Perlite Products for Construction Uses

ViORYP®
Perlite Products

...natural superiority

Perlite Products

Vioryp's Perlite Bplus (fiber-reinforced perlitobeton) and **Perlite B** (perlitobeton) are lightweight concretes with exceptional thermo-acoustical insulation properties. They are based on expanded Perlite of specific measurements (0-3mm) combined with natural non-active ingredients.

