

Amphibolin / Amphibolin-W

Universal acrylic paints for versatile exterior and interior use.



Product Description

Field of Application

Emission-minimised and solvent-free exterior and interior paint for versatile use with outstanding adhesive strength on nearly all substrates. The special formula reduces the writing effect (stress whitening) for tinted paint coatings.

Suitable for weather-resistant exterior coatings on smooth and finely textured substrates, providing higher protection against aggressive air pollutants.
 Universal facade paint for application on mineral renders of mortar groups PII and PIII, concrete, fair faced brickwork, fibre-cement boards, stable existing coats of paint, galvanised surfaces, unplasticized (rigid) PVC and wooden parts of unstable shape. Do not apply on ETICS/EWI systems.

For heavy-duty, scrub resistant, texture-retaining interior paint coatings. Particularly suitable for highly stressed coatings on Capaver glass fibre wall coverings and outstandingly suitable for dimly-lit halls, corridors, staircases, storerooms, workshops and underground car parks, due to a high light reflectance value.

Amphibolin is also available with a silk-gloss/mid-sheen gloss level (Amphibolin Gloss 20).

Amphibolin-W (facade paint) is provided with a preservative against deterioration in the coating film due to algal and fungal attack. Hence, do not use indoors.

Material Properties

- Emission-minimised, solvent-free, unplasticized.
- Free of fogging-active substances.
- Water-dilutable, ecologically compatible, low odour.
- Weather-resistant.
- Wet scrub resistance Class 1 according to DIN EN 13300; < 5 µm at 200 strokes, corresponds to "scrub resistant" according to German standard DIN 53778.
- Opacity (hiding/covering power) Class 2, with a spreading rate of 8 m²/litre or 120 ml/m²
- Driving rain resistant, water-repellent according to German standard DIN 4108.
- High adhesive strength.
- Non-yellowing.
- Alkali-resistant, hence unsaponifiable.
- Thin film coating, texture-retaining.
- Highly cleanable and resistant to aqueous disinfectants and household detergents.
- Easy to apply.
- Contains special pigments with photocatalytic effect.

Material Base / Vehicle

100 % pure acrylate. Synthetic dispersion/emulsion according to German standard DIN 55945, containing wet adhesion promoter to achieve optimum adhesive strength.



Packaging/Package Size

Amphibolin

- **Standard Product:** 2.5 l, 5 l and 12.5 l. Airfix: 25 l hobcock, 120 l paint barrel, 480 l stainless steel container
- **"Red Sandstone"** (Rotsandstein): 5 l
- **ColorExpress:** 1.25 l, 2.5 l, 5 l, 7.5 l and 12.5 l

Amphibolin Gloss 20

- **Standard Product:** 25 l

Amphibolin-W

- **Standard Product:** 12.5 l

Colours

White and "Red Sandstone" (Amphibolin Gloss 20 is only available in White).

Amphibolin / Amphibolin Gloss 20 / Amphibolin-W can be tinted with CaparolColor or AmphiColor® (AVA) colourants. Add up to max. 10 % of colourants for application on non-absorbent substrates, e.g. unplasticized (rigid) PVC or galvanised surfaces.
If more than one bucket is manually tinted, all product must be thoroughly mixed before use in order to avoid colour differences.

Amphibolin / Amphibolin-W: Quantities of 100 litres or more in individual colours may be ordered ready tinted ex factory.

Amphibolin is tintable to all current colour collections via the ColorExpress tinting & mixing machine system. Amphibolin-W is tintable in light colours up to luminosity/lightness index (LI) approx. 70. Check tinted product before applying to avoid colour differences. Always use tinted paint of same batch, when applying on seamless surfaces.

Brilliant, intensive colours may have a lower opacity (hiding/covering power). It is therefore advisable to apply a first coat in a similar hiding pastel tint, based on white. Possibly a second finishing coat may be necessary.

Colour Stability as per German BFS-Merkblatt (Data Sheet) No. 26:

(Binder) Class: A

(Pigmentation) Group: 1 - 3, depending on the colour.

Gloss Level

Amphibolin / Amphibolin-W: Silk-matt, G₂

Amphibolin Gloss 20: Silk-gloss (mid sheen), G₂

Storage

Keep in a cool, but frost-free place.

