



# Sunlight Exterior Technical Sheet

Reduces air pollution

Inhibits growth of bacteria and mould on the dried paint surface

Repels dust and airborne dirt

Cuts cooling costs by up to 29%

Reduces odours

Ensures excellent aesthetic performance with the application of a single coat



Airlite Sunlight Exterior is a mineral, inorganic exterior paint with high breathability. It is available in white and numerous colours. Provided in a powder form, it has to be mixed with water before application. The technology of Airlite is recommended by the Italian Ministry of Environment via Article (G.U. n. 84 - 9 April 2004) – Innovative Systems and Technologies for the mitigation and removal of environmental pollution. Airlite Sunlight Exterior is Cradle to Cradle Certified™ at the gold level. Cradle to Cradle Certified™ products are evaluated for material health, material reutilization, renewable energy use and carbon management, water stewardship, and social fairness.

\*This product meets Green Seal™ Standard GS-11 based on effective performance, minimized/recycled packaging, and protective limits on VOCs and human toxicity. GreenSeal.org.

## Benefits

Airlite Sunlight Exterior is a new, revolutionary technology, conceived and designed to clean the air of the spaces in which we live and work and where we spend our leisure time. Airlite is a bacteria-resistant and mould-resistant paint. Bacteria and mould are reduced on the surface by the double action of surface oxidation and high alkalinity, which, combined, prevent them from surviving. Its high durability and self-cleaning effect ensure better conditions of the infrastructure, reducing the frequency of painting and maintenance. Effective against the disruptive action of water, rain, acid rain and smog and it retains a high level of surface breathability. Furthermore, it has a high reflectance power and prevents the excessive flow of heat into buildings, ensuring cooler environments cuts cooling costs by up to 29%. Activated in the presence of light, the effectiveness is preserved with limited to no reduction of performance due to the catalytic nature of the technology. With the application a single coat of tinted Airlite Primer and a single coat of Airlite Sunlight Exterior, an excellent aesthetic performance and a finely velvety natural finish is guaranteed, reducing the time of application. The special inorganic composition of the paint is in class A2-s1, d0 regarding fire classification (UNI EN 13501-1:2009). The VOC content is less than 0.1 g/l in the white coloured product when being applied (European Directive 2004/42/CE), more than 400 times less than the limit defined in the European Regulations. Airlite is LEED, WELL and BREEAM compliant: Airlite products can help you get points for LEED, WELL and BREEAM certification of buildings. Further details on LEED, WELL and BREEAM compliancy can be found on our website or upon request.

## Field of application

Airlite Sunlight Exterior can be applied on all the external surfaces (new or existing). It is ideal for every type of external application. Particularly:

- external plasters, New Jersey type concrete, concrete surfaces and masonry
- prebuilt elements, parking areas, viaducts
- infrastructure of road transport, railway and airport
- overlay of galleries with suitable light
- traffic dividers, overlay of sound barriers
- sensitive receptors such as schools, hospitals, residences, public and private buildings

## Preparation of the base

The base must be intact, solid, dry and clean. It must be free of dust, oil, efflorescence, incoherent particles, substances or salts that might prevent the adhesion of the paint. The substrate must be treated with tinted Airlite Primer (white or coloured).

## Particular cases

**Old Substrates:** the surfaces must be treated carefully. Moulds must be removed prior to application of Airlite Anti-Mould. Any remaining paint, old overcoats and overlays must be removed and the surface must be cleaned again.

**Concrete:** the surfaces must be treated carefully. Any remains must be removed and surface flaws repaired before the application of the product. Any remaining oil, grease and wax must be removed with sandblasting machine.

## Application Cycle

The complete application cycle includes the preparation of the substrate with a single coat of tinted Airlite Primer, and a single coat of Airlite Sunlight Exterior.

