

'Crystal'  
Light interactive



**ALTEAM FZE**

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## 'Crystal'

'Crystal' is an exclusive, built up system, multi component that enables surfaces to interact / refract light.

'Crystal' surfaces are intricate multitude of precision made micro 'Crystal's, that refract light, creating, multi chromatic, jewel quality blistering rich shades.

With 'Crystal' multi pattern, surfaces are made, by embedding, combination setting of particle size(s) and shades.

In certain technical demanding situations, refractive properties and structure can be enhanced using our 'Aggregate placement agent', these created surfaces, when over passed by wheeled traffic, create an audible 'rumbling', helping audible lane guidance and help movement of visually impaired.

With 'Crystal's exclusive process, impact creating, intricate patterned, multi shade surfaces are made.

'Crystal' is also used for its functional properties; in diminished light, dust, fog and wet conditions, when exposed to beamed light, the surfaces appear illuminated, improving visibility and safety. Applications are for lining tunnel walls (Road, metro, tram), also on bridge structures, safety barriers...

Decoratively, 'Crystal' is used for facades, wall panels, ceilings, on flooring tiles that are light refractive.

## Brief details

'Crystal' treatment creates a combination of multi refractive / reflective structured surfaces.

'Crystal' is made from high-quality, pure melt, micro crystal, having composition: SiO<sub>2</sub> (68 - 75%), Na<sub>2</sub>O (12 - 18%), CaO (7 - 12%), MgO (0 - 5%), Al<sub>2</sub>O<sub>3</sub> (0 - 2.5%).

It is a mineral, bubble free meticulously polished to ≥ 99% roundness, having refractive index 1.5 to ≥ 1.9, with a Yield: 600 - 1300 mcd/m<sup>2</sup>/lx.

Has high wide range temperature stability, 200 - 230°C with short term exposure up to 400°C.

Has high abrasion resistance Mohs hardness of 5.5, with exceptional durability

'Crystal' is chemically inert, resistant to acids, Calcium Chloride, Sodium Sulfide, & water.

'Crystal' surfaces are highly durable, will not tarnish.

To further enhance the blistering effect and create optimum sub structure and improve durability, 'Crystal' is encapsulated into mineral based 'Aggregate placement agent', that is made with selected tightly controlled particle size distribution and orientation, having high light reflectivity. The 'Aggregate placement agent' is chemically inherently inert, physically stable, insulating, die electric, lightweight, moisture resistant, performs in extreme temperatures up to 500°C, UV, weather resistant, having high light reflectivity, exceptional 'Brilliance' luster.

'Crystal' and 'Aggregate placement agent' and other materials used are classed, non dangerous, safe to users, environmentally friendly green products, recyclable and sustainable.

Product: Crystal 1180

Description: 'Crystal' is meticulously made to perfection into spherical shape, bubble free, with ultimate clarity, premium refractive.  
 'Crystal' is classed as environmentally friendly, green, recyclable and sustainable. Safe to store and use.

Properties: 'Crystal' has high level of retro-reflection, durable, high abrasion resistance, performs in extreme high temperatures, exceptional 'Brilliance' lustre, clarity. It is made from high-quality pure melt, having composition: SiO<sub>2</sub> (68-75%), Na<sub>2</sub>O (12-18%), CaO (7-12%), MgO (0-5%), Al<sub>2</sub>O<sub>3</sub> (0-2.5%).  
 Made to Class 1 standard, having controlled minimal hazardous composition less than 200 PPM of As, Pb, Sb. 'Crystal' is chemically inert, resistant to acids, Calcium Chloride, Sodium Sulfide and water.

Field of use: 'Crystal' creates a combination of multi refractive / reflective structured light, IR interactive surfaces.

Properties

Bulk Weight	~1,6 g/cm <sup>3</sup>
Refractive Index	Class A acc. to EN 1423
Retro reflection value	> 1300 mcd/m <sup>2</sup> *lx
Abrasion resistance	Mohs hardness of 5.5,
Particle Size	800 - 1400 μm



Product: Tie bond clear XEOCO

Description: Tie bond clear XEOCO is Alkyl phenol Ethoxylates (APEO) free acrylic base copolymer

Properties: Excellent weather resistance, outstanding adhesion to cementitious concrete, due to dual self cross linking mechanism, for high gloss. Excellent chemical resistance, outdoor durability. Designed for application on surfaces such as concrete, wood, MDF

Field of use: Tie bond clear XEOCO is used to bond 'Crystal' to surfaces such as concrete, GRC, wood, MDF, paper.