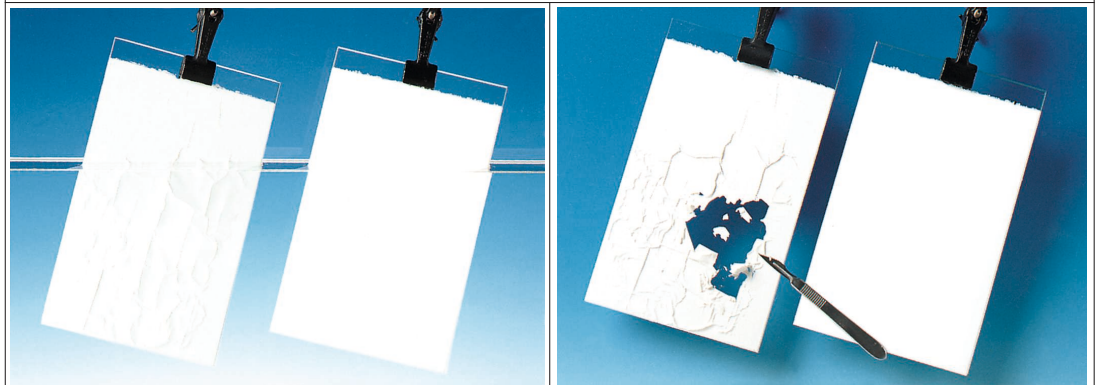
Technical Data

Characteristics according to DIN EN 1062: Tinting may cause variations.

- Maximum particle (grit) size: 100 µm, S₁
- Density: Approx. 1.4 g/cm³
- Dry film thickness: 50 - 100 µm, E₂
- Diffusion-equivalent air layer thickness s_d CO₂: > 50 m, C₁
- Water permeability (w-value): ≤ 0.1 [kg/(m² · h^{0.5})] (low), W₃
- Water vapour permeability (sd-value): ≥ 0.14 m to ≤ 1.4 (medium), V₂

Note

The "wet adhesion promoter", embedded in Amphibolin as demonstrated in our laboratory test on glass plates, prevents the swelling up of binding agent in extremely moist conditions, so that the coatings are permanently prevented from blistering and flaking.



On the left: Conventional exterior dispersion/emulsion paint, on the right: Amphibolin.

Suitability according to
Technical Information No. 606
Definition of Application Areas

Amphibolin / Amphibolin Gloss 20:

Interior 1	Interior 2	Interior 3	Exterior 1	Exterior 2
+	+	+	+	+
(-) inapplicable / (○) of limited suitability / (+) suitable				

Amphibolin-W:

Interior 1	Interior 2	Interior 3	Exterior 1	Exterior 2
-	-	-	+	+
(-) inapplicable / (○) of limited suitability / (+) suitable				

Application

Suitable Substrates

The substrate must be sound/stable, dry, clean, and free from all substances that may prevent good adhesion. In Germany: Follow VOB, part C, DIN 18363, section 3.

Substrate Preparation

Exterior Surfaces:

Exterior Renders in Mortar Groups/Classes PII (Lime-Cement Mortars) and PIII (Cement Mortars) / Minimum Compressive Strength according to DIN EN 998-1: 1.5 N/mm²:

New renders must be left untreated for a sufficiently long time, normally for 2 weeks at 20 °C and 65 % relative humidity. Adverse weather conditions, influenced e.g. by wind or rain, extend the curing process and correspondingly longer holding times must be respected.

The risk of calcareous efflorescence is reduced by an additional priming coat of CapaGrund Universal and the alkaline finishing render may be coated after a holding time of 7 days.

Existing Renders:

Repairs must have adequate time to cure and dry.

Highly porous, absorbent, slightly sanding renders: Apply one priming coat of OptiGrund or CapaSol. Prime highly sanding, chalking renders with Dupa-grund.

Coat mineral lightweight renders of mortar group PII with Sylitol® or AmphiSilan products.

Concrete:

Concrete surfaces with deposits of dirt or fines layer must be cleaned, either mechanically or by using high-pressure water jet, in compliance with the regulations.

Apply one priming coat (covering undercoating) of Amphibolin, diluted to a max. of 5 % with tap (potable) water, on slightly absorbent or smooth surfaces.

