



Geopearl[®]

CRYSTAL PEARLESCENT PIGMENTS

**premium synthetic mica pearlescent
pigments for plastics**

Premium synthetic mica pearlescent pigments

Geoparl® Crystal is a range of premium quality synthetic pearlescent pigments suitable for plastic applications.

The characteristic shimmer of Geoparl® Crystal pearlescent pigments has been designed to match the unique luster of natural pearls. The basic structure is a platelet synthetic mica which is coated with a metal oxide. GEOTECH offers titanium dioxide and iron oxide coated synthetic pearlescent pigments.

Resulting from reflected, refracted and transmitted light patterns developed at the multiple interfaces between the layers, Geoparl® Crystal pearlescent pigments provide unsurpassed performance in brightness and colour play varying from white to earth tone effects.

The product range includes the following types:

- Crystal silver/white synthetic mica based pearlescent pigments
- Crystal interference synthetic mica based pearlescent pigments
- Crystal golden synthetic mica based pearlescent pigments
- Crystal metallic synthetic mica based pearlescent pigments
- Crystal colour travel synthetic mica based pearlescent pigments

Reflective effects from matte softness (1 – 15 micron) to glittering reflection (100 – 260 micron) can be obtained by a wide variety of particle sizes. The total range contains over 70 products.

Product benefits

- Batch to batch consistency
- Wide product range with > 75 products
- In compliance with regulations for plastics; including food contact.

Applications

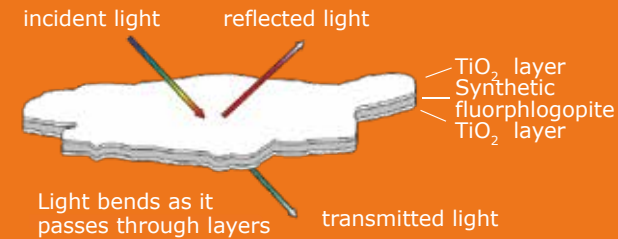
We recommend to use this product line for the following application:



Masterbatch

The effect

The colour of the Geoparl® Crystal pigments is obtained by interference, a phenomenon that occurs when visible light passes through thin layers with different refractive indices.



Synthetic fluorophlogopite is the base for our Geoparl® Crystal pigments and has a lamellar structure which is perfect for obtaining the interference effect. The transparent flakes are coated on all sides with a thin layer of titanium dioxide and/or iron oxide, effectively helping to reflect and bend the light.



Crystal Silver/Icy White/Rainbow pigments

A range of brilliant silver/white/rainbow pigments in a variety of particle sizes, ranging from 1 – 15 micron up to 40 – 260 micron. Depending on their particle size and composition these pigments provide different lustrous effects ranging from soft/satin to glittering.

Art. nr.	Product name	Particle size		Effect	
1115500	Geoparl Crystal Soft Silver	1 – 15	micron	Soft silver/white lustre	●
1115510	Geoparl Crystal Silk Silver	5 – 25	micron	Silk silver/white lustre	●
1115520	Geoparl Crystal Silver	10 – 60	micron	Silver/white lustre	●
1115530	Geoparl Crystal Bright Silver	10 – 100	micron	Bright silver/white	●
1115535	Geoparl Crystal Sparkling Silver	20 – 150	micron	Sparkling silver/white	●
1115540	Geoparl Crystal Glittering Silver	40 – 250	micron	Glittering silver/white	●
1115640	Geoparl Crystal Icy White	10 – 60	micron	Intense white lustre	●
1115650	Geoparl Crystal Sparkling Icy White	30 – 120	micron	Intense white sparkle	●
1115700	Geoparl Crystal Glittering Icy White	100 - 260	micron	Intense white glitter	●
1115543	Geoparl Crystal Sparkling Rainbow	10 - 125	micron	Intense rainbow sparkle	●
1115545	Geoparl Crystal Glittering Rainbow	40 - 200	micron	Intense rainbow glitter	●



● Recommended



Crystal Interference pigments

The portfolio of interference pigments contains a variety of particle sizes. It allows formulators to create subtle silk effects with high hiding power up to bright interference effects in combination with transparency.


