
Technical Datasheet UniQuartz TK 11

Excellent filler for epoxy mortar. Specially developed for applications with decorative appearance.

Product description:

UniQuartz TK 11 is a specially developed coloured quartz grain mixture covered with polymer coating that has very high UV resistance. It can be used to fill polymer binders like solvent-free epoxy resin. Product is ready to use and easy to work with. This mix is highly decorative. The mortar combines intensive, unique and vivid colours with perfect technical characteristics and meets the highest demands which can be expected in case of reproduction.

Product features / benefits:

- **Low water absorption**
 - **Coloured with UV resistant Polyurethane CfQS system**
 - **For decorative surfaces**
 - **For machine- and hand-installation**
-

Applications:

The UniQuartz TK 11 is suitable for multi functional use, but it was specially developed for the decorative floorings in for example shops, showrooms, locker rooms, galleries, restaurants, living rooms and offices.

Product data:

Name:	- UniQuartz TK 11
HS code:	- 25.05.10
EINECS-nr.:	- 238-878-4
CAS-nr.:	- 14808-60-7
Colours:	- 24 warm, trendy standard colours which can be mixed with each other. This allows to create an unlimited range of multicolour surfaces. Silver, Black (94), Antracite (716), Beige(11), Cement-grey (733), Champaign(132), Dark-grey(715), Enzianblue (510), Grey-beige (119), Lever (35), Light-blue (627), Nutbrown (811), Ocker (81), Persian red (34), Signal-grey(74) , Telegrey (745) , Terracotta (823), White (91), Salmon red (322), Sand yellow (12) , Silk-grey(744), Pastel blue (524), Grass green (610), Pine green (628) Other colours on request.
Packing:	-25 kg Polyethylen PE ventile bags on one way pallet wrapped with stretch foil
Storage conditions:	Storage in the original sealed bags in dry place. Long-term exposure to sunlight will damage the packing



Picture:



Technical data:

Technical specifications:	
Hardness (Mohs)	7
Content of SiO ²	99,3 %
Moisture	< 0,1 %
Bulk density	1,70 kg/dm ³
Density	2,65 g/cm ³ (DIN ISO 787/10A)
Sieve curve	0,15-2,0 mm
Maximum deviation of the sieve curve	5.00%
<p><i>UV stability of our CfQs polyurethane color coating when applied on the granulate is full. UV stability is tested. Compared are our polymer system to reference products that are based on Polyurethane and Epoxy. Executed test was an 168 hour UV test with wave length 313 Nm. Special datasheet for these test results is available on request.</i></p>	
UV non lighted $\Delta E=$	7,47
UV lighted $\Delta E=$	13,61

Standing Water:

UniQuartz TK 11 technical and mechanical properties are tested for use in humid environment. The tests are executed with a binder that has following properties. Viscosity 400 mPas, Compressive strength 56,5 N/mm², tensile strength 76,2 N/mm².

These tests showed us that a binder with a high tensile strength gives the best results when used in combination with the UniQuartz TK 11 mortar. This result comes only with the UniQuartz TK 11 mortar because of it's exact mixture, properties of the production techniques and Polyurethane used for the colouring process. The tests took place without a topcoat on the mortar.

A deeper interpretation of these results is necessary for the investment to succeed. The presented case of the flooring slab depends on the combination of binder, quartz filler and form of the application that has to be done by an experienced technician.

Some of the criteria are:

The amount of water load (the more standing water is on the slab the higher proportion of binder is recommended-at least 13,5% of the quartz filler).

Mechanical loads: optimum results of the compressive strength will be reached with ca. 14% of the quartz filler. Decorative flooring slabs need 10-13% of binder added to the quartz filler.

	Proportion of the Binder (% of the filler)	Density (g/cm ³)	Compressive strength (N/mm ²)	Tensile strength (N/mm ²)	Water absorption (in % after 1 day)	Water absorption (in % after 7 days)	Water absorption (in % after 13 days)
UniQuartz TK11	10	1,920	62,1	24,0	1,6	3,8	4,1
	12	2,003	82,8	28,9	0,4	0,7	0,9
	12,5	1,948	83,1	29,1	0,1	0,4	0,4
	14	1,918	85,2	30,2	0,1	0,2	0,2
	15	1,910	84,1	30,1	0,1	0,1	0,1



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Colour card:



716



734



35



627



11



733



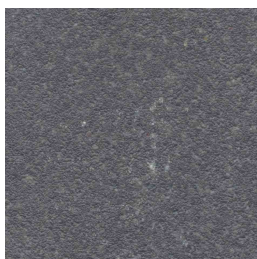
811



132



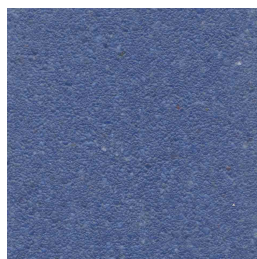
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715