Apply one priming coat of OptiGrund or CapaSol on highly absorbent surfaces.

Prime chalking substrates with Dupa-grund.

Fibre Cement Boards (with or without Asbestos Fibres):

Germany: Follow BFS-Merkblatt/Data Sheet No. 14 and TRGS 519 for coatings on asbestos cement boards. Prime in accordance with Technical Information No. 650. Prime free-standing boards on both sides as well as on all edges. Prime new, highly alkaline fibre-cement boards with Disbon 481 EP-Uniprimer to avoid calcareous efflorescence.

Cement-Bound Wood Chipboards (Particle Boards):

Apply one priming coat of Disbon 481 EP-Uniprimer on highly alkaline boards to avoid calcareous efflorescence.

Sound/Stable Coatings of Enamel or Dispersion/Emulsion Paint:

Roughen/sand the surface of glossy coatings or enamels. Wash off existing soiled, chalking layers by high-pressure water jet, manually washing or other suitable cleaning method, in compliance with the regulations. Apply one priming coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W, diluted to a max. of 5 % with tap (potable) water.

Sound/Stable Existing Coatings of Plasto-Elastic Dispersion/Emulsion Paint, e.g. Cap-elast:

Clean soiled, chalking coatings by high-pressure water jet, manually washing or other suitable method, in compliance with the regulations. Allow substrates to dry well. Apply Amphibolin, Amphibolin Gloss 20 or Amphibolin-W on such surfaces either exclusively in white or pastel to medium shades (luminosity/LI > 60 for Amphibolin / Amphibolin-W).

Sound/Stable Synthetic Resin-Bound (Organic) Renders:

Clean existing renders by suitable means, e.g. wet cleaning, in compliance with the regulations. Allow surfaces to dry well. Apply one priming coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W, diluted to a max. of 5 % with tap (potable) water.

Unstable Coatings of Enamel, Dispersion/Emulsion Paint or Synthetic (Organic) Render:

Remove existing coatings completely by suitable means, e.g. mechanically or with paint stripper. If paint stripper is used, clean the surface with a high-pressure steam jet in compliance with the regulations and allow to dry well.

Apply one priming coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W, diluted to a max. of 5 % with tap (potable) water.

Prime highly absorbent, sanding surfaces with Dupa-grund.

Unstable Mineral Coatings:

Remove the coating completely by brushing off, scraping off, wet-blasting or other suitable method, in compliance with the regulations. Allow the substrate to dry well and prime with Dupa-grund.

Unpainted Wooden Parts of Unstable Shape:

Remove resin galls and seeped resin from new wood/timber. Wash tropical, grease containing wood with nitro thinner. Remove weathered wood layers and coat only sound/stable wood with a limited moisture content: Max. 12 % for hardwood, max. 15 % for coniferous wood (softwood).

Prime with Capalac Holz-Imprägniergrund. If discolouration may occur, an intermediate coat of Capacryl Holz-IsoGrund is essential.

Galvanised Surfaces:

Clean the surface with an ammonia-potash based wetting agent and by corundum plastic fleece and rinse thoroughly. Germany: Follow BFS-Merkblatt/Data Sheet No. 5.

Apply one priming coat of Amphibolin / Amphibolin-W, diluted to a max. of 5 % with tap (potable) water.

Coloured coatings on galvanised surfaces may cause white efflorescence at higher humidity. In such cases wipe off all efflorescence and apply an additional coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W.

Unplasticized (Rigid) PVC:

Clean thoroughly and slightly sand the surface. Apply one priming coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W, diluted to a max. of 5 % with tap (potable) water. Germany: Follow BFS-Merkblatt/Data Sheet No. 22.

Coil Coatings:

Clean the surface with an ammonia-potash based wetting agent. Apply one priming coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W. Note: Silicone containing coil coatings cannot be coated. Always apply a trial coating on site and check for adhesion.

Fair Faced Brickwork:

Only absorbent clinker bricks of frost resistant quality and free of foreign inclusions are suitable for exterior coatings. Masonry must be dry and free of salts/salty efflorescence, jointing must be free of cracks. Apply one priming coat of Amphibolin, Amphibolin Gloss 20 or Amphibolin-W, diluted to a max. of 5 % with tap (potable) water. If brown discolouration appears on this first coat, then recoat with solvent-based facade paint Duparol.