Art. nr.	Product name	Particle size	Effect	
1115795	Geopearl Crystal Silk Gold	5 – 25 micron	Interference silk gold lustre	●
1115811	Geopearl Crystal Silk Red	5 – 25 micron	Interference silk red lustre	●
1115819	Geopearl Crystal Silk Violet	5 – 25 micron	Interference silk violet lustre	●
1115829	Geopearl Crystal Silk Blue	5 – 25 micron	Interference silk blue lustre	●
1115839	Geopearl Crystal Silk Green	5 – 25 micron	Interference silk green lustre	●
1115850	Geopearl Crystal Gold	10 – 60 micron	Interference gold lustre	●
1115810	Geopearl Crystal Red	10 – 60 micron	Interference red lustre	●
1115820	Geopearl Crystal Violet	10 – 60 micron	Interference violet lustre	●
1115830	Geopearl Crystal Blue	10 – 60 micron	Interference blue lustre	●
1115840	Geopearl Crystal Green	10 – 60 micron	Interference green lustre	●
1115850	Geopearl Crystal Bright Gold	10 – 100 micron	Interference bright gold	●
1115860	Geopearl Crystal Bright Red	10 – 100 micron	Interference bright red	●
1115870	Geopearl Crystal Bright Violet	10 – 100 micron	Interference bright violet	●
1115880	Geopearl Crystal Bright Blue	10 – 100 micron	Interference bright blue	●
1115890	Geopearl Crystal Bright Green	10 – 100 micron	Interference bright green	●
1115900	Geopearl Crystal Sparkling Gold	20 – 150 micron	Interference sparkling gold	●
1115910	Geopearl Crystal Sparkling Red	20 – 150 micron	Interference sparkling red	●
1115920	Geopearl Crystal Sparkling Violet	20 – 150 micron	Interference sparkling violet	●
1115930	Geopearl Crystal Sparkling Blue	20 – 150 micron	Interference sparkling blue	●
1115940	Geopearl Crystal Sparkling Green	20 – 150 micron	Interference sparkling green	●
1115550	Geopearl Crystal Glittering Gold	40 – 250 micron	Interference glittering gold	●



● Recommended

Crystal Golden pigments

A range of intense golden lustrous pigments that add luxury to your products. This portfolio of golden shades is available in a variety of colour tones and particle sizes, ranging from silk 5 – 25 micron to glittering 20 – 250 micron. Geopearl® golden pigments can be combined with other pigments to create an endless variety of shades.

Art. nr.	Product name	Particle size		Effect	
1115805	Geopearl Crystal Silk Sun Gold	5 – 25	micron	Silk warm sun gold lustre	●
1115806	Geopearl Crystal Sun Gold	10 – 60	micron	Warm sun gold lustre	●
1115807	Geopearl Crystal Bright Sun Gold	10 – 100	micron	Warm bright sun gold	●
1115808	Geopearl Crystal Glittering Sun Gold	20 – 250	micron	Warm sun gold glitter	●


● Recommended

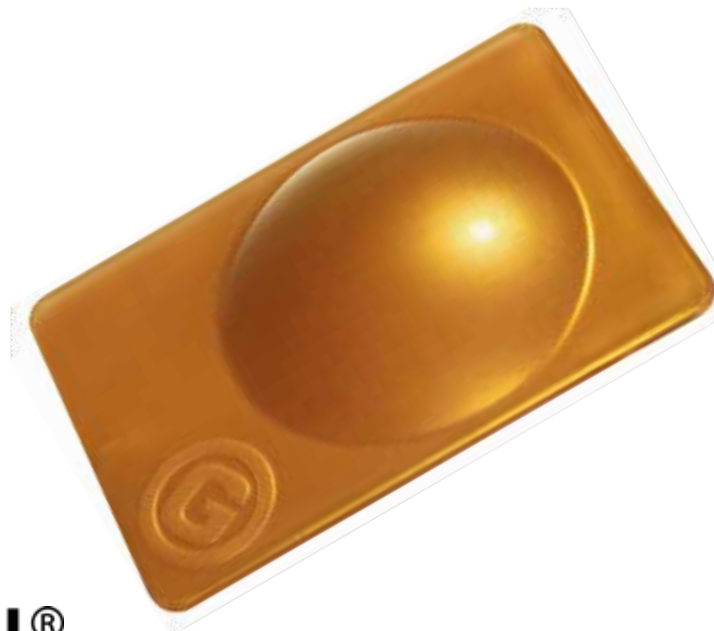


Crystal Amber pigments

Geoparl® Crystal Amber effect enhancing pigments offer amber pearlescent effects in a combination of lustre, reflection, brilliance and transparency. These pigments are based on synthetic mica flake substrates which are coated with iron oxides.

Geoparl® Crystal Amber pearlescent pigments vary in lustre from smooth to glittering depending on the particle size distribution. Combined with other special effect pigments and colourants they create an endless colour pallet of shades.


