

PAVILUX CRYSTALQUARZ

DESCRIPTION

Pavilux Crystalquarz Isoplam[®] is a ready-to-use mixture based on very pure German quartz of high hardness and Portland Cement Cem II/A-LL – 42.5 R with low Cr +6 content, in compliance with Directive 2003/53/CE, implemented in Italy with Ministerial Decree dated 10.05.2004, to be applied by dry-shake method on fresh concrete to protect civil and industrial flooring from wear.

FIELDS OF APPLICATION

- New flooring in residential, commercial and industrial buildings
- Schools, hospitals
- Parking areas, garages and basements
- Courtyards, terraces and sidewalks
- Warehouses subject to medium traffic, mainly rubber-wheeled.

Do not use: in all chemical and food industries where acidic or cement-aggressive substances are present. In such conditions, consult the Isoplam[®] Technical Office to define the most suitable surface treatment.

ADVANTAGES

- A floor reinforced with Pavilux Crystalquarz lasts much longer than a traditional cement screed floor (2 to 4 times longer): the surface mechanical strength of concrete is increased due to the high concentration of silica aggregate and the reduction of the water/cement ratio caused by the dry-shake application.
- Pavilux Crystalquarz reduces dust formation thanks to the high silica content of the surface layer. This reduces the penetration of oils and grease, facilitating their removal and cleaning.
- The Pavilux Crystalquarz surface is more resistant to weathering, freeze-thaw cycles and de-icing salts compared to standard concrete, making it ideal for sidewalks, courtyards, ramps and parking areas.

TECHNICAL DATA AND PERFORMANCE

Pavilux Crystalquarz Isoplam[®] complies with UNI EN 13813:2004.

Compressive strength:

> 45 N/mm² at 3 days

> 75 N/mm² at 28 days

Flexural strength:

ISOPLAM S.R.L.

Via E. Mattei, 4 – Z. I. Maser (TV) – Italia Tel. (+39) 0423 925023 www.isoplam.it

Azienda certificata UNI EN ISO 9001:2015

> 7.5 N/mm² at 3 days

> 9 N/mm² at 28 days

Abrasion resistance: 2.95 mm

(Amsler test, sliding friction over 1000 m)

Aggregate hardness Mohs scale < 7

SRI (Solar Reflectance Index) according to ASTM E1980-11(2019): >49 test performed on Cement color

RECOMMENDED CONSUMPTION

From a minimum of 3.5 kg/m² to a maximum of 7 kg/m² depending on wear resistance.

COLORS

Miele, rubino, cuoio, bosco, cemento, lavagna (Bayferrox colors by Bayer).

SUBSTRATE PREPARATION

The subfloor must be prepared according to UNI 11146, compacting and correctly establishing the pouring levels.

We recommend laying Isoplam® Nylon as a vapor barrier and Isoplam® Non-Woven Fabric to prevent rising damp, rapid drying, and cracking. Apply Isoplam® Perimeter Strip. Properly reinforce the concrete according to regulations, using Isoplam® Spacers for the correct positioning of the mesh, or using Isoplam® Structural Fibers. We recommend choosing the right type of concrete mix, which must comply with UNI EN 206 for floors exposed to frost in the absence of de-icing salts.

We recommend, whenever possible, using trusted concrete contractors that use selected cements and aggregates to prevent the appearance of efflorescence (even after years). These appear as whitish stains when the salts dissolved in the concrete rise to the surface along with the water containing them, or in the presence of high humidity (even after the pavement is installed) with the formation of calcium carbonate.

The strength class must not be less than Rck 30 N/mm² (C25/30). The cement dosage must not be less than 350 kg/m³ (325 type cement in the summer and 425 in the winter). We recommend an aggregate composed of aggregate no smaller than 15-18 mm and no larger than 30 mm (depending on the intended use), washed and non-reactive to avoid pop-out.

The minimum average thickness must not be less than 10 cm for pedestrian areas and 15 cm for light vehicular traffic areas. If the concrete is placed mechanically using an Isoplam® Magic Screed Vibrating Screed, the appropriate consistency class is S2-S3. If the concrete is to be placed manually using an Isoplam® Aluminum Screed, the appropriate consistency class is S4.

To avoid compromising the final strength of the pavement, it is recommended not to add too much water to the concrete mix. To this end, we recommend using seasonal superplasticizers such as Isoplam® Hotpav or Isoplam® Coldpav.

We recommend using Isoplam® Polypropylene Fibers in the concrete mix to limit the formation of micro-cracks caused by plastic shrinkage of the concrete.

Choose concrete plants close to the construction site. It is important that the concrete destined for the same construction site is always mixed by the same plant with the same dosages, to avoid differences in color tone between pours.

APPLICATION AND CURING

Once the concrete has been leveled to a minimum slope of 1% (for outdoor paving) and all surface water has disappeared, apply Pavilux Crystalquarz Isoplam®, dusting it evenly in two crisscrossing coats (two-thirds of the product for the first coat, the remaining third for the second coat), and proceed with roughing and smoothing using an Isoplam® float.

Do not use Pavilux Crystalquarz Isoplam® to cover areas with excess water: this procedure could cause surface chipping.

Avoid wetting the surface during application: this would weaken the cortex. Instead, use E-Red Isoplam®, a processing aid and anti-evaporation agent, spraying it on the surface during the various passes of the float.

It is recommended to keep the surface thoroughly and continuously wet for about a week once it has hardened.

Alternatively, we recommend applying Isoplam® Antieaporating Agent, which forms a film that retains the concrete's moisture during the initial stages of hydration. This optimizes the achievement of mechanical strength and reduces the risk of cracking.

Notes: OPEN TO TRAFFIC AND PRECAUTIONS DURING CURING Concrete reaches its characteristic strength after 28 days. It is therefore recommended to adjust the opening to heavy traffic accordingly.

All companies working on concrete floors for any reason must avoid contaminating the floor with oils, greases, paints, glues, adhesives (including those from paper tape), solvents, diesel fuel and gasoline, and silicones. If resin coating is applied once the concrete has cured, this will expose the area that came into contact with these pollutants. Similarly, nothing should be left on a curing concrete floor, even for a few days, as this would prevent the floor from curing evenly, causing irreparable aesthetic damage.

Depending on the intended use of the flooring, consult the Isoplam® Technical Office for protective treatments to be applied subsequently.

PACKAGING AND STORAGE

Pavilux Crystalquarz Isoplam® is supplied in 25 kg moisture-resistant bags.

If stored in a cool, dry place at temperatures between +5°C and +35°C, the product will last for more than 6 months from the packaging date shown on the bag. (The batch number indicates, in sequence, year/week/day).

SAFETY

Pavilux Crystalquarz Isoplam® is a product for professional use only. Consult the Safety Data Sheet before use.

IMPORTANTE:

All information contained in this sheet is based on the best practical and laboratory experience. It is the customer's responsibility to verify that the product is suitable for the intended use. The manufacturer declines all responsibility for the results of incorrect applications. It is always recommended to test on small areas before application. This sheet replaces and cancels all previous versions. The data may be changed at any time. Please also remember that ISOPLAM products are intended for professional use and that ISOPLAM provides periodic training to its customers upon request. Anyone using these products without authorization does so at their own risk.