Surfaces Contaminated with Industrial Emissions or Soot:

Coat with solvent-based facade paint Duparol.

Surfaces with Fungal or Algal Attack:

Remove fungal (fungi/mildew/mould) and algal attack by wet blasting, in compliance with the regulations. Then use Capatox or FungiGrund and allow to dry well. Recommendation: Use Amphibolin-W for finishing coat.

Cracks in Exterior Renders or Concrete:

Coat with the crack covering system Cap-elast.

Surfaces with Salty Efflorescence:

Remove salty efflorescence thoroughly with a dry wire brush and prime with Dupa-grund. Coating of such surfaces must be considered a risk for which we cannot accept responsibility (application without guarantee), since even after the most thorough treatment the efflorescence may recur.

Defects:

Repair small defects in mineral substrates with fine filler Caparol-Fassaden-Feinspachtel, deeper damages up to 20 mm preferably with filler Histolith-Renovierspachtel and prime repaired areas subsequently.

Interior Surfaces (Do not use Amphibolin-W in interiors):

Interior Plasters in Mortar Groups/Classes PII (Lime-Cement Mortars) and PIII (Cement Mortars) / Minimum Compressive Strength according to DIN EN 998-1: 1.5 N/mm²:

Solid, normally absorbent plasters can be coated without any pre-treatment.

Prime highly porous, sanding, absorbent plasters with OptiGrund or CapaSol.

Gypsum Plasters and Ready-Mixed Gypsum Plasters of Mortar Group PIV / Minimum Compressive Strength according to DIN EN 13279: 2 N/mm²:

Sand/grind off the sintered skin and remove all sanding dust. Prime with Caparol-Tiefgrund TB.

Gypsum Wallboards:

Prime absorbent boards with OptiGrund or Caparol-Tiefgrund TB.

Gypsum Plasterboards (Sandwich-Type Plaster Boards/Drywalls):

Sand/grind off mortar burrs. Prime and strengthen soft gypsum areas (repairs) with Caparol-Tiefgrund TB. Boards containing water-soluble, discolouring substances that leave marks must be primed with Caparol AquaSperrgrund. Germany: Follow BFS-Merkblatt/Data Sheet No. 12.

Concrete:

Remove all residues of separating agent (formwork oil residues) and chalking/powdery, sanding substances.

Autoclaved Aerated Concrete (AAC) / Cellular Concrete:

Prime with a 1 : 3 mixture of Capaplex and tap (potable) water.

Facing Brickwork and Fair-Faced Sand-Lime Brick Masonry:

Coat without any pre-treatment.

Sound/Stable Existing Coatings:

Matt, slightly absorbent coatings can be treated without a preliminary preparation. Roughen glossy surfaces and enamel coatings.

Unstable Existing Coatings:

Remove unstable coatings of enamel and dispersion/emulsion paint or synthetic (organic) plaster. Slightly absorbent, smooth surfaces can be directly coated. Prime highly porous, sanding or absorbent surfaces with OptiGrund or CapaSol. Remove unstable mineral paint coatings by mechanical means and remove all sanding dust. Then prime with Caparol-Tiefgrund TB.

Distemper Paints (Limewater Colour/Paint):

Remove by washing and prime with Caparol-Tiefgrund TB.

Unpainted Woodchip/Ingrain, Relief or Embossed Wallpapers (made of Paper):

Coat without any pre-treatment.

Non-Adherent Wallpapers:

Remove completely. Wash off all residues of wallpaper paste/glue and waste paper. Prime with Caparol-Tiefgrund TB.

Mildewed Surfaces:

Remove coverings of mould by wet cleaning. Then use Capatop or FungiGrund and allow to dry well. Apply a finishing coat of Indeko-W, Malerit-W or Fungitex-W on heavily mould affected surfaces, in compliance with current legal/local and official regulations (follow e.g. Ordinance on Biological Agents and Ordinance on Hazardous Substances).

Surfaces Stained with Nicotine, Water, Soot or Fat/Grease:

Remove nicotine, soot or fat/grease stains by washing with tap water, adding a fat-dissolving household detergent, then allow the substrate to dry well. Clean dried-up water stains by dry brushing-off. Apply one insulating coat of Caparol AquaSperrgrund. Apply one finishing coat of Caparol IsoDeck on highly soiled surfaces.