Art. nr.	Product name	Particle size	Effect	
1116035	Geoparl Crystal Amber	10 - 75 micron	Intense warm red gold lustre	●
1116036	Geoparl Crystal Sparkling Amber	20 - 150 micron	Intense warm red gold sparkle	●
1116037	Geoparl Crystal Glittering Amber	40 - 300 micron	Intense warm gold glitter	●



Crystal Metallic pigments

Geopearl® Crystal Metallic effect enhancing pigments offer metallic pearlescent effects in a combination of lustre, reflection, brilliance and transparency. These pigments are based on synthetic mica flake substrates which are coated with titanium dioxide and iron oxides.

Geopearl® Crystal Metallic pearlescent pigments vary in lustre from soft and smooth to glittering depending on the particle size distribution.

Art. nr.	Product name			Effect	
1115948	Geopearl Crystal Soft Beige	1 - 15	micron	Soft beige lustre	●
1115958	Geopearl Crystal Soft Bronze	1 - 15	micron	Soft bronze lustre	●
1115963	Geopearl Crystal Soft Copper	1 - 15	micron	Soft copper lustre	●
1115968	Geopearl Crystal Soft Russet	1 - 15	micron	Soft russet lustre	●
1115964	Geopearl Crystal Soft Golden Copper	1 - 15	micron	Soft yellow copper lustre	●
1115950	Geopearl Crystal Silk Beige	5 - 25	micron	Silk beige lustre	●
1115960	Geopearl Crystal Silk Bronze	5 - 25	micron	Silk bronze lustre	●
1115965	Geopearl Crystal Silk Copper	5 - 25	micron	Silk copper lustre	●
1115970	Geopearl Crystal Silk Russet	5 - 25	micron	Silk russet lustre	●
1116025	Geopearl Crystal Rufous	10 - 60	micron	Intense red russet lustre	●
1116000	Geopearl Crystal Glittering Bronze	50 - 250	micron	Intense bronze glitter	●
1116020	Geopearl Crystal Glittering Copper	50 - 250	micron	Intense copper glitter	●
1116037	Geopearl Crystal Glittering Russet	50 - 250	micron	Intense russet glitter	●


● Recommended



Crystal Titanium pigments

Geoparl® Crystal Titanium effect enhancing pigments offer metallic silver effects without the usage of aluminium. These pigments are based on synthetic mica flake substrates which are coated with titanium dioxide in an innovative way, resulting in metallic rather than pearlescent effects with excellent hiding power. Compared to natural mica, synthetic mica offers more reflectivity and higher colour purity.

Geoparl® Crystal Titanium pearlescent pigments vary in metallic from soft to glittering depending on the particle size distribution.

Art. nr.	Product name	Particle size		Effect	
1116060	Geoparl Crystal Soft Titanium	1 - 15	micron	Soft silver metallic	●
1116065	Geoparl Crystal Titanium	10 - 60	micron	Silver metallic lustre	●
1116070	Geoparl Crystal Glittering Titanium	50 - 200	micron	Sparkling silver metallic	●

● Recommended



Crystal Colour Travel pigments

Geoparl® Crystal Colour Travel pigments offer mesmerizing colour enhancing effects in a combination of lustre, reflection, brilliance and transparency. The observed colour travel depends on the direction of lighting and the location of the viewer. These pigments are based on synthetic mica flake substrates which are coated with a multi-layer of metal oxides.



Art. nr.	Product name	Particle size	Effect
1115570	Geoparl Crystal Sparkling Enchanting Blue	20 - 150 micron	Interference blue to violet sparkle ●
1115570	Geoparl Crystal Sparkling Charming Green	20 - 150 micron	Interference green to violet sparkle ●
1115590	Geoparl Crystal Sparkling Flamboyant Fuchsia	20 - 150 micron	Interference fuchsia to gold sparkle ●
1115600	Geoparl Crystal Sparkling Magical Gold	20 - 150 micron	Interference gold to green sparkle ●
1115575	Geoparl Crystal Glittering Enchanting Blue	100 - 260 micron	Interference blue to violet glitter ●
1115585	Geoparl Crystal Glittering Charming Green	100 - 260 micron	Interference green to violet glitter ●
1115595	Geoparl Crystal Glittering Flamboyant Fuchsia	100 - 260 micron	Interference fuchsia to gold glitter ●
1115605	Geoparl Crystal Glittering Magical Gold	100 - 260 micron	Interference gold to green glitter ●
1118260	Geoparl Crystal CT Sparkling Blue to Red	20 - 150 micron	Metallic red to gold sparkle ●
1118310	Geoparl Crystal CT Sparkling Fuchsia to Gold	20 - 150 micron	Metallic fuchsia to gold sparkle ●
1118110	Geoparl Crystal CT Sparkling Green to Red	20 - 150 micron	Metallic violet to orange sparkle ●
1118210	Geoparl Crystal CT Sparkling Red to Gold	20 - 150 micron	Metallic blue to red sparkle ●
1118160	Geoparl Crystal CT Sparkling Violet to Orange	20 - 150 micron	Metallic green to red sparkle ●