Properties

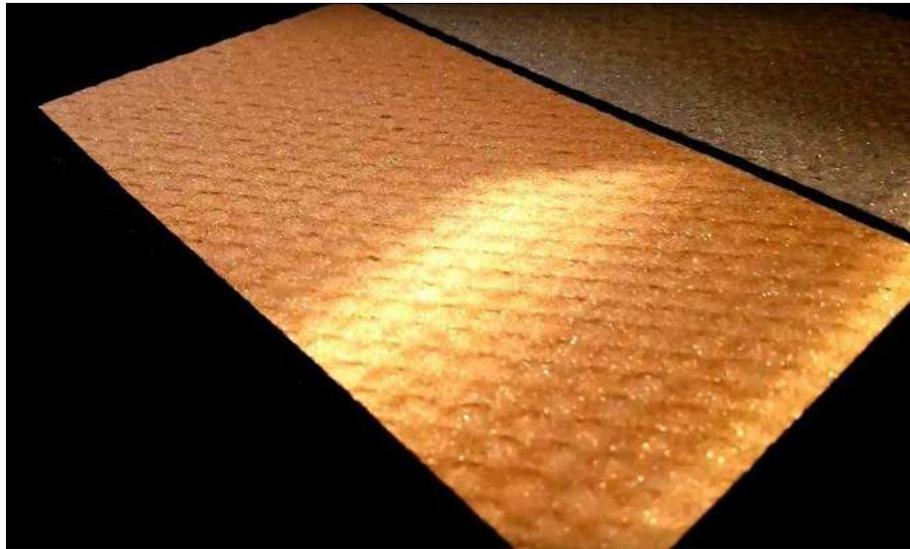
Density	~1,05 Kg/dm <sup>3</sup> DIN 53217
Minimum Film formation temperature MFFT	Approx. 8°C Method 087A ASTM D 2354
Non volatiles	42 - 45 % ISO 3251
pH	8 - 9,2
Storage conditions	Should not be stored below 0°C and not above 35°C
Shelf life	12 Months if kept in original sealed packing
Spreading agent	Dematerialized water