Wood and Derived Timber Products:

Apply one undiluted priming coat of Amphibolin. Apply one insulating priming coat of Capacryl-Holz-IsoGrund on wood or derived timber products, if discolouration may occur.

Small Defects:

After having completed suitable preparatory work, repair small defects with filler Caparol-Akkordspachtel, following the manufacturers' instructions for processing. Prime subsequently, if necessary.

Method of Application

Apply Amphibolin / Amphibolin Gloss 20 with paint brush, roller or spraying equipment. When spraying: Prime slightly absorbent up to non-absorbent substrates with CapaGrund Universal.

Airless application:

Spray angle: 50°
Nozzle size: 0.017" – 0.021"
Spray gun pressure: 150 – 180 bar

Apply Amphibolin-W with paint brush or roller.

Surface Coating System

First or Intermediate Coat:

Apply Amphibolin / Amphibolin Gloss 20 / Amphibolin-W undiluted or diluted to a max. of 5 % with tap (potable) water.

Finishing Coat:

Apply Amphibolin / Amphibolin Gloss 20 / Amphibolin-W undiluted or diluted to a max. of 5 % with tap water. On roughly textured substrates the first or intermediate and finishing coats should be diluted 5 % and spread out well.

Consumption

Approx. 120 ml/m² per coat on smooth substrates. On roughly textured surfaces correspondingly more. Determine the exact amount of material required by coating a test area on site.

Application Conditions

Low Temperature Limit for Application and Drying:

+5 °C for product, substrate and ambient air.

Drying/Drying Time	At +20 °C and 65 % relative humidity surface-dry and recoatable after 4 – 6 hours, rain-resistant after 24 hours. Completely dry and ready for stress after approx. 3 days. Lower temperatures and higher humidity extend the drying time.
Tool Cleaning	Clean tools (paint brushes/rollers) and airless equipment immediately after use with tap water.
Note	<p>The product should not be applied in direct sunlight or on sun heated substrates, during strong wind, fog or rain, high relative humidity or imminent rain or frost, etc. To avoid lapping, the paint should be applied wet-on-wet and without interruption. Do not apply on horizontal surfaces exposed to rain or moisture.</p> <p>On roughly textured exterior substrates the use of matt exterior Caparol paints (e.g. Muresko, Amphisil, AmphiSilan or Syllitol facade paint) is recommended for aesthetic reason.</p> <p>Stir and sieve well before airless application.</p> <p>Due to the use of Caparol-Tiefgrund TB in interiors, a typical solvent odour is released, hence proper ventilation must be provided during application and drying. Use low aromatic, low odour AmphiSilan-Putzfestiger in sensitive areas.</p> <p>Facades in special climatic conditions (high degree of moisture) or subjected to a higher influence of atmospheric exposure: It is recommended to apply our special products, e.g. ThermoSan NQG, Amphibolin-W or Duparol-W, provided with special agents delaying the forming of organic growth (fungi & algae).</p> <p>Amphibolin-W is provided with a preservative against deterioration in the coating film due to algae and mould/mildew growth (fungal attack) for prolonged – but not unlimited – protection, depending on the moisture degree and intensity of organic infestation (conditions on site). A permanent protection cannot be guaranteed.</p> <p>FungiGrund may be used instead of OptiGrund for substrate preparation on such infested substrates after having finished the cleaning procedure.</p> <p>Mechanical loads on matt facade paints in dark shades may produce bright-toned stripes as a product specific property (no writing resistance).</p> <p>In case of moist weather conditions (rain, dew, fog) yellowish transparent traces of additives, showing a slightly glossy shine and stickiness, may occur on the surface of compact, cool substrates or by means of delayed drying caused by the weather. The traces of additives are water-soluble and will disappear under the influence of a sufficient water quantity, e.g. repeated intensive rainfalls. The quality of the dried coating will not be affected by these changes. In case of direct reworking, all traces of additives must be pre-wetted and completely removed after a short reaction time. An additional priming coat of CapaGrund Universal must be applied. The traces cannot occur when the material is applied under suitable climatic conditions.</p> <p>Touching up surfaces is depending on many parameters and may be visible after drying. Germany: BFS-Merkblatt/Data Sheet No. 25. The use of phenol-based disinfectants may cause surface yellowing.</p>

