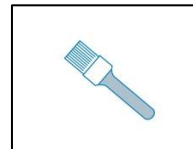
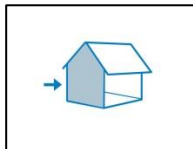


Product Description

Nano 360 is a superior quality paint which is extremely durable because of its highly innovative Nano-composite binder that combines the hardness of inorganic binders with the elasticity of organic binders. It is a new generation superior quality Nano-composite acrylic binder technology for exterior surfaces with extreme outstanding exterior durability. **Nano 360** is specially formulated with an advanced, ground breaking and unique Nano-pure acrylic binder in combination with other premium quality raw materials that reduces maintenance intervals and extends the paint structures life circle up to 25 years. **Nano 360's** special recipe provides a durable and long lasting finish with excellent Dirt Pick-up Resistance. **Nano 360** offers outstanding protection against the deteriorating effects of UV rays, with added benefits of non-yellowing, superb gloss retention, and excellent water whitening resistance and gives walls the opportunity to withstand harsh climate conditions for longer period of time. **Nano 360** is available in a wide variety of long-lasting colours in more than 1000 colour shades. **Nano 360** increase your facades lifespan, providing best possible resistance to dirt accumulation and keeps exterior surfaces fresh and clean for longer periods.



Recommended Use

Nano 360 is suitable for exterior use on walls and ceilings on:

Cement plaster, gypsum boards, sound existing water based paint systems, concrete, rendered surfaces, block work, etc.

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 / (o) of limited suitability / (+) suitable				

Physical Properties

Volume solids 57 ±2%

Colour* White

Nano 360 is tintable 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 tintable 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.

Thinner/Cleaner Potable clean water

Finish Sheen

Packing size 1 litre, 3.75 litres & 18 litres

Shelf life 12 months

*Tinting may cause variations in the technical characteristics.

Technical Information No. 0115 – Issue: March 2020

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/consultant 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. We reserves the right to change the given data without further notice. Our general conditions of sale and delivery in their latest edition apply.

Advantages

Superior Nano-composite paint for extreme outstanding exterior durability
Its special Nano formulation reduces repainting intervals and lowers maintenance cost
Excellent dirt pick-up resistance
Outstanding average lifespan compared to other water paint systems
Ultra-weatherproof and maximum suited to withstand harsh climatic conditions
Combines the hardness of inorganic binders with the elasticity of organic binders
Very good alkaline resistance
Non-yellowing
Enhanced gloss retention
Excellent adhesion
Good adhesive strength
High degree of protection against aggressive air pollutants
Superb application properties
High degree of protection against UV radiation
Safe, non-toxic and easily cleanable with soap and water
Excellent water whitening resistance
Ultra-long-lasting and fade resistant colours
Excellent weather-ability
Anti-carbonation properties
APEO free

Environment and Health

- **Energy Efficiency:** Initial / aged : up to 5% reduction in energy consumption - higher Solar Reflective Index (SRI). Also the **Heat reflective ability** reduces the surface temperature and cools your homes or buildings.
- **Sustainability:** up to 10% reduction in the CO₂-Footprint – Sustainable Biomass used instead of Fossil oil
- **CO₂ saving:** up to 2.75kg of CO₂/m² per year – helps to reduce effects of Global warming
- **Green Product:** Nano 360® is a Green Product which saves energy, reduces carbon footprint and helps environment by reducing the **urban heat island effect**
- **Cost Saving:** up to 22% cost reduction due to fewer renovation cycles* - Lasts 3 times more as compared to conventional paint
- **Excellent Resistance against Dirt pick up:** The paint film resists dirt/dust settlement and keeps the façade looking fresh for longer. Also it can be easily cleaned and maintained.
- **Microbial properties:** Prevents growth of bacteria and fungus and gives long lasting protection

Nano 360 is a sustainable, green, environmentally friendly and Lead Free paint; it has very low Volatile Organic Compounds (VOC) and is free from all Harmful Chemicals and Heavy Metals.

Technical Information No. 0115 – Issue: March 2020

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/consultant 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. We reserves the right to change the given data without further notice. Our general conditions of sale and delivery in their latest edition apply.

