cements

APSE®

floor products since 1964

APSEQUARZ KATALITIC

PASTE-BASED HARDENER FOR SMOG-ABSORBING CONCRETE



DESCRIPTION

APSEQUARZ KATALITIC is a ready-to-use mixture based on natural mineral aggregates (quartz) of high hardness, combined with special photocatalytic additives designed to make concrete pavements capable of absorbing smog.
Its high mechanical strength and ability to break down and encapsulate fine particulate matter make it particularly suitable for use in town squares – even those with heavy vehicle traffic – as well as on urban roads, in public parks, at airports, etc. Attractive aesthetic effects can be achieved in five different colour shades by adding selected organic pigments.
APSEQUARZ KATALITIC is applied to fresh concrete using the 'paste-based, fresh-on-fresh' method.

AREAS OF APPLICATION

The main areas of application are:

- New flooring in buildings
- Residential, commercial and industrial
- Outdoor areas and squares
- Freight terminals, public spaces
- Platforms for food markets
- Airport areas
- Roadways and cycle paths
- Garages, car parks
- Food processing industries (outdoor areas) etc.
- Ramps
- Access ramps to garages or car parks where a reduction in pollutants of up to 60%t is required.

CERTIFICATIONS

APSEQUARZ KATALITIC has been awarded the photocatalytic product certificate by the ITALCEMENTI technical centre (test report CTG No. 2007012)
It complies with the UNI EN 13813 standard: screed materials (DoP No. 215).
ISO 9001-certified quality management system (Certificate No. IT.17.0227.01.QMS).
APSE S.r.l. is an active member of CONPAVIPER.
It contributes to the achievement of LEED credits and has an EPD (Environmental Product Declaration).

ISO 9001 certiW CERTIFIED

CE EN 13813

PARTNER TX Active ITALCEMENTI

TX Active®

Since 2007, APSE has been a partner of ITALCEMENTI SPA in the photocatalytic project for TX Active® cementitious products with low environmental impact, capable of retaining 60 per cent of fine particulate matter harmful to humans. Its effectiveness has been extensively tested and subsequently certified by leading independent research centres (CNR, ARPA, Ispra Research Centre). TX Active® is the photocatalytic active ingredient for cementitious materials, patented by Italcementi. Products containing TX Active® are capable of breaking down organic and inorganic pollutants present in the air and preserve the aesthetic quality of the finished products over time. TX Active® is an eco-friendly, certified product for mortars, paints, plasters and floor coverings. With its pollution-reducing and self-cleaning properties, it is the seal of quality for photoactive cementitious products designed to improve life in our cities.

PACKAGING

25 kg polythene-lined paper sacks.

CONSUMPTION

- 12 kg/m² at a thickness of 6 mm
- 18–20 kg/m² at a thickness of 9–10 mm, where the floor is to be polished

FEATURES AND BENEFITS

- **Traps fine dust;**
- Increases the surface's mechanical strength;
- It is suitable for floors where excellent abrasion resistance is required;
- Increases resistance to wear caused by sliding and rolling friction, resulting from the passage of wheeled machinery, including vehicles with solid tyres;
- The surface can be polished to achieve a better aesthetic appearance and a cleaner look;
- The finish can be smooth or non-slip;
- It can be coated with METALCRIL or VERNILUX and does not cause oxidation;
- The finish can be smooth or non-slip;
- The product complies with regulations regarding fire reaction classes;
- When treated with METALCRIL, it offers excellent resistance to atmospheric agents, freeze-thaw cycles and attack by de-icing salts, and makes it water-repellent.

cements

APSE®

floor products since 1964

APSEQUARZ KATALITIC

PASTE-BASED HARDENER FOR SMOG-ABSORBING CONCRETE



PREPARATION OF THE SUBSTRATE

Large areas of concrete should be poured using a laser screed. For smaller areas, the traditional method using levelling strips is sufficient.
Trowel the concrete briefly, either by hand or using a machine.

PRODUCT PREPARATION

Mix in a vertical concrete mixer, adding 3.5 to 4.0 litres of clean water for each 25 kg bag of APSEQUARZ KATALITIC, and continue mixing until a homogeneous, lump-free mortar of a soft consistency is obtained.

METHOD OF APPLICATION

Spread the resulting mortar onto the fresh concrete in a layer between 6 and 10 mm thick, as soon as the concrete begins to set.
The air content of the concrete must be less than 3%.

Wait for the layer to set. (This time may vary depending on temperature and humidity conditions.) Then begin the trowelling process, which must be repeated until a perfectly smooth and uniform surface is achieved.

With the paste method, after waiting 7–10 days, the surface can be polished to achieve a finish that highlights the quartz grains.

N.B. In this case, trowelling should not be continued until a smooth surface is achieved; instead, the surface should be left slightly rougher, as this will facilitate sanding.