Advice

German Certificates

- Amphibolin Permeability to carbon dioxide
- Amphibolin Lightness/Luminosity
- Amphibolin Resistance to disinfectants

Special Risks (Hazard Note) / Safety Advice (Status as at Date of Publication)

Amphibolin-W:

Harmful to aquatic life with long lasting effects. Avoid release to the environment. Dispose of contents/ container to an approved waste disposal plant. If swallowed, seek medical advice immediately and show the container or label (intestinal bacteria can be affected). Do not empty into drains, water courses or into the ground. Use P2 dust filter for grinding. Ensure good ventilation during use and drying. Do not eat, drink or smoke while using the product. In case of contact with eyes or skin, immediately and thoroughly rinse with water. Clean utensils immediately after use with soap and water. Apply by brush or paint roller only.

Contains: 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one. May produce an allergic reaction.

In Germany: Advice for allergy sufferers with isothiazolinone allergy: Hotline 0180/5308928 (0.14 €/minute from German landline, MTS max. 0.42 €/minute).

According to European Regulation 528/2012 this product is defined as a “treated article” (not a biocidal product) and contains the following biocidal substances: Carbendazim (CAS-No. 10605-21-7), Isoproturon (CAS-No. 34123-59-6), Terbutryn (CAS-No. 886-50-0), 2-Octyl-2H-isothiazol-3-one (CAS-No. 26530-20-1).

Amphibolin:

Keep out of reach from children. Ensure good ventilation during use and drying. Do not eat, drink or smoke while using the product. In case of contact with eyes or skin, immediately and thoroughly rinse with water. Do not allow product to enter drains, waterways or soil. Clean utensils immediately after use with soap and water. Do not breathe spray dust. Use A2/P2 combination filter for paint spraying.

Further information: See Material Safety Data Sheet (MSDS).

Contains: 1,2-benzisothiazol-3(2H)-one, 2-methyl-2H-isothiazol-3-one. May produce an allergic reaction.

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Please Note (Status as at Date of Publication)

Disposal

Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Particular attention should be made to re-moving wastage from site in compliance with standard construction site procedures.
In Germany: Only completely empty containers should be handed in for recycling. Dispose containers with residues of liquid product via waste collection point accepting old paints and enamels. Dispose dried/hardened product residues as construction site/demolition/municipal or domestic waste.

EU limit value for the VOC content

of this product (category A/c): max. 40 g/l (2010). This product contains max. 10 g/l VOC.

Product Code Paints and Enamels

Amphibolin: M-DF01 (Germany)
Amphibolin-W: M-DF01F (Germany)

Substances of Content - Declaration

Amphibolin:
Acrylic resin dispersion/emulsion, titanium dioxide, silicates, water, additives, preservative (Methylisothiazolinone, Benzisothiazolinone).

Amphibolin-W:
Acrylic resin dispersion/emulsion, titanium dioxide, silicates, water, additives, preservative (Methylisothiazolinone, Benzisothiazolinone), film preservative (Carbendazim, Terbutryn, Octylisothiazolinone, Isoproturone).

Further Details

See Material Safety Data Sheets (MSDS).

Technical Assistance

As it is impossible to list herein the wide variety of substrates and their specific problems, please request our technical assistance in case of queries. We will describe appropriate working methods, if a substrate not specified above is to be coated.

Customer Service Centre

Tel.: (+49) 0 61 54 / 71 17 10
Fax: (+49) 0 61 54 / 71 17 11
e-mail: kundenservicecenter@caparol.de

International Distribution: Please see www.caparol.com

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All suggestions and application instructions herein are based on our latest technical experience. Due to the wide variety of individual project conditions, we cannot be held responsible for their content. These instructions do not release the purchaser/ applicator from his responsibility to determine the suitability of the product in consideration of the project characteristics. These instructions are to be considered void when a new edition is released. Our general conditions of sale and delivery in their latest edition apply. This document is a translation of our German Technical Information No.100 - Amphibolin / Amphibolin-W - Issued: April 2016