## Tools

- Short-haired roller
- Brush
- Roller grid
- Empty can
- Water
- Scale
- Measuring cup
- Drill mixer

## Application Instructions

The following instructions have been compiled to ensure the correct application of Airlite. Please follow them closely. It is essential that the correct ratio/combination of Airlite Powder and water is respected (see below). Airlite is made with natural materials in order to get the best results possible, it is recommended to complete the painting of the surface without interruption in order to have an even finish. The application of a single coat of tinted Airlite Primer is essential before the application of Airlite Sunlight Exterior. For any enquire, please contact our customer service department by writing to: [info@airlite.com](mailto:info@airlite.com)

**Instructions for the preparation of 5 kg of Airlite powder.** For different quantity, the same proportions and procedures must be applied (eg.: each 1 kg of Airlite powder has to be mixed with 0,75 litres of water).

## White Paint\*

1. Take 3.75 litres of clean water.
2. Pour 2 litres of the prepared water into 5 kg of Airlite Sunlight Exterior powder.
3. Mix it with a mixer until the powder is completely dissolved. It is recommended to start with a lower speed and increase it gradually to a higher speed.
4. Add the remaining 1.75 litres of water to the mix.
5. Continue mixing it alternating the speed of the mixer, until you have the optimal consistency.

## Coloured paint\*

1. Fill up a container with 3.75 litres of clean water.
2. Take the container of the pigment.
3. Pour all the coloured pigment into the 3.75 litres of water, mix it at least for 20 seconds, until it is completely dissolved.
4. Pour 2 liters of the coloured water into the 5 kg of Airlite Sunlight Exterior powder.
5. Mix it with a mixer until the powder is completely dissolved. It is recommended to start with a lower speed and increase it gradually to a higher speed.
6. Add the remaining 1.75 litres of water to the mix.
7. Continue mixing it alternating the speed of the mixer, until you have the optimal consistency.

### Attention:

Once the paint is ready, it has to be applied in 3 hours (this is an indicative value, it depends on the environmental conditions).

For airless spray gun application, use a nozzle type 427-429 and a pressure of approx. 100/140 bar.

The tools used must be rinsed thoroughly with water immediately after use.

# Analysis of heavy metals and Volatile Organic Compounds (VOC) of Airlite

Comparison of the emission of Airlite and the defined limits of the A+ VOC category

VOC EMISSION  $\mu\text{g}/\text{m}^3$  – EN ISO 16000-6:2011



Compound	Airlite Emission ( $\mu\text{g}/\text{m}^3$ )	Limit ( $\mu\text{g}/\text{m}^3$ )
TVOC	<2	<1000
Formaldehyde	<3	<10
Acetaldehyde	<3	<200
Toluene	<2	<300
Trichloroethylene	<2	<250
Ethylbenzene	<2	<750
Xylene	<2	<200
Styrene	<2	<250
2-Butoxyethanol	<2	<1000
1, 2, 4- Trimethylbenzene	<2	<1000
1, 4- Dichlorobenzene	<2	<60

Heavy metal and VOC content of Airlite Sunlight Exterior

VOC CONTENT - EN ISO 11890/2

VOC < 0,1 g/l

HEAVY METAL CONTENT – ICP - MS

Cadmium	0,000023%
Lead	0,00069%
Chromium	0,0012%
Mercury	< 0,00002%
Arsenic	0,00019%

Airlite has 5 to 500 times better performance in comparison to other paints that have A+ certification.

The indicated values are results of the laboratory tests following the official standard and can be different from the results of the individual cases. Airlite uses a set of patented technologies of which some activates in the presence of sunlight or lamps that have the same frequency; in case of lacking any of them, some of the characteristics cannot be activated (partially or completely).

