



**Geodiamond<sup>®</sup>**  
PEARLESCENT PIGMENTS

**luxurious sophisticated sparkling glass flakes  
for cosmetics**

## Geodiamond® borosilicate pigments for cosmetics

Geodiamond® effect pigments are exclusive specialty pigments based on borosilicate flakes. They bring products to life with brilliant colour and glittering effects. Geodiamond® pigments are coated with titanium dioxide, iron oxide, real silver (Ag) and more, resulting in unlimited possibilities for formulators looking for eye-catching effects in cosmetic products.

The product range includes the following types:

- White borosilicate based effect pigments;
- Interference borosilicate based effect pigments;
- Golden borosilicate based effect pigments;
- Coloured borosilicate based effect pigments;
- Silver Ag borosilicate based effect pigments.

Each range offers a variety of particle sizes: XS (10 – 60 micron), S (10 – 100 micron), M (30 – 220 micron), L (50 – 350 micron) and XL (80 – 450 micron).

The white and interference Geodiamond® pigments out-perform traditional mica based pearlescent pigments in lustre, brightness, transparency and reflectivity. They create an exceptionally high visual impact. This makes them suitable for all kinds of colour cosmetic and personal care applications like nail polishes, pressed powders, wax based systems, emulsions and gels. The exclusive Geodiamond® Silver Ag pigments produce an extremely brilliant mirror like reflection and sparkling effect which cannot be achieved by any other technology. The main applications in colour cosmetics are lip glosses, eyeliners, pressed powders and nail polishes.

Geodiamond® pigments are non-toxic and comply to the regulations for cosmetics. Some colour coated borosilicate based effect pigments have a few restrictions in certain areas due to the used colorants. The coloured Geodiamond® pigments are a bit more sensitive, depending on the application some special attention is required.

### Product benefits

- Luxurious and sophisticated diamond effects in cosmetic products
- Alternative for polyester glitter particles
- Low heavy metal content
- Excellent transparency of glass flakes
- In compliance with cosmetic regulations

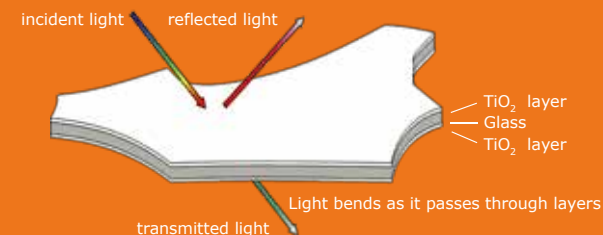
### Applications

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



### The effect

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



Very thin Calcium Sodium Borosilicate glass is the base for our Geodiamond® pigments. The particles have a more uniform thickness and a flat surface which results in a clean and pure colour next to a brilliant sparkling effect even for smaller particles.

The transparent flakes are coated on all sides with a thin layer of titanium dioxide and/or other metal oxides (for some products even pure silver), effectively helping to reflect and bend the light.



## Geodiamond® White and Interference range

The white and interference Geodiamond® pigments out-perform traditional mica based pearlescent pigments in lustre, brightness, transparency and reflectivity. They create an exceptionally high visual impact.

Art. nr.	Product name	Particle size		Effect
1216100	Geodiamond Pearl XS	10 - 60	micron	Interference pearl lustre
1216200	Geodiamond Pearl S	10 - 100	micron	Interference pearl bright lustre
1216300	Geodiamond Pearl M	20 - 150	micron	Interference pearl sparkling lustre
1216600	Geodiamond Pearl L	50 - 200	micron	Interference pearl glittering lustre
1216610	Geodiamond Pearl XL	100 - 500	micron	Interference pearl twinkling lustre
1216110	Geodiamond Gold XS	10 - 60	micron	Interference gold lustre
1226210	Geodiamond Gold S	10 - 100	micron	Interference gold bright lustre
1226310	Geodiamond Gold M	20 - 150	micron	Interference gold sparkling lustre
1226610	Geodiamond Gold L	50 - 200	micron	Interference gold glittering lustre
1226720	Geodiamond Gold XL	100 - 500	micron	Interference gold twinkling lustre
1216120	Geodiamond Red XS	10 - 60	micron	Interference red lustre
1226220	Geodiamond Red S	10 - 100	micron	Interference red bright lustre
1226320	Geodiamond Red M	20 - 150	micron	Interference red sparkling lustre
1226620	Geodiamond Red L	50 - 200	micron	Interference red glittering lustre
1226725	Geodiamond Red XL	100 - 500	micron	Interference red twinkling lustre