*Some images*



'Crystal' Light interactive high visibility



'Crystal' 650 Light interactive Sun gold



'Crystal' Structured concrete ●





Enhanced 'Crystal' Light interactive ●



Enhanced 'Crystal' Light interactive gold ●





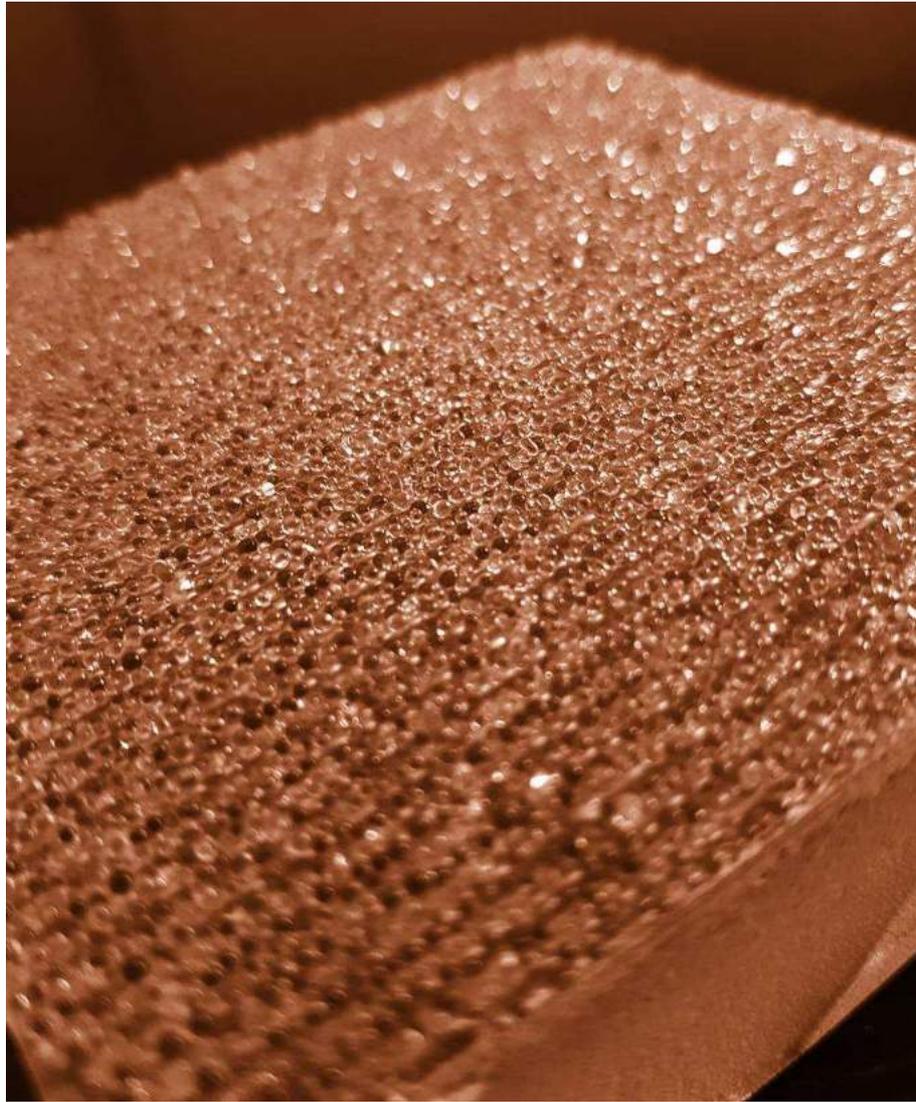
Enhanced 'Crystal' Light interactive ●





Enhanced 'Crystal' Light interactive GRG ●





'Crystal' Al Ula 2 TheLine



'Crystal' Snow white





