is 17g/L based on the theory that all the reactive monomer is reacted into the matrix.

*/**/*** Please see comments below.

* VOC measurement can best be done for this type of product by following test standard ISO 3233.

** The VOC content at 23 °C is found to be 39 g/L at a wet film thickness of 750 µm and with 2.5vol% peroxide.

*** The VOC content at 23 °C is found to be 56 g/L at a wet film thickness of 750 µm and with 1.25vol% peroxide.

Film thickness per coat

Typical recommended specification range

Dry film thickness	600	-	1500	µm
Wet film thickness	650	-	1610	µm
Theoretical spreading rate	1.54	-	0.62	m²/l

All vinyl ester and polyester resin systems are subject to some shrinkage during the curing process. This results in a practical spreading rate lower than the theoretically calculated. The shrinkage depends on actual dry film thickness applied and conditions during application.

Surface preparation

Surface preparation summary table

Substrate	Surface preparation	
	Minimum	Recommended
Carbon steel	Sa 2½ (ISO 8501-1) with a surface profile Medium to Coarse G (ISO 8503-2)	Sa 2½ (ISO 8501-1) with a surface profile Medium to Coarse G (ISO 8503-2)
Stainless steel	Cleanliness and surface profile corresponding to the description of Sa 2½ (ISO 8501-1), Fine to Medium G (ISO 8503-2)	Cleanliness and surface profile corresponding to the description of Sa 2½ (ISO 8501-1), Fine to Medium G (ISO 8503-2)

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Aluminium	Cleanliness and surface profile corresponding to the description of Sa 2½ (ISO 8501-1), Medium to Coarse G (ISO 8503-2)	Cleanliness and surface profile corresponding to the description of Sa 2½ (ISO 8501-1), Medium to Coarse G (ISO 8503-2)
Coated surfaces	Clean, dry and undamaged compatible coating	Clean, dry and undamaged compatible coating

Application

Application methods

The product can be applied by

Spray:	Standard airless spray may be used. Dedicated two component airless spray is an option.
Brush:	Recommended for stripe coating and small areas. Care must be taken to achieve the specified dry film thickness.

Mixing ratio table - Additives

The steel temperature shall not be lower than the paint temperature and not more than 20 °C above the paint temperature.

Additive volumes (ml) in 16 litres product.
Due to local regulations, local variants in pack size and filled volume may exist. Note that the amount of additives must be adjusted accordingly.

	Paint temperature					
Additive	5-9 °C	10-14 °C	15-19 °C	20-24 °C	25-29 °C	30-34 °C
Jotun Inhibitor 53 or Inhibitor NLC-10		15	30	40	50	60
Jotun Peroxide 13, Norox KPM or Trigonox 61	400	200	200	200	200	200

For plural pump two-component airless spray equipment:
The recommended dosage of peroxide (Jotun Peroxide 13, Norox KPM or Trigonox 61) is for substrate temperatures:

Temperature:	Dosage:
5-9°C:	2.5 vol%
10-40°C:	1.25 vol%

In special cases where there is a need of a faster cure or equipment restrictions dictates using extra peroxide also at substrate temperatures above 10°C, a higher dosage can be acceptable when shorter overcoating time is ensured.

The temperature of base and curing agent is recommended to be 18 °C or higher when the product is mixed. The potlife is stated for 1.25 vol% peroxide and a temperature of 23°C, and to have a good control of time before gelling in the hoses etc when application is done by 2K equipment, it is recommended to stay close to that temperature of 23°C, and within a temperature range of maximum +/- 5°C (i.e. 18-28°C).

WARNING:
Accelerators must never come in direct contact with peroxides.
All peroxides must be stored in a dark and cool storage room (below 25 °C), and kept away from all kind of combustible materials. Exposure to direct sunlight must be avoided. Use only original or approved containers. Empty containers should be washed with water and kept in separate storage/containers.
The peroxide may catch fire if exposed to sparks or to hot metal dust from grinding or other mechanical work. The curing reaction develops heat. For leftovers of mixed paint it is recommended to fill the tin with water to avoid excessive heat development.

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Thinner/Cleaning solvent

Thinner: Vinyltoluene

Cleaning solvent: Jotun Thinner No. 17 / Jotun Thinner No. 27

Thinning is not recommended for this product.

When thinners are used as a cleaning solvent, the use must be in accordance with prevailing local regulations.