Art. nr.	Product name	Particle size		Effect
1216130	Geodiamond Violet XS	10 - 60	micron	Interference violet lustre
1226250	Geodiamond Violet S	10 - 100	micron	Interference violet bright lustre
1226350	Geodiamond Violet M	20 - 150	micron	Interference violet sparkling lustre
1226650	Geodiamond Violet L	50 - 200	micron	Interference violet glittering lustre
1226730	Geodiamond Violet XL	100 - 500	micron	Interference violet twinkling lustre
1216140	Geodiamond Blue XS	10 - 60	micron	Interference blue lustre
1226240	Geodiamond Blue S	10 - 100	micron	Interference blue bright lustre
1226340	Geodiamond Blue M	20 - 150	micron	Interference blue sparkling lustre
1226640	Geodiamond Blue L	50 - 200	micron	Interference blue glittering lustre
1226735	Geodiamond Blue XL	100 - 500	micron	Interference blue twinkling lustre
1216150	Geodiamond Green XS	10 - 60	micron	Interference green lustre
1226260	Geodiamond Green S	10 - 100	micron	Interference green bright lustre
1226360	Geodiamond Green M	20 - 150	micron	Interference green sparkling lustre
1226660	Geodiamond Green L	50 - 200	micron	Interference green glittering lustre
1226740	Geodiamond Green XL	100 - 500	micron	Interference green twinkling lustre
1226630	Geodiamond Fuchsia L	50 - 200	micron	Interference fuchsia glittering lustre



## Geodiamond® Silver Ag range

The exclusive Geodiamond® Silver Ag pigments produce an extremely brilliant mirror like reflection and sparkling effect which cannot be achieved by any other technology.

Art. nr.	Product name	Particle size		Effect
1276410	Geodiamond Silver Ag XS	10 - 60	micron	Intense silver reflection
1276400	Geodiamond Silver Ag S	10 - 100	micron	Intense silver bright reflection
1276450	Geodiamond Silver Ag M	30 - 220	micron	Intense silver sparkling reflection
1276500	Geodiamond Silver Ag L	50 - 350	micron	Intense silver glittering reflection
1276520	Geodiamond Silver Ag XL	80 - 450	micron	Intense silver twinkling reflection



## Geodiamond® Coloured range

An innovative product line of coloured pearlescent pigments is available within the Geodiamond® Coloured range. Combined with other special effect pigments and colourants they create an endless colour pallet of shades.

Art. nr.	Product name	Particle size		Effect
1226700	Geodiamond Super Red Gold L	50 - 200	micron	Interference red gold glittering lustre
1226741	Geodiamond Amethyst L	50 - 300	micron	Interference amethyst glittering lustre
1226743	Geodiamond Aragonite L	50 - 300	micron	Interference aragonite glittering lustre
1226742	Geodiamond Citrine L	50 - 300	micron	Interference citrine glittering lustre
1226745	Geodiamond Emerald L	50 - 300	micron	Interference emerald glittering lustre
1226744	Geodiamond Rose Quartz L	50 - 300	micron	Interference rose quartz glittering lustre



## General formulation do's and don'ts

### Avoid high shear or grinding

The calcium sodium borosilicate based Geodiamond® pearlescent pigments are available in different sizes. From XS with an average particle size of 25 micron until and XL, with an average of 175 micron. Calcium sodium borosilicate is a brittle substrate and therefore high shear and/or grinding can break the particles (especially the larger Geodiamond® products). For improved handling pre-wetting the pigments is recommended by making in a premix in vehicle (oils or solvents) under slow stirring conditions.

### Colourants might bleed

To obtain the strong and vibrant Geodiamond Amethyst L, Geodiamond Citrine L, Geodiamond Aragonite L, Geodiamond Emerald L and Geodiamond Rose Quartz L colourants are used that are sensitive to bleeding.

### UV stability

The with organic colorants coated Geodiamond Amethyst L, Geodiamond Citrine L, Geodiamond Aragonite L, Geodiamond Emerald L and Geodiamond Rose Quartz L pearlescent pigments are sensitive to UV light.

### Recommendation

GEOTECH recommends not to use Geodiamond® pearlescent pigments with a particle size higher than 150 micron for eye area applications.