'Crystal' - Al Ula multi

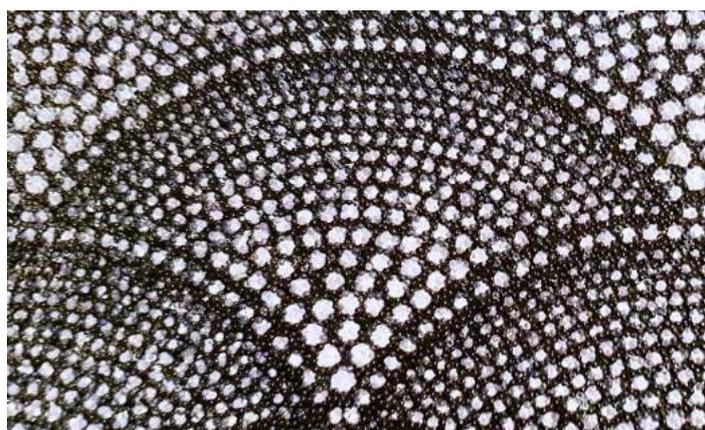


'Crystal' Al Ula Clay tablet





'Crystal' Multi Color ●





'Crystal' Multi Color

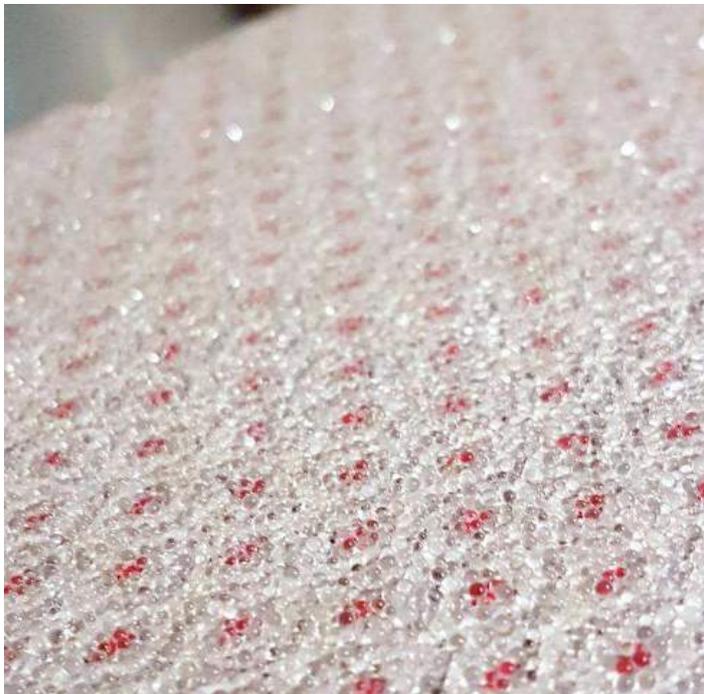


'Crystal' Emerald



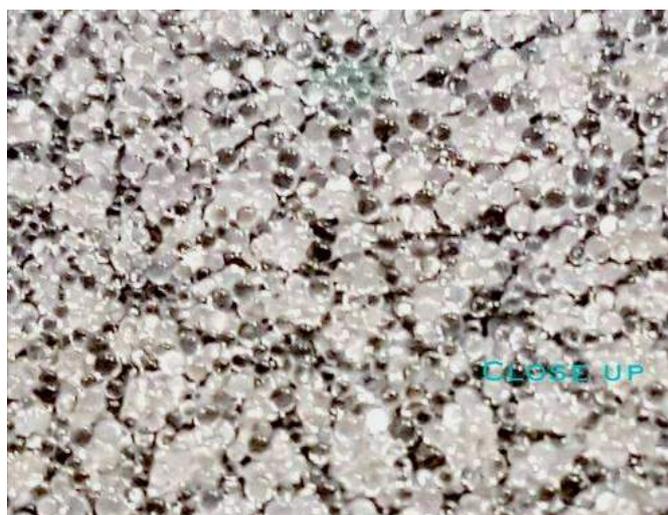


'Crystal' Ruby



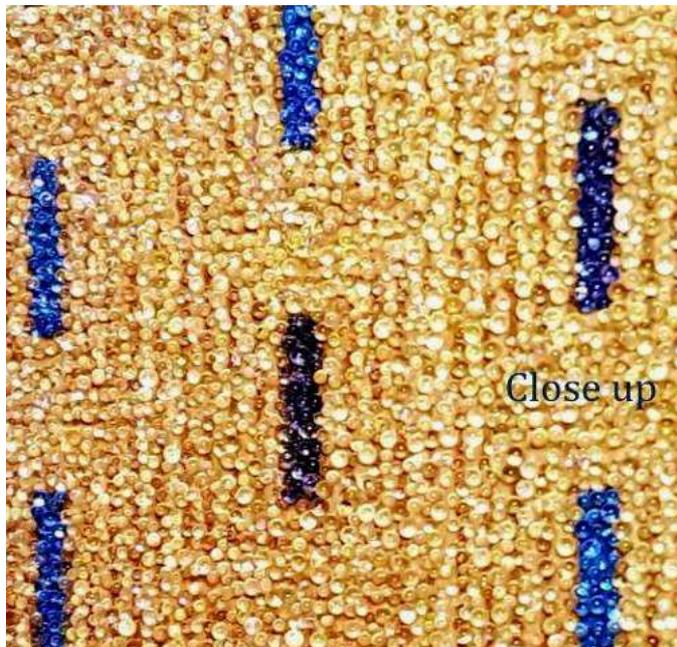


'Crystal' White silver emerald ●



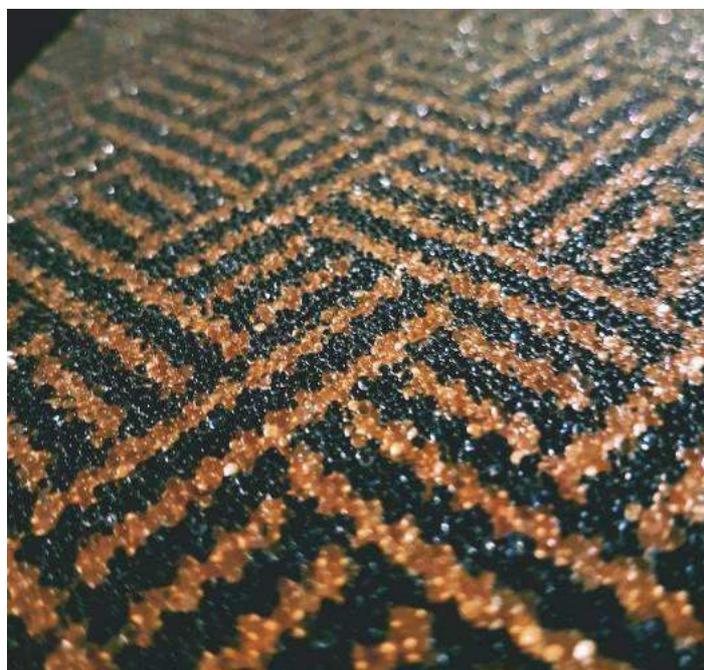


'Crystal' Royal





'Crystal' Rich gold ●