Guiding data for airless spray

Nozzle tip (inch/1000): 27-35

Pressure at nozzle (minimum): 150 bar/2100 psi

Drying and Curing time

Substrate temperature	5 °C	10 °C	15 °C	19 °C	23 °C	30 °C	40 °C
Using two component airless spray							
Surface (touch) dry	2.5 h	2.5 h	2 h	1 h	45 min	45 min	45 min
Walk-on-dry	2.5 h	2.5 h	2 h	1 h	45 min	45 min	45 min
Dry to over coat, minimum	2.5 h	2.5 h	2 h	1 h	45 min	45 min	45 min
Dried/cured for service	3 d	2 d	2 d	12 h	4 h	4 h	4 h
Using one component airless spray							
Surface (touch) dry	3 h	3 h	2.5 h	2 h	2 h	2 h	2 h
Walk-on-dry	3 h	3 h	2.5 h	2 h	2 h	2 h	2 h
Dry to over coat, minimum	3 h	3 h	2.5 h	2 h	2 h	2 h	2 h
Dried/cured for service	3 d	3 d	2 d	2 d	1 d	1 d	1 d

For maximum overcoating intervals, refer to the Application Guide (AG) for this product.

Drying and curing times are determined under controlled temperatures and relative humidity below 85 %, and at average of the DFT range for the product.

Surface (touch) dry: The state of drying when slight pressure with a finger does not leave an imprint or reveal tackiness.

Walk-on-dry: Minimum time before the coating can tolerate normal foot traffic without permanent marks, imprints or other physical damage.

Dry to over coat, minimum: The recommended shortest time before the next coat can be applied.

Dried/cured for service: Minimum time before the coating can be permanently exposed to the intended environment/medium.

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Paint temperature	23 °C
Pot life	15-20 min

The potlife is stated for 1.25vol% peroxide and a temperature of 23°C and it will be reduced at higher temperatures.

After addition of inhibitor for one component ordinary airless spray according to the mixing table: 35 min.

Heat resistance

	Temperature	
	Continuous	Peak
Dry, atmospheric	90 °C	100 °C
Immersed, sea water	50 °C	50 °C

Peak temperature duration max. 1 hour.

The temperatures listed relate to retention of protective properties. Aesthetic properties may suffer at these temperatures.

Note that the coating will be resistant to various immersion temperatures depending on the specific chemical and whether immersion is constant or intermittent. Heat resistance is influenced by the total coating system. If used as part of a system, ensure all coatings in the system have similar heat resistance.

Product compatibility

Depending on the actual exposure of the coating system, various primers and topcoats can be used in combination with this product. Some examples are shown below. Contact Jotun for specific system recommendation.

Previous coat:	unsaturated polyester
Subsequent coat:	unsaturated polyester, polyurethane, polysiloxane

Packaging (typical)

	Volume (litres)	Size of containers (litres)
Baltoflake Ecolife	16	20

The volume stated is for factory made colours. Note that local variants in pack size and filled volumes can vary due to local regulations.

Storage

The product must be stored in accordance with national regulations. Keep the containers in a dry, shaded, cool, well-ventilated space and away from sources of heat and ignition. Containers must be kept tightly closed. Handle with care.

Storage temperature not to exceed 25 °C.

Shelf life at 23 °C

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Baltoflake Ecolife	6 month(s)

In some markets commercial shelf life can be dictated shorter by local legislation. The above is minimum shelf life, thereafter the paint quality is subject to re-inspection.

Environmental Documentation

This product can contribute to Green Building Standard credits. Please refer to Jotun.com for more information or contact your local Jotun representative.

Environmental Product Declaration (EPD) is available at www.epd-norge.no

Caution

This product is for professional use only. The applicator and operator shall be trained, experienced and have the capability and equipment to mix/stir and apply the coatings correctly and according to Jotun's technical documentation. Applicators and operators should use appropriate personal protection equipment when using this product. This guideline is given based on the current knowledge of the product. Any suggested deviation to suit the site conditions shall be forwarded to the responsible Jotun representative for approval before commencing the work.

Health and safety

Please observe the precautionary notices displayed in the container. Use under well-ventilated conditions. Do not inhale spray mist. Avoid skin contact. Spillage on the skin should immediately be removed with suitable cleanser, soap and water. Eyes should be well flushed with water and sought medical attention immediately.

Colour variation

When applicable, products primarily meant for use as primers or antifoulings may have slight colour variations from batch to batch. Such products and epoxy-based products used as a finish coat may chalk when exposed to sunlight and weathering.

Colour and gloss retention on topcoats/finish coats may vary depending on type of colour, exposure environment such as temperature, UV intensity etc., application quality and generic type of paint. Contact your local Jotun office for further information.

Disclaimer

The information in this document is given to the best of Jotun's knowledge, based on laboratory testing and practical experience. Jotun's products are considered as semi-finished goods and as such, products are often used under conditions beyond Jotun's control. Jotun cannot guarantee anything but the quality of the product itself. Minor product variations may be implemented in order to comply with local requirements. Jotun reserves the right to change the data given without further notice.

Users should always consult Jotun for specific guidance on the general suitability of this product for their needs and specific application practices.

If there is any inconsistency between different language issues of this document, the English (United Kingdom) version will prevail.

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