Certificates and Test Values*

Volume Solids as per ASTM D2697-03: 57.1%

Crack Bridging Ability as per ASTM C836: Passed 1.82mm

Adhesion Strength as per ASTM D4541: Average Pull off Strength 2.58 N/mm²

Rapid Chloride Permeability as per ASTM C1202-12: Reduction in RCP 99%

Water Resistance (1000 hours) as per ASTM D870: No signs of colour change, blistering or removal of coating after test

Water Vapour Permeability as per ISO 7783

Water Vapour Transmission Rate as per ISO 7783:2011: 97.27g/m²/d Class V2 "medium"

Water Vapour Diffusion Equivalent Air Layer Thickness as per ISO 7783:2011: 0.24m = Class V2 "medium"

Water Vapour Resistance Factor as per ISO 7783:2011: 646 = Class V2 "medium"

Reduction in Water Absorption as per ASTM C642-13: 98.9%

Liquid Water Permeability as per BS EN 1062-3:2008: <0.1 kg/m²-24h0.5 Class W3 "low"

Average Carbon dioxide permeability (i) as per BS EN 1062: 0.568g/m²d

Diffusion equivalent air layer thickness Sd (R value) as per BS EN 1062: 436.62m

Diffusion equivalent air layer thickness of concrete (SC) as per BS EN 1062: 1.09m

Diffusion resistance number (μ) as per BS EN 1062: 2.18 x 10⁶

Carbon dioxide diffusion coefficient of the coating, DCO₂ as per BS EN 1062: 6.88 x 10⁻⁸

Abrasion Resistance as per ASTM D4060:2014: Weight loss 40 mg

Tensile Strength as per ASTM D412-06a: Average 3.82N/mm²

Fungal Resistance as per ASTM D3273: Resistant

Salt Spray (500 hours) as per ASTM B117-18: No cracking, no blistering, no flaking & no spot rusting was observed

Humidity Resistance (500 hours) as per BS 3900: No Signs of Blistering or deterioration observed on the sample

Flame Spread Index (FSI) as per ASTM E84-18b: 5 = Class A

Smoke Development Index (FSI) as per ASTM E84: 10 = Class A

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.

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.

If necessary adjust the substrate evenness of the planned, finer surface finish with **CapaFilex**. For heavy undulations, carry out additional substrate levelling measures with suitable thick layer plasters/renders like **Capatect Levelling Plaster**.

It is most important that substrates are correctly prepared prior to application of paint.

Technical Information No. 0115 – Issue: March 2020

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/appliator/consultant 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. We reserves the right to change the given data without further notice. Our general conditions of sale and delivery in their latest edition apply.

Mixing Paint

Nano 360 is single component water based product, should be mixed properly before application. The material can be diluted with potable clean water only. Stir **Nano 360** 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	70	79	88	µm
Dry film thickness	40	45	50	µm
Theoretical spreading rate	14.3	12.7	11.4	m ² /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	8	4	2	h
Dry to over coat	16	8	4	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. 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

Technical Information No. 0115 – Issue: March 2020

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/consultant 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. We reserves the right to change the given data without further notice. Our general conditions of sale and delivery in their latest edition apply.

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** or **CapaSeal SB**. 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 **Nano 360** 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*

Nano 360 can be used on suitable exterior surfaces as follows:

Exterior surface typical standard paint system

	Coats
CapaAcryl Primer (for all normal absorbent mineral substrates) or if necessary <i>CapaSeal SB (only for weak and high absorbent mineral substrates)</i>	1
Nano 360®	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. 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, **Nano 360** 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** or **CapaSeal SB** must be applied. The traces cannot

Technical Information No. 0115 – Issue: March 2020

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/consultant 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. We reserves the right to change the given data without further notice. Our general conditions of sale and delivery in their latest edition apply.

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. 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 appropriate 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. 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.

Please also always refer to:

TDS No. 0606 Definition of Application Areas

Technical Information No. 0115 – Issue: March 2020

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/consultant 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. We reserves the right to change the given data without further notice. Our general conditions of sale and delivery in their latest edition apply.