Formulation guidelines | Plastic chip samples

Product: Plastic chip samples
 Code: Plastic presentation 2021 - Box 2
 Special effect pigment: Geopearl Crystal Amber | Geopearl Crystal Sparkling Amber | Geopearl Crystal Glittering Amber

Product name	% WT.	Supplier
Plastic chip 5 Geopearl Crystal Amber Braskem Inspire 382 (Clear PP)	1.00 99.00	Geotech International B.V. Braskem Netherlands B.V.
Plastic chip 6 Geopearl Crystal Sparkling Amber Braskem Inspire 382 (Clear PP)	1.00 99.00	Geotech International B.V. Braskem Netherlands B.V.
Plastic chip 7 Geopearl Crystal Glittering Amber Braskem Inspire 382 (Clear PP)	1.00 99.00	Geotech International B.V. Braskem Netherlands B.V.

Procedure

These chips are manufactured by dry mixing of components using a BOY25E injection moulding machine. We recommend to incorporate our special effect pigments into a masterbatch for optimum results.

Samples of the chips are available upon request.



Formulation guidelines | Plastic chip samples

Product: Plastic chip samples
 Code: Plastic presentation 2021 - Box 2
 Special effect pigment: Geoparl Crystal Soft Titanium | Geoparl Crystal Titanium | Geoparl Crystal Glittering Titanium

Product name	% WT.	Supplier
Plastic chip 3 Geoparl Crystal Soft Titanium Braskem Inspire 382 (Clear PP)	1.00 99.00	Geotech International B.V. Braskem Netherlands B.V.
Plastic chip 4 Geoparl Crystal Titanium Braskem Inspire 382 (Clear PP)	1.00 99.00	Geotech International B.V. Braskem Netherlands B.V.
Plastic chip 5 Geoparl Crystal Glittering Titanium Braskem Inspire 382 (Clear PP)	1.00 99.00	Geotech International B.V. Braskem Netherlands B.V.

Procedure

These chips are manufactured by dry mixing of components using a BOY25E injection chipping machine. We recommend to incorporate our special effect pigments into a masterbatch for optimum results.

Samples of the chips are available upon request.



General formulation do's and don'ts

Temperature resistance

Geopearl® Crystal pearlescent pigments have a temperature resistance up to 900°C due to calcination in the production process.

Compliance to regulations

The Geopearl® Crystal pearlescent pigments are approved for industrial use on the European, USA and Asian market; including food contact.

Colour mixing

Unlike traditional pigments, iridescent pearls reflect, refract and transmit light and follow an additive colour mixing scheme. A mix of blue and yellow interference pearls will yield a white reflection rather than the expected green (= subtractive colour mixing). This is why only limited mixing (so called tinting) of interference pigments is advised.



Finished product	Level of use (recommendation)
Masterbatch	10 - 20 %



Available packaging

Nett weight	Gross weight	Package size L x W x H
1	2	15 x 15 x 15 cm
5 kg	6 kg	35 x 18 x 21 cm
25 kg	27 kg	40 x 40 x 50 cm

Packed in a plastic bag in a cardboard box.

Shelf life

120 months original packaging stored in a closed box under dry conditions.

Samples

Approx. 50 grams samples are available free of charge.

Product data

Product data sheets and additional technical product information are available online. To get access please send an email to marketing@geotech.nl and ask for an account.



About us

Geotech International B.V., based in Haarlem, The Netherlands, is a dynamic company focusing on the development, production and distribution of special effect pigments. The owners family has a background in the industry with over 40 years of experience. Since 1999 the company is managed by the third generation.

GEOTECH's special effect pigments are being used globally in the cosmetics, plastics, coatings & paints, printing and arts & crafts industry.

Disclaimer

All information and samples provided by GEOTECH are given in good faith and without warranty. Our advice does not release you from the obligation to verify the information provided and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and therefore entirely your own responsibility.



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