Finished product	Level of use (recommendation)
Hair styling gel	0,01 - 0,1 %
Hair colouring gel	3 - 5 %
Shower gel	0,01 - 0,1 %
Eye shadow gel	5 - 10 %
Skin gel	0,05 - 0,1 %
Soaps	0,3 - 4,0 %
Pressed powder	30 - 70 %
Loose powder	up to 100 %
Blusher	1 - 5 %
Face powder	1 - 5 %
Body powder	1 - 5 %
Lipstick	5 - 10 %
Lip balm	3 - 5 %
Lip gloss	3 - 5 %
Lip lacquer	10 - 15 %
Body lotion	1 - 3 %
Shampoo	0,1 - 1 %



## Formulation guideline | Pressed Power

Product: Pressed Power  
 Code: GL-200206b  
 Special effect pigment: Geodiamond Violet XS | Geodiamond Gold XS | Geoparl C Amethyst

Product name	INCI name	% WT.	Supplier
<b>Phase A</b>			
Sunrise SVA	Mica   Lauroyl Lysine	10.00	Geotech International B.V.
Sunrise 970	Mica	7.00	Geotech International B.V.
Zinc Stearate	Zinc Stearate	7.00	
Boroneige 1501	Boron Nitride	2.50	ESK
Luzenac 00	Talc	23.50	Luzenac
<b>Phase B</b>			
Fragrance		q.s.	
Antioxidant		q.s.	
Preservative		q.s.	
<b>Phase C</b>			
DC 200 Fluid 5cts	Dimethicone	6.25	Dow Corning
DC 9040 Elastomer	Cyclopentasiloxane   Dimethicone Crosspolymer	6.25	Dow Corning
<b>Phase D</b>			
Geodiamond Violet XS	Calcium Sodium Borosilicate   Titanium Dioxide	13.00	Geotech International B.V.
Geodiamond Gold XS	Calcium Sodium Borosilicate   Titanium Dioxide	13.00	Geotech International B.V.
Geoparl C Amethyst	Mica   Titanium Dioxide   CI 77510   CI 75470	13.00	Geotech Internatiional B.V.
Iron Oxide Black	CI 77499	1.00	

### Procedure

1. Thoroughly blend Phase A in a blender;
2. Add Phase B to Phase A and mix until uniform;
3. Add Phase C to Phase A + B and mix until uniform;
4. Add Phase D to Phase A + B + C and mix until uniform;
5. Press the powder.





## Formulation guideline | Lip gloss

Product: Lip gloss  
 Code: GL-200917  
 Special effect pigment: Geodiamond Super Red Gold L

Product name	INCI name	% WT.	Supplier
<b>Phase A</b>			
Versagel ME 750	Hydrogenated Polyisobutene   Ethylene   Propylene   Styrene Coploymer   Butylene/Ethylene/Styrene Copolymer	73.40	Calumet Penreco
Baobab Oil	Adansonia Digitata Seed Oil	2.10	Sigma Oil Seeds
BRB Caprylyl Methicone	Caprylyl Methicone	7.70	BRB International BV
BRB 2835	Cetyl Dimethicone	3.50	BRB International BV
Hydrogenated Polydecene	Hydrogenated Polydecene	4.40	
Isopropyl Myristate	Isopropyl Myristate	4.90	
<b>Phase B</b>			
Geodiamond Super Red Gold L	Calcium Sodium Borosilicate   Titanium Dioxide   CI 77491	2.00	Geotech International B.V.
Colorants		2.00	

### Procedure

1. Combine all ingredients from Phase A and heat up to 85°C;
2. Add Phase B to Phase A and mix until uniform;
3. Pour into lip gloss container.



## Formulation guideline | Liquid-Gel Eyeshadow

Product: Liquid-Gel Eyeshadow  
 Code: GL-221124  
 Special effect pigment: Geodiamond Gold XS | Geoparl C Emerald

Product name	INCI name	% WT.	Supplier
<b>Phase A</b>			
Enhans PC-38	Polyethylene   Polycyclopentadiene   Stearoxy Dimethicone	11.00	Koster Keunen
Kester Wax K-82P	C18-38 Hydroxystearoyl Stearate	5.00	Koster Keunen
Kester Wax K-82H	C20-40 Alkyl Stearate	2.00	Koster Keunen
Octyldodecanol	Octyldodecanol	15.00	Koster Keunen
<b>Phase B</b>			
Sunrise 970	Mica	4.00	Geotech International B.V.
Geoparl C Emerald	Mica   Titanium Dioxide   CI 77491   CI 77510	11.50	Geotech International B.V.
Geodiamond Gold XS	Calcium Sodium Borosilicate   Titanium Dioxide	11.50	Geotech International B.V.
<b>Phase C</b>			
Isononyl Isononanoate	Isononyl Isononanoate	7.00	
Belsil PDM20	Trimethylsiloxyphenyl Dimethicone	5.00	Wacker
<b>Phase D</b>			
Belsil TMS 803	Trimethylsiloxy silicate	5.00	Wacker
Isododecane	Isododecane	23.00	






### Procedure

1. Combine all ingredients from phase A and heat to 85°C;
2. Pre-mix phase B and add to phase A, mix until homogeneous;
3. Pre-mix phase C and add to phase AB, mix until homogeneous;
4. Pre-mix phase D and add to phase ABC, mix until homogeneous;
5. Cool and fill into container.



