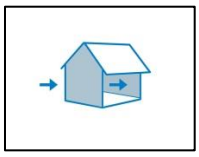
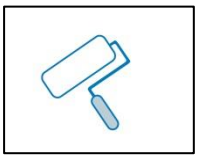
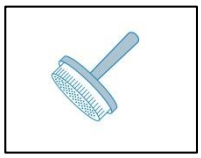
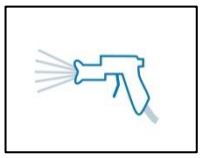
Technical Data Sheet

Amphibolin

Pure Acrylic Water Based Premium Quality Paint For Most Common Substrates For Exterior And Interior

Product Description

Amphibolin is new generation premium quality 100% pure acrylic water based smooth finish paint for exterior and interior surfaces. It is self-primed multipurpose with excellent resistance to weathering and shows high UV resistance. **Amphibolin** also exhibits excellent adhesion to almost all substrates. Also available as **Amphibolin W**, an organic growth inhibiting, fungus/algae resistant emulsion paint. It can be use as finishing coat on top of textured intermediate coats for EIFS/ETICS.


Recommended Use

Amphibolin is suitable for interior and exterior use on walls and ceilings on:

Cement plastered walls
Gypsum boards
Sound existing water based paint coatings
Fibrous cement sheets
Uncoated concrete
Sound existing mineral coatings
Rendered fair faced brick masonry

Unsuitable are substrates showing efflorescence and substrates made of plastic or wood. Not suitable for horizontal or sloping surfaces subject to weathering.

Definition of Application Areas

Suitability according to Caparol Technical Information No. 0606

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

Physical Properties

Volume solids	42±2%
Colour*	White **Amphibolin** is tint able by the manufacturer as per in Caparol defined colour shade groups to Caparol´s popular colour fan deck “Your Colour Guide”; it´s also on request tint able to selected colours for “Caparol 3D System Plus” colour collection and as well for other colour collections listed in Caparol database. Check tinted product before applying to avoid colour deviation. If more than one bucket/container is manually tinted, all products must be thoroughly mixed before use in order to avoid colour differences. Brilliant, intensive colours shades may are not possible to tint or show a lower opacity (hiding/covering power). It is therefore advisable to apply an additional finish coat with in the desired colour shade. Possibly a second finishing coat may be necessary. Always use tinted paint of same batch, when applying on seamless surfaces.
VOC	1.95 g/litre
Thinner/Cleaner	Potable clean water
Finish	Semi-matt, Silk & Gloss
Packing size	1 litre, 3.75 litres & 18 litres
Shelf life	24 months

*Product can be tinted on CAPAROL tinting express system and made available instantly. Tinting may cause variations in the technical characteristics.

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Advantages

Weatherproof, alkali resistant and highly washable

Very low liquid water permeability

High adhesive strength to a multitude of substrates

High degree of protection against aggressive air pollutants

Superb crack-bridging properties

Low odour

Paint with antibacterial activity

Excellent wet adhesion properties making it suitable to apply directly to aged alkyds with minimal surface preparation

Paint with high degree of protection against UV rays

Available with anti-fungal properties as Amphibolin W

Certificates and Test Values*

Surface Spread of Flame certified as Class1 as per BS 476

Antibacterial activity and efficacy against Staphylococcus aureus and Escherichia coli tested as per JIS Z 2801:2000

Water Vapour Transmission >15g/m^2/d Class V_2 tested as per ISO 7783-2

Liquid Water Permeability <0.1 kg/m^2-$h^{0.5}$ Class W_3 "low" as per EN 1062-3:2008

Carbon Dioxide Permeability CO_2 flux<5 g/m^2/d and CO_2 corresponds to class C_1 as per EN1062-6 Value CO_2 S_D>50m

Crack Bridging Ability passes 3.2mm as per ASTM C836/C 836M-15

Chloride Ion Diffusion 5.11x10 Cm^2/S as per ASTM C 1556

Wet Scrub Resistance passed 25000 cycles without failure as per DIN 53778 Part 2

Burnish Resistance no characteristic changes observed as per ASTM D2485-91

Stain Resistance resistant as per ASTM D1308

Pull off resistance > 0.8 N/mm^2according to EN 1504-2

Salt Spray resistance (500 hours) as per ASTM B117-18: No Corrosion was observed on the coated specimen

Light fastness after 2500h accelerated UV humidity conditioning passes without showing any film defects, chalking and colour fading

Light fastness after 5000h accelerated UV-conditioning according EN ISO 11507 = fully satisfying

DCLD Product Conformity certified

ESMA ECAS GREEN LABEL 5 Star Environmental Efficiency Rating certified

Abu Dhabi Quality and Conformity Council Conformity certified

ADCE certified civil supplier

*Additional certificates and approvals may available on request or could be arranged if required.