Apply the product at temperatures between +5°C and +35°C.

Paste application for the construction of garage ramps (using APSEQUARZ KATALITIC specifically for RAMPS)

- Mix in a vertical concrete mixer, adding 3.5 to 4.0 litres of clean water for each 25 kg bag of APSEQUARZ KATALITIC, and continue mixing until a homogeneous, lump-free mortar of a soft consistency is obtained;
- Construction of the panels;
- Spread the mortar onto the fresh concrete in a layer between 8 and 12 mm thick;
- Allow the layer to set. The time required may vary depending on temperature and humidity conditions;
- Using the appropriate shaped trowels and aluminium straight edges, create the grooves characteristic of the non-slip surface of the garage ramps, repeatedly running the tool over the mortar until uniform and compact grooves are achieved.

APPLICATION DATA (paste-type)

Minimum permitted thickness: 6 mm
Maximum permitted thickness: 12 mm

Tips for achieving a perfect finish:

- Mechanical spraying of the paste is prohibited. Apply APSEQUARZ KATALITIC evenly using an aluminium trowel on levelling guides to achieve the desired thickness;
- When APSEQUARZ KATALITIC begins to set, smooth the edges by hand with a trowel, and the main surface mechanically with a power trowel;
- Smoothing must be carried out using a trowel; For the white colour, use Teflon trowels to avoid burning the surface.

Application of APSERING AQ, BETONCURE or METALCRIL 12 J anti-evaporation curing agents

- APSERING AQ, BETONCURE or METALCRIL 12 J must be applied immediately after finishing;
- APSERING AQ, BETONCURE or METALCRIL 12 J should be applied evenly over the entire surface using a low-pressure spray, at a rate of approximately 100 g/m^2(refer to the relevant technical data sheets).

cements

APSE®
floor products since 1964

APSEQUARZ KATALITIC

PASTE-BASED HARDENER FOR SMOG-ABSORBING CONCRETE



CURING

For curing times (at +20°C), please refer to the table below:

Workability time	35 mins
Initial setting time	60 mins
Open to foot traffic	24–36 hours
Light traffic	14 days
In service	28 days

CLEANING OF TOOLS

Clean with water whilst the product is still fresh.
Clean mechanically once it has set.

WARNINGS

Do not use if the bag is damaged.
Do not add any additives unless specified by the manufacturer.
Do not add water once the product has started to set.

HEALTH AND SAFETY WARNINGS

For information on safety regulations, hazard warnings and safety advice, please refer to the most recent safety data sheet, which can be requested at: ufficiotecnico@apsebg.it

STORAGE

Up to 12 months if stored correctly in the original packaging in a dry place, away from moisture.
Store at temperatures between +5°C and +35°C.

DISPOSAL

Dispose of the contents and/or the container in accordance with local regulations.

PRODUCT TECHNICAL DATA

PHYSICAL PROPERTIES (at +20°C)

CHARACTERISTIC	STANDARD	RESULT
Appearance	-	Powder and granules
Colour	-	grey, red, green, tobacco, yellow-Gb420
Density	EN 1015-6	1.92 ± 0.05 g/cm³

QUARTZ CHARACTERISTICS

CHARACTERISTIC	STANDARD	RESULT
Natural quartz colours	-	White-yellow
Origin	-	Sedimentary and metamorphic
Grain size	-	0.50 – 0.70 – 1 – 2 – 3 mm
Loss on ignition (LOI)	EN 196-2	0.2%
Mohs hardness scale	EN 101	6–7
Wheel abrasion resistance	EN 1339-G	I

PRODUCT PERFORMANCE IN ACCORDANCE WITH UNI EN 13813

CHARACTERISTIC	STANDARD	RESULT
Compressive strength at 28 days	EN 13892-2	≥ 85 N/mm²
Flexural strength at 28 days	EN 13892-2	≥ 8.5 N/mm²
Böhme abrasion resistance	EN 13892-3	≥ 9.0 cm³ / 50 cm²
Reaction to fire	EN 13501-1	$A1_{fl}$

The data set out above is based on our best technical and practical knowledge, as well as our research experience. However, as we are unable to directly influence site conditions or the execution of the works, this information is provided for general guidance only and does not in any way bind APSE S.r.l. – V&V Group. The information provided does not relieve the purchaser of their responsibility to personally test our products with regard to their suitability for the intended use. The customer is also required to verify that this technical data sheet is valid for the batch of product in question and has not been superseded by subsequent editions. If in doubt, please contact our Technical Department in advance. APSE S.r.l. – V&V Group reserves the right to make technical modifications of any kind without prior notice. This revised version supersedes and replaces all previous versions, subject to ongoing verification of the data in accordance with the latest applicable regulations and our
ISO 9001. Please check the most up-to-date version of this Technical Data Sheet on our website: www.apse.it