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Art. nr.	Product name						Calcium Sodium Borosilicate Titanium Dioxide (CI 77891) Tin Oxide (CI 77861)
1216100	Geodiamond Pearl XS	●	●	●	●	●	X X X
1216200	Geodiamond Pearl S	●	●	●	●	●	X X X
1216300	Geodiamond Pearl M	●		●	●	●	X X X
1216600	Geodiamond Pearl L	●		●	●	●	X X X
1216610	Geodiamond Pearl XL	●		●	●	●	X X X
1216110	Geodiamond Gold XS	●	●	●	●	●	X X X
1226210	Geodiamond Gold S	●	●	●	●	●	X X X
1226310	Geodiamond Gold M	●		●	●	●	X X X
1226610	Geodiamond Gold L	●		●	●	●	X X X
1226720	Geodiamond Gold XL	●		●	●	●	X X X
1216120	Geodiamond Red XS	●	●	●	●	●	X X X
1226220	Geodiamond Red S	●	●	●	●	●	X X X
1226320	Geodiamond Red M	●		●	●	●	X X X
1226620	Geodiamond Red L	●		●	●	●	X X X
1226725	Geodiamond Red XL	●		●	●	●	X X X

● Global approval

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Art. nr.	Product name						Calcium Sodium Borosilicate Titanium Dioxide (CI 77891) Tin Oxide (CI 77861)
1216130	Geodiamond Violet XS	●	●	●	●	●	X X X
1226250	Geodiamond Violet S	●	●	●	●	●	X X X
1226350	Geodiamond Violet M	●		●	●	●	X X X
1226650	Geodiamond Violet L	●		●	●	●	X X X
1226730	Geodiamond Violet XL	●		●	●	●	X X X
1216140	Geodiamond Blue XS	●	●	●	●	●	X X X
1226240	Geodiamond Blue S	●	●	●	●	●	X X X
1226340	Geodiamond Blue M	●		●	●	●	X X X
1226640	Geodiamond Blue L	●		●	●	●	X X X
1226735	Geodiamond Blue XL	●		●	●	●	X X X
1216150	Geodiamond Green XS	●	●	●	●	●	X X X
1226260	Geodiamond Green S	●	●	●	●	●	X X X
1226360	Geodiamond Green M	●		●	●	●	X X X
1226660	Geodiamond Green L	●		●	●	●	X X X
1226740	Geodiamond Green XL	●		●	●	●	X X X
1226630	Geodiamond Fuchsia L	●		●	●	●	X X X





● Global approval



Art. nr.	Product name						Calcium Sodium Borosilicate	Titanium Dioxide (CI 77891)	Tin Oxide (CI 77861)	Silver (CI 77820)
1276410	Geodiamond Silver Ag XS	⊙	⊙	⊙	⊙	⊙	X	X	X	X
1276400	Geodiamond Silver Ag S	⊙	⊙	⊙	⊙	⊙	X	X	X	X
1276450	Geodiamond Silver Ag M	⊙		⊙	⊙	⊙	X	X	X	X
1276500	Geodiamond Silver Ag L	⊙		⊙	⊙	⊙	X	X	X	X
1276520	Geodiamond Silver Ag XL	⊙		⊙	⊙	⊙	X	X	X	X

⊙ European and Japanese approval



Art. nr.	Product name					Calcium Sodium Borosilicate	Titanium Dioxide (CI 77891)	Tin Oxide (CI 77861)	Iron Oxide Red (CI 77491)	D&C Green 5 (CI 61570)	D&C Red 28 (CI 45410)	FD&C Blue 1 (CI 42090)	FD&C Yellow 5 (CI 19140)	FD&C Red 40 (CI 16038)
1226700	Geodiamond Super Red Gold L	●	●	●	●	X	X	X	X					
1226741	Geodiamond Amethyst L	○	○	○	○	X	X	X			X	X		
1226743	Geodiamond Aragonite L	●	●	●	●	X	X	X						X
1226742	Geodiamond Citrine L	●	●	●	●	X	X	X					X	
1226745	Geodiamond Emerald L	●	●	●	●	X	X	X		X				
1226744	Geodiamond Rose Quartz L	●	●	●	●	X	X	X			X			

- Global approval
- European and United States approval



## Available packaging

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

Packaged in a plastic bag in a cardboard box.

## Shelf life

10 years in 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](mailto:marketing@geotech.nl) and ask for an account.



 **Geodiamond**®

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## About us

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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.

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## Disclaimer

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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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Geotech International B.V.  
P.O. Box 1578  
2003 BP Haarlem  
The Netherlands

T: +31(0)235317553  
E: info@geotech.nl  
URL: geotech.nl



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