Environment and Health

- **VOC (USEPA Method 24):** 1.95 g/l
- **Hazardous Chemicals - free from:**
  - Formaldehyde (ASTM D6191): <10ppm
  - Heavy Metals (ASTM/WLIP 028) <0.01ppm

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- APEO (USEPA 8260B): <0.01mg/kg
- Phthalates (GC-MS): <0.01mg/kg

Amphibolin it is environmentally friendly and has low Volatile Organic Compounds (VOC). Amphibolin is free from all Harmful Chemicals and Heavy Metals.

Surface Preparation

The substrate must be even, clean, dry, solid, sound/stable, and free from all substances that may prevent adhesion. Remove unsound coatings of enamels, dispersion paints, synthetic renders/plasters and unsound mineral paint coatings. Clean sound, adherent paint coatings dry or wet. Clean surfaces with organic growth (moss, algae and mild) by high pressure water jet in compliance with the regulations. Treat the surfaces with **CapaTox** and allow drying thoroughly. Clean surfaces soiled with industrial gases or soot by high pressure water jet and suitable cleaners in compliance with the regulations. Adjust the substrate evenness of the planned, finer surface finish. If necessary, carry out additional substrate levelling measures. Check existing coatings for their load-bearing capacity. Remove any non-load bearing or structurally weak coatings. Any damaged areas or surface irregularities should be repaired before application. Repairs must be well set and dried out. Damp or not fully cured substrates can lead to defects in subsequent coats, such as blistering or cracks. It is most important that substrates are correctly prepared prior to application of paint.

Mixing Paint

Amphibolin is single component water based product, should be mixed properly before application. The material can be diluted with potable clean water only. Stir **Amphibolin** with a low-speed stainless steel agitator. Do not use mixers made of aluminium - danger of discolouration. Use as little water as possible to achieve application consistency. Stir well before application. For airless spraying the amount of water added depends on the requirement of the airless machine. If necessary adjust to working consistency with tap water up to max. 10 %. Ensure short stirring times at low speed to prevent foam formation in the binding agent. Foam formation can have an impact on wet adhesion with significantly lower consumption, and hence due to the lower paint density, can cause the substrate to shine through. This, in turn, leads to patchy and inhomogeneous drying of the render layer. As a rule, in case of strong colour shades less water needs to be added to achieve the optimum application consistency. Diluting the material too much will make application more difficult and will result in poorer characteristics (e.g. hiding power, colour shade). It´s strongly recommend to use the thinned paint in same shift and not to store for next day as there are might chances of paint losing its characteristic's, settling, formation and chances of bacterial contamination from external sources. Hence recommended to estimate paint required for the shift and mix accordingly to avoid any problems.

Film Thickness and Spreading Rate*

	Minimum	Typical	Maximum	
Wet film thickness	95	107	120	µm
Dry film thickness	40	45	50	µm
Theoretical spreading rate	10.5	9.5	8.5	m²/litre

*Indicated rates are indicative per coat, due allowance and wastage factor should be considered in practical application. This indication does not take into account usage for spilling or loss on site. The figure may also vary according to substrate or application conditions. The exact rate of consumption for your particular project is best established by a trial application on site and executed by your desired applicator.

Drying Time*

Substrate temperature	10°C	25°C	40°C	
Touch dry	4	2	1	h
Dry to over coat	12	6	3	h
Ready for stress	96	48	24	h

*The material cures physically by evaporation of water. Drying time generally related to air circulation, temperature, film thickness, no of coats and relative humidity. The given data must be considered as guidelines per coat only.

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The actual drying time before recoating may be shorter or longer, depending on film thickness, ventilation, humidity, underlying paint system, requirement for early handling and mechanical strength etc. The figures given are typical with: Good ventilation (outdoor exposure or free circulation of air), typical film thickness, on coat on top of inert substrate and relative humidity 70%.

Application Conditions

Substrate temperature should be min.5°C and at least 3°C above the dew point of the air. Suitable processing temperature should between + 5 °C to approx. 40 °C for material, substrate, water and ambient air during application and curing.

At application below 10°C drying temperature will be significantly extended and spraying characteristics may be impaired. Paint to be applied to suitable primed surface. Do not apply during strong wind, fog, high relative humidity, and imminent rain or frost. Do not apply or leave to dry in direct sunlight as this can lead to differences in gloss levels and even to slight cloudiness.

Application Equipment's/Tools

Manually application by roller, brush or airless spraying equipment

Guiding data for airless spray equipment*

Spraying angle: 50°- 80°
Nozzle size: 0.018" - 0.026"
Pressure: 150 - 180 bars

*The spray details given above are intended as a guide only, fluid hose length, diameter, paint temperature and project complexity all influence the choice of tip and operating pressure. Always check to ensure that filter is clean.