## Technical Characteristics

Water in the end product	75% of the total weight
Time of application	in 3 hours from mixing the powder with water
Apparent density of the product (powder)	0,8 kg/l
Apparent density of the product (liquid)	1,4 kg/l
Vapour permeability	V1 - high - NF EN ISO 7783   447,4 g/m <sup>2</sup> / 24h
Fire resistance	Class Euro A2 - s1, d0 UNI EN 13501-1:2009   class 0 BS 476:Part 6:1989+A1:2009 and BS 476:Part 7:1997
VOC content	< 0,1 g/l - UNI EN ISO 11890/2
VOC emission	< 2 $\mu\text{g}/\text{m}^3$ - UNI EN ISO 16000-6:2011
Heavy metal content	$\leq$ 0,0012% (Cd, Pb, Hg, As, Cr) - ICP - MS
Resistance to mould	Prevents the development of moulds - ASTM D 3273
Resistance to bacteria	Prevents the development of bacteria – JIS Z2801
Yield	In standard conditions 10-12 m <sup>2</sup> /kg per layer
Alkali resistance	No alteration of gloss or colour - ISO 2812-4
Humidity resistance	No damage - ISO 6270
Corrosion tests in artificial atmospheres Salt spray tests	Blistering degree $\rho(S_0)$ - No blistering Flaking degree $\rho(S_0)$ - No flaking
Methods of exposure to laboratory light sources	Blue scale > 7. From grade 1 (minimum solidity) to 8 (maximum solidity) - UNI EN ISO 16474-2:2014 Grey scale: 5. From grade 1 (minimum solidity) to 5 (maximum solidity) - UNI EN ISO 16474-2:2014 Chalking degree < 1. From 1 (minimum chalking) to 5 (maximum chalking) - UNI EN ISO 16474-2:2014
Solar reflectance index (SRI)	112 - ASTM E1980
Solar reflectance	89 % - ASTM C 1549-09
Thermal emittance	0.86 - ASTM C 1371

# Technical details

## Yield

Depends on the absorption and roughness of the surface and the tools used for the application.

In standard conditions, the yield is approximately 10-12 m<sup>2</sup>/kg for one layer.

Please purchase the appropriate amount of paint for your project.

## Health and safety

Ingestion can cause irritation. Repeated ingestion can cause kidney damage.

## Supply

Airlite Sunlight Exterior is provided in packages of 5 or 10 kg, or in 20 kg bags.

## Precaution

Keep the container closed when not in use. Do not ingest.

## Storage

Airlite Sunlight Exterior should be stored in dry places.

## Duration

1 year, if it is stored appropriately, closed in the complete original packaging.

## How to clean the tools

Clean the tools with water immediately after their use.

## Colours

Airlite is available in a wide range of mineral, high performance colors. Customised colours are available only for request.

## Application

Airlite can be applied in a temperature between 2°C and 40°C with brush, roller or airless\*. The applied paint dries completely 5 hours after its application on the surface (+20°C, 65% humidity). In low temperature and/or high level of humidity, the desiccation could be longer. Use adequate ventilation during both application and drying.

\*For airless spray gun application, use a nozzle type 427-429 and a pressure of approx. 100/140 bar.

## Finish

Velvety Flat.

## Caution

Walls painted with Airlite must be protected from rain for about 48 hours.

## Proper disposal

Please contact local authorities regarding proper disposal, recycling, or donation opportunities for leftover product. Packaging must be recovered or disposed of in compliance with national regulations on waste management.

## First aid

In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes. In case of ingestion immediately seek medical advice. For further information, please make reference to the Security Sheet (MSDS).

**KEEP LOCKED UP AND OUT OF THE REACH OF CHILDREN.**

# Tender Specification

Water based paint in powder form to dilute with water called Airlite Sunlight Exterior, which reduces air pollution and is a transpiring, bacteria-resistant and self-cleaning, containing photocatalytic substances, ultra fine inert elements and special additives according to the D.M. Italian Ministry of Environment 01.04.2004. SRI (Solar Reflectance Index – measured according to the international standard ASTM E1980) is higher than 108, VOC content must be less than 0.1 g/l; high water permeability V1 – NF EN ISO 7783 higher than 430 g/m<sup>2</sup>/24h, heavy metal content, such as Cd, Hg, As, Pb, Cr is lower or equal to 0,0015%. The yield of one layer is approximately 10-12 m<sup>2</sup>/kg. Furthermore, the product must prevent the development of mould and must be in class A2-s1, d0 of fire resistance. It must be diluted with clean water at least 75%.

## LIMITED LIABILITY WARRANTY

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