

16638 UNICURE AL MASTIC

A surface tolerant, biobased two component, EPA compliant anti corrosive aluminum mastic primer/coating, based on special epoxy resins and a modified phenalkamine curing agent. 16638 UniCure AL Mastic is specially developed as a surface tolerant maintenance primer/coating on ST-2 cleaned surfaces, hand prepared steel and old paint systems, as well as Sa2½ blasted substrates. Early water resistance and good wetting properties enables application at high relative humidity (90%, damp surface). Recoatable with itself, epoxy and polyurethane coatings, vinyl and alkyd products. A very tight, impenetrable coating, resistant to abrasion, chemical impact and water immersion, even as a single coat system.

FEATURES

- biobased mastic epoxy;
- heavy duty properties;
- NORSOK approved;
- immersion qualified;
- ocean proofed; splash zone resistant;
- super high solid;
- abrasion resistant;
- extreme mechanical properties;
- easy application;
- good curing at low temperatures (5°C);
- easy application by airless as well as by brush/roller;
- suitable for application up to and including C5-I, C5-M, IM-1, IM-2, IM-3 environments according to ISO 12944;
- for outside applications this coating should be over coated to prevent chalking;
- in combination with 16738 UniCure Miox, Norsok M501 system 7 (immersion) certified.

WORKING PROCESS

Mixture:	16638 UniCure AL Mastic Base component 1 part by volume 16638 UniCure AL Mastic Activator 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 without thinning when using airless spray equipment (18-23°C). The eventual necessary amount of EP5800 depends on used equipment, application method and temperature of the mixed product.
Potlife:	At 20°C 4 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. When using brushes, a different film thickness and possibly inferior flow will be achieved.

PERFORMANCE AND PROPERTIES

Aesthetic product properties

Gloss:	Eggshell gloss
Colour:	Aluminum

Product properties

Volume solids:	± 82 volume % (mixed product)			
VOC:	≤ 160 gr/ltr.			
Density:	At 20°C ± 1,40 kg/ltr (mixed product)			
Dry Film thickness:	Standard: 80-250 µm (depends on application process)			
Theoretical coverage:	At a dry film thickness of 125 µm 6,6 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.			
Heat resistance:	Maximum 200°C (dry load)			
Dry times: at 50% RH and standard dry film thickness of 250 µm. (method: BYK Drying recorder)	5°C	10°C	20°C	30°C
Dust free:	12 hours	6 hours	4 hours	2 hours
Manageable:	48 hours	30 hours	16 hours	8 hours
Recoatable:	24 hours	16 hours	8 hours	5 hours

Maximum interval unlimited provided the surface is clean and free of grease and/or oil. At a higher dry film thickness longer drying time should be taken in account. During drying and curing the relative humidity should remain under 90%. Furthermore, any contact with moisture must be avoided during this period. In case of water spillage during the curing cycle white spots may occur.

PROCESSING DATA

	Airless spray	Airmix
Thinner	n.a.	EP5800
Quantity	0 vol. %	5-10 vol.%
Nozzle	0,015-0,017 inch	0,015-0,017 inch
Flow pressure	150-175 bar	70-100 bar
Dry film thickness	80-250 µm	80-250 µm

	Brush-roller	Airspray
Thinner	S5102	EP5800
Quantity	0-5 vol %	5-10 vol.%
Nozzle		2,0-3,0 mm
Flow pressure		3-4 bar
Dry film thickness	80 µm	80-250 µm

Cleaning tools: Immediately after application using thinner EP5800.

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

Saltspray: >5500 hours (16638/16738)
ISO 9227-NSS / ASTM B 117
Pull off (before/after saltspray): 13,0/11,0 MPa
ISO 4624 / ASTM D4541

Norsok M501, system 7: >4200 hours (16638/16738)
(Immersion)
ISO 20340 >4200 hours (16638/16738)

Flexibility:
ISO 1519 / ASTM D522
Cylindrical mandrel: 20 mm
ISO 1520
Cupping: 3,3 mm
ISO 6272 / ASTM D2794
Impact resistance: 6 Nm

Corrosion Resistance: $R_c 1,3 \cdot 10^8$, n=0,98 (21 days)
TNO Electrochemical Impedance Spectroscopy (EIS)

Cathodic Disbonding
ISO 15711 4200 hours (Norsok system)

ASTM G8 30 days, <10 mm (Norsok system)

According Norsok M501 Certified

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-IV

AWARE

The AWARE (acronym for Adequate Warning and Air Requirement) is a coding system for products containing volatile organic compounds (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 16638 UniCure AL Mastic. For customized advice on paint systems please contact Baril Coatings, or our local sales representative.

System 1 Corrosion Class C2/C3, ST2 hand prepared surfaces

One coat system 80 µm;
16638 UniCure AL Mastic

System 2 Corrosion Class C4 (inside)

1st coat 100 µm;
16638 UniCure AL Mastic

2nd coat 100 µm;
16838 UniCure HSC

System 3 Corrosion Class C4 (outside)

1st coat 100 µm;
16638 UniCure AL Mastic

2nd coat 100 µm;
17443 PolyCoat HS

System 4 Norsok M501 system 7 Immersion

1st coat 225 µm;
16638 UniCure AL Mastic

2nd coat 225 µm;
16738 UniCure Miox

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.

CONTROL & 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.

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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.