Typical Application Procedure*

Depending on the type and condition of the substrate, it may be necessary to apply consolidating, absorbency-regulating prime coatings. On suitable mineral substrate it is usually necessary to apply an absorbency-equalizing and adhesion promoting prime coat with **CapaAcryl Primer**. On organic substrates we recommend using colour-adjusting intermediate coats if the colour shade of the finishing render is very different to the colour shade of the substrate. When using render textures, a colour shade adjusting intermediate coat with **CapaAcryl Primer** is generally recommended. Allow thorough drying of priming/intermediate coats before further application. Apply **Amphibolin** with suitable roller, brush or airless spraying equipment homogeneously to the complete surface and immediately treat the material as per desired design. Apply thoroughly an even layer and avoid overlapping that may be caused by stories of scaffolding. To avoid lapping on large area surfaces, care should be taken to have a sufficient number of hands/craftsmen on the job and to apply the material wet-on-wet without interruption.

* For system specific application instructions please refer to detailed MS (method statement) or specification.

Typical Paint System*

Amphibolin can be used on suitable exterior and interior surfaces as follows:

Exterior and interior surface standard typical paint system	**Coats**
CapaAcryl Primer (for all normal absorbent mineral substrates) or *CapaSeal SB (for week and high absorbent mineral substrates)* Amphibolin	1 2

* Above mentioned paint system is for general guide line only, can be changed as per specification requirements. 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 provide appropriate working methods.

Important Note

The characteristic values stated are average values or approx. values. We use natural raw materials in our products, which mean that the stated values can vary slightly in the same delivery batch; this does not affect the suitability of the product for its intended purpose. Being natural products, the granular materials used in the paint finishes, may occasionally cause slight colour variation in the finished coating.

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Use only material marked with identical batch numbers or, if utilizing material from different batches, mix the entire quantity needed in advance. As usual for facade paints, **Amphibolin** paint system must not be applied in direct sunlight or on sun heated surfaces, during strong wind, fog or rain, high relative humidity, imminent rain or impending night frost. Apply wet-on-wet and without interruption to avoid lapping. Stir and sieve the paint thoroughly in case of airless spray application. Do not apply on horizontal surfaces exposed to rain or moisture.

Do not apply on calcareous (high lime) substrates and lightweight renders/plasters. 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 (Emulsifier washouts) 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 **CapaAcryl Primer** must be applied. The traces cannot occur when the material is applied under suitable climatic conditions. This does not constitute an impairment of product quality. Statically (structural/constructional) cracks may be subject to extreme movements. Therefore a durable and invisible crack bridging treatment by paint products is impossible. Joints in the vicinity of windows, doors and window sills must be sealed in a technically correct manner with permanently elastic sealing compound.

Facades in special climatic conditions (high degree of moisture) or subjected to a higher influence of atmospheric exposure: Additional top coat of our special product **Amphibolin W** is advisable. **Amphibolin W** is provided with a preservative against deterioration in the coating film due to algal and fungal attack and offers a long-lasting protection, but the algaecide & fungicidal effect is limited by the special facade conditions, e.g. intensity of attack and moisture loads. Thus, a durable protection cannot be guaranteed. Mechanical loads on matt façade paints or coatings in dark shades may produce bright-toned stripes as a product specific property (no writing resistance). Touching up surfaces is depending on many parameters and may be visible after drying.

Please note: It is recommended to use trained and experienced applicator to carry out painting works.

Colour Stability

Due to weathering, and in particular due to the intensity of UV radiation and the effect of humidity, the surface of coatings changes over time. This can result in visible changes in colour. At the same time, it is a process which is influenced by substrate and environment conditions. This does not impair the quality and the functionality of the product. When coated surfaces are exposed to mechanical stress it is possible that, due to the natural calibration grains used for darker, more intense colour shades, the areas of impact change to a lighter colour. This does not affect the quality and functionality of the product. It is not possible to give warranty for uniform colour accuracy and freedom from stains due to chemical and/or physical curing processes and fluctuations in the weather and different substrate conditions, e.g. uneven absorption behavior of the substrate, different substrate moisture levels over the entire the surface, partially very different alkalinity/substances from the substrate, direct solar radiation with sharply delineated shadowing on the freshly applied coating.

Storage and Handling

24 months when stored in warehouse conditions below 35°C in the original, unopened packs. The product must be kept in in cool, dry well ventilated space and away from source of heat and ignition. Containers must be kept tightly closed and always handle with care. Keep out of reach of children.

Health and Safety

Always ensure good ventilation during application and drying. Do not eat, drink or smoke while using the product. Do not breathe vapors or spray when applying paint indoor by spray, wear proper air supplied breathing equipment's. Respiratory equipment's must be suitable for the purpose and meet appropriates standards. When applying paint, it is advisable to wear suitable eye protection, in case contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove splashes from skin, use soap and water or recognized skin cleaner. Do not use or store by hanging on a hook.

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Materials and all related packaging must be disposed of in a safe way in accordance with the full requirements of the local authorities. Do not allow product to enter into wadis, waterways, drains, watercourses and soil. Only completely emptied containers should be given for recycling. Material safety data sheet (MSDS) available on request.

Amphibolin W

Also available as **Amphibolin W**, an organic growth inhibiting, fungus/algae resistant emulsion paint.

Please also always refer to: TDS No. 0606 Definition of Application Areas

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