'Crystal' Rising sun ●







'Crystal' Leopard



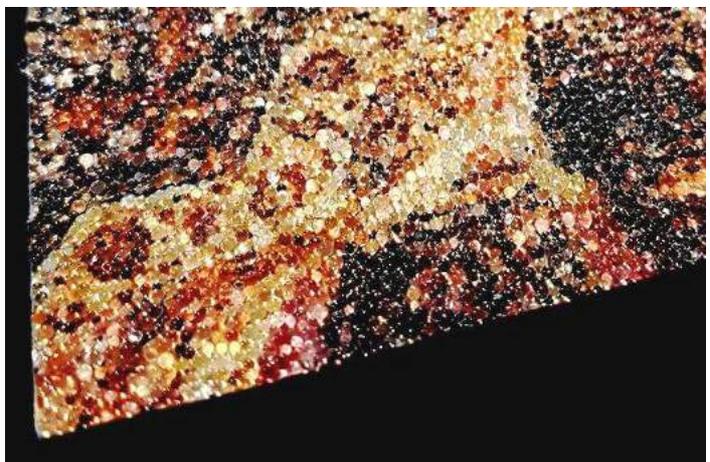
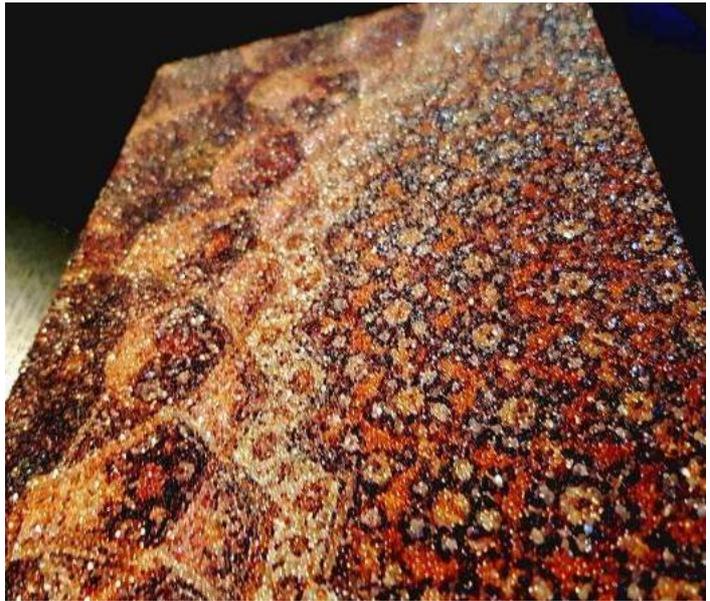
'Crystal' Multi pattern shade ceiling





'Crystal' Multi pattern shade ceiling



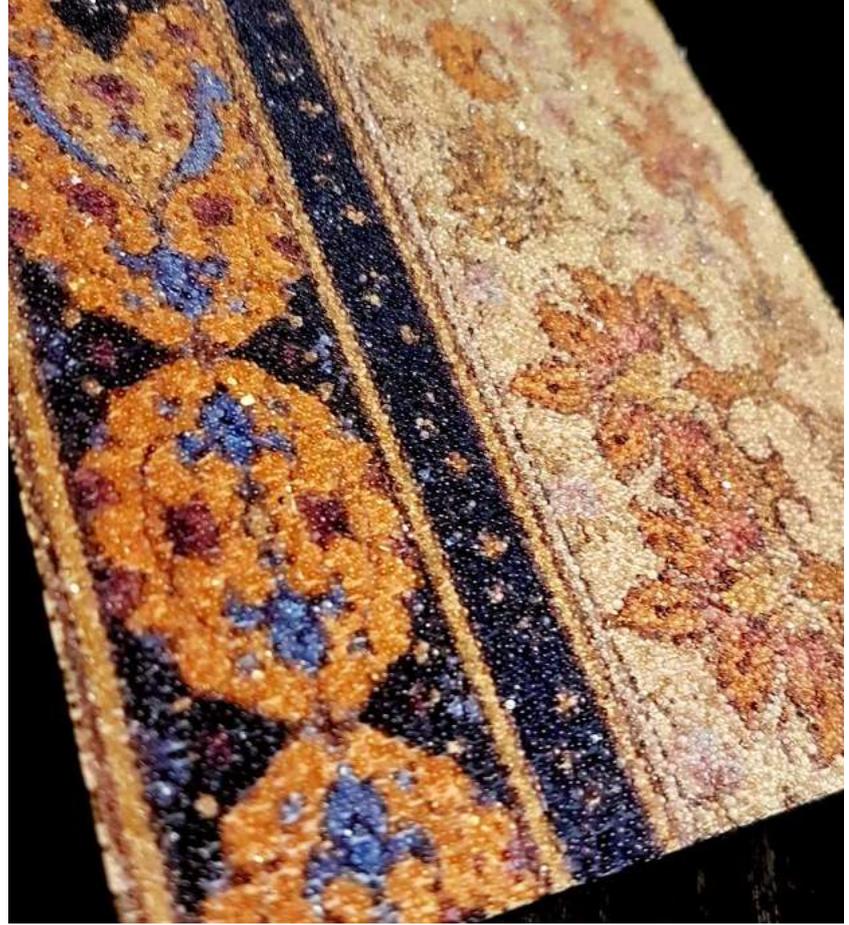


'Crystal' Multi pattern shade ceiling



'Crystal' Multi shade





'Crystal' Multi shade





'Crystal' Multi shade





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