

504 HYBRID ISOPRIMER

A two component anti corrosive, aluminum reinforced primer based on Dual Cure Chemistry. Adhesion primer for Sa2½ blasted steel, hot dip galvanised steel, aluminum and stainless steel structures in nearly all surroundings, among which marine and offshore. The outstanding adhesion and mechanical strength provide minimum risk on damaging and rework. Can be finished with various Hybrid coatings to provide durable protective coatings systems (C3 - C5I/C5M).

FEATURES

- patented technology NL1034986, US 8889798, EU/CA patent pending;
- wet on wet application;
- easy mixing ratio;
- fast curing at low temperatures;
- resistant to sea and sewage water;

WORKING PROCESS

Mixture:	504 Hybrid Isoprimer Base component 1 parts by volume Activator 915, 1 part by volume
Mixing instructions:	Mix base component and activator intensively, preferably using a mechanical mixing device. The temperature of the mixed product should at least be 5°C during application.
Thinning:	The paint can be applied with various spray equipment. The necessary amount of PU5801 depends on used equipment, application method and temperature of the mixed product.
Potlife:	At 20°C 8 hours (mixed product).
Conditions during application:	The temperature of the substrate should be at least 3°C. above dew point. Keep application area well ventilated during application and drying in order to reduce evaporated solvents. This is necessary to acquire good drying conditions and for the good of the applicators' health.
Method of application:	Preferably by means of airless or airmix spray equipment.

PERFORMANCE AND PROPERTIES

Aesthetic product properties:

Gloss:	Matt
Colour:	Greenish aluminum

Product properties:

Volume solids:	± 48 volume % (mixed product)
VOC:	≤ 485 gr/ltr.
Density:	At 20°C ± 1,30 kg/ltr (mixed product)
Dry Film thickness:	Standard: 50-100 µm (depends on application process)
Theoretical coverage:	At a dry film thickness of 50 µm 9,6 m ² /ltr.
Practical coverage:	The performance in practice depends on various circumstances. As a guideline for airless spraying: For large dimensions: 70% of the theoretical coverage. For small dimensions: 50% of the theoretical coverage.
Dry times: at 55% RH and at a standard dry film thickness of 50 µm. (method: BYK Drying recorder)	20°C
Dust free:	20 minutes
Recoatable:	2 hours (max. 7 days)

At a higher dry film thickness longer drying times should be taken in account. During drying and curing the relative humidity should remain between 55-90%. The higher the humidity, the faster the curing.

PROCESSING DATA

	Airless spray	Airmix
Thinner	PU5801	PU5801
Quantity	0-10 vol.%	0-10 vol.%
Nozzle	min 0,022 inch	min 0,022 inch
Flow pressure	min 150 bar	min 80 bar
Dry film thickness	50-100 µm	50-100 µm

Airspray

Thinner	PU5801
Quantity	10-20 vol.%
Nozzle	1,8 mm
Flow pressure	min 3,5 bar
Dry film thickness	50-100 µm

Cleaning tools: Immediately after application using thinner PU5801.

PRODUCT INFORMATION

Packaging: 20 litre cans. Thinner in 25 litre jerry cans and 200 litre drums.

Shelf life: In original well shut packaging 12 months, stored inside at temperatures between 5°C and 40°C.

TEST DATA

Test procedure	Results
Accelareted Weathering: ISO 11507 / ASTM G154	n.a.
Saltspray: ISO 9227-NSS / ASTM B 117	>2160 hours
Pull off (before/after saltspray): ISO 4626 / ASTM D4541	7,0/5,0 MPa
Corrosion Resistance: TNO Electrochemical Impedance Spectroscopy (EIS)	$R_c 2,7 \cdot 10^9$, $n=0,95$ (21 days) primer 80 µm 504
Cathodic Disbonding ISO 15711	13 mm after 4200 hours primer 80 µm 504
Flexibility: ISO 1519 / ASTM D522 Cylindrical mandrel	19 mm
Pull off: ISO 4624 / ASTM D4541 Sa 2½ blasted steel	7,0 MPa

ENVIRONMENT AND HEALTH

Labelling: In accordance with EU directions 67/548/EEG and in accordance with directives on hazardous materials. Harmful and irritating in contact with skin, eyes and by inhalation. In case of eye contact, immediately wash with large amounts of water and contact a medical expert. Do not eat, drink or smoke during application.

UN: 1263

Aware code: 42-I

AWARE

The AWARE (acronym for Adequate Warning and Air Requirement) is a coding system for products containing volatile organcompounds (VOC), a tool for product manufacturers to support risk assessment and product innovation. Additionally it can be used for hazard communication with end-users to inform them about potential health risks of hazardous products. The system is based on the Norwegian concept for the OAR (Occupational Air Requirement) and the Danish concept for the MAL-code system. The AWARE code consist of two digits separated by a hyphen. Both digits are elaborated based on physical-chemical considerations and adapted to the European Dangerous Preparations Directive. The first digit is expressed as m3 required fresh air at the workplace to dilute the emissions from one litre used product to be sure not to exceed the level of the Occupational Exposure Limit (OEL). It is based on the component content, vapour pressure, solubility and toxicity. The second digit is derived from R phrases ascribed to the substances in the product. In this way the AWARE is a tool that can be used for risk identification of products as well as ingredients in products. A higher AWARE does indicate a higher risk. It is a perfect tool to support substitution of hazardous products.