34



510



823



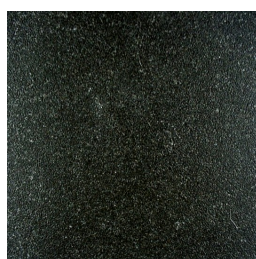
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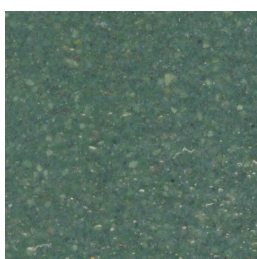
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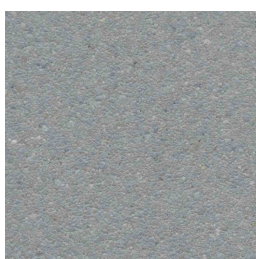
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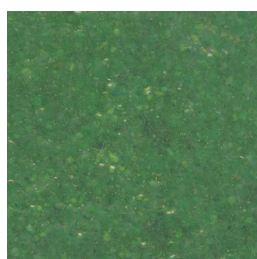
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628



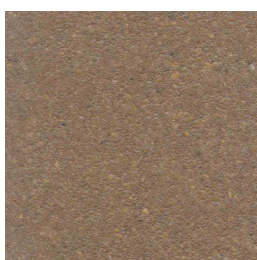
745



610



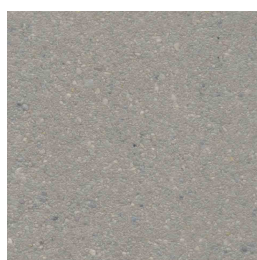
silver



81



119



74



UniQuartz TK 11

Below, You will find examples, instruction and basic informations about the system. You shall take into account that not every binder is the same and application properties can change, but our guideline can provide you basic informations

Polymer floorings need a basic concrete or cementitious surface that has to be free from contaminants. If it is not, they have to be removed by shot blasting, diamond grinding or otherwise. After that, the surface must be freed from dust.

Apply the two components solvent-free epoxy primer (250 gr/m²) on the top of the concrete layer to prevent absorption into the concrete top layer. You may spread the mortar by trowel on the fresh primer.

Or scatter 0,7-1,2 mm quartz to the primer to create a rough surface.

After the primer hardens, smooth the roughness and holes prepare joints etc.

Mix the ingredients of the two components solvent-free binder. Follow the instructions of the manufacturer.

Pour the binder to the quartz filler UniQuartz TK 11 and mix it, always keep the exact same mixing time.

For decorative applications add 10-12 % epoxy binder to the UniQuartz TK 11. For a water resistant mortar (as necessary for industrial use) you need at least 13,5 % epoxy binder in favorable conditions. If the conditions aren't optimal it's possible that you will have to increase the portion of the binder to avoid sliding of the wet mortar.

PRIOR NOTICE !
LOWER PROPORTIONS OF THE BINDER (UNDER 11,0%), NO MATTER WHICH QUARTZ FILLER WAS USED, IT WILL NOT CREATE A MORTAR WITH INDUSTRIAL AND MECHANICAL STRENGTHS. ALSO WHEN A TOP GELCOAT OR OTHER TOPCOAT WAS USED.



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*Spread wet mixture on the concrete with a screedbox .
It depends on the application, but layer with thickness
between 6 and 10 mm is necessary.*

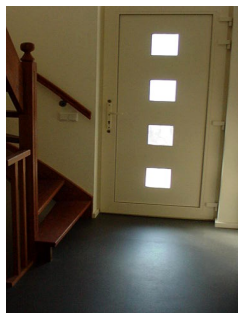
*After applying the mortar, spread it with trowel until you
reach an even surface, then close the top surface by
compacting it by hand or mechanical trowel.*

*If the right binder and trowel machine is used, application at
once is possible.*



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Project examples:



*Decorative mortar in a living room
(Primer 300 gr/m², 13 kg UniQuartz TK 11 with binder 12% of the filler, Topcoat 200 gr/ m² EP Thix 300)*



*Decorative mortar in a barber shop
(Primer 300 gr/m², 13 kg UniQuartz TK 11 with binder 12% of the filler, Topcoat 200 gr/ m² EP Thix 300)*



*Industrial mortar in bakery
(Primer 300 gr/m², 14 kg UniQuartz TK 11 with binder 15% of the filler, Topcoat 200 gr/ m² EP High Gloss Thix)*



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LIABILITY:

All information, guidelines and prices are based on the current, actual state. Changes can be made without prior notice. Since environmental factors are constantly changing, we cannot accept any liability in these cases. Before application you should establish whether or not our products are suitable for desired application and will meet expected requirements. Due to the natural source of the raw materials, slight differences may appear in the colours. These differences may also appear between batches and sample materials.

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