PRE-TREATMENT

Preliminary treatment, steel untreated:

The surface needs to be pretreated according ISO12944 part 4 § 6.2.3. Remove grease, oil, dirt etc. using an appropriate cleansing agent, for instance ENVICLEAN PR (for use see product sheet) and a high pressure spraying pistol. Grit blasting to purity degree Sa 2½ in accordance with ISO 8501-1. After blasting remove all dust from the entire surface with compressed air which is free of moisture and grease. Apply first coating layer within 6 hours. In case the final coating layer is applied on the construction site, extra precautions need to be taken.

Preliminary treatment surface, hot dip galvanised:

The surface needs to be pretreated according ISO12944 part 4 §6.2.3.4.1 (sweep blast, with inert grit). See also NEN5254 for Duplex systems. Remove grease, oil, dirt etc. using an appropriate cleansing agent, for instance ENVICLEAN PR (for use see product sheet). Lightly blast the entire zinc surface with an inert blasting agent (grain size: 0.3 - 0.5 mm, blasting pressure: 2.0 - 2.5 bar, nozzle opening: 6 mm minimum). After blasting, the entire surface must have a uniform flat appearance. Depending on the zinc layer thickness, in accordance with NEN5254, max. 5 - 10 µm of zinc can be removed.

After blasting remove all dust from the entire surface with compressed air which is free of moisture and grease. Apply first coating layer within 2 hours.

PROTECTIVE COATINGS

Our 'protective coatings' excel by virtue of their durability, flexibility, adhesion, easy application, anti-corrosion, and chemical and mechanical resistance. This is the result of our vast competence in coating chemistry, combined with a good eye for our client's requirements and wishes. The coating systems conform to ISO 12944 and comply with international VOC guidelines.

PAINT SYSTEMS

Please find below a few paint systems based on 504 Hybrid Isoprimer. For customized advice on paint systems please contact Baril Coatings, or our local sales representative.

System 1	Corrosion Class C2/C3 1st coat 50 µm; 504 Hybrid Isoprimer Top coat 60 µm; Hybrid Finish 10 / 30 / 60 / 90
System 2	Corrosion Class C4 1st coat 80 µm; 504 Hybrid Isoprimer Top coat 80 µm; 575 Hybrid Fastcure HS

TOUCH UP

Touching up of damages or untreated parts at the construction site. Remove grease, oil, dirt etc. using an appropriate cleansing agent, for instance ENVICLEAN PR (for use see product sheet). Remove the rust from all mechanical damage caused by transport and mounting, untreated welding strips and welding spots and burns with rotating steel wire brushes, sanding discs or steel wire brushes and coarse sandpaper to purity degree St3, in accordance with ISO 8501-1.

Smooth the transition of cleansed parts to parts with intact coats of paint by sanding and scraping.

After sanding, remove all dust from the entire surface with compressed air which is free of moisture and grease. Then touch up the object with the entire paint system, as described in this paint advice.

Touch up light surface damages only with the product of the top coat, as described in the paint advice.

MAINTENANCE

It is recommended to clean the surface regularly and to inspect the coats of paint for defects annually. Touch up any defects with the original paint system.

TECHNICAL SUPPORT

Baril Coatings B.V. offers more than just advice. We offer a total service solution to the principal, the architect, the main contractor and the painting contractor.

In order to ensure the required performance in terms of durability, Baril Coatings offers full technical support and supervision during implementation and completion of the application process, all in accordance with the ISO 12944 guideline.

The supervision and support provided by Baril Coatings does not relieve the painting contractor of his responsibility for the work carried out by him. The painting contractor must thoroughly familiarize himself with the most recently updated product data sheets and the general terms and conditions of Baril Coatings for protective coatings on steel. Baril Coatings is not responsible for application and the application conditions. The final durability depends mainly on factors that are outside our control and for that reason we cannot accept any liability.

WARRANTY & DISCLAIMER

This Product Data Sheet supersedes those previously issued. Data, specifications, directions and recommendations given in this data sheet represent only test results or experience obtained under controlled or specially defined circumstances. Their accuracy, completeness or appropriateness under the actual conditions of any intended use of the Products herein must be determined exclusively by the Buyer and/or User. The Products are supplied and all technical assistance is given subject to our UNIFORM CONDITIONS OF SALE AND DELIVERY FOR PAINT, PRINTING INK AND OTHER PRODUCTS unless otherwise expressly agreed in writing. The Manufacturer and Seller disclaim, and Buyer and/or User waive all claims involving, any liability, including but not limited to negligence, except as expressed in said UNIFORM CONDITIONS for all results, injury or direct or consequential losses or damages arising from the use of the Products as recommended above, on the overleaf or otherwise. Product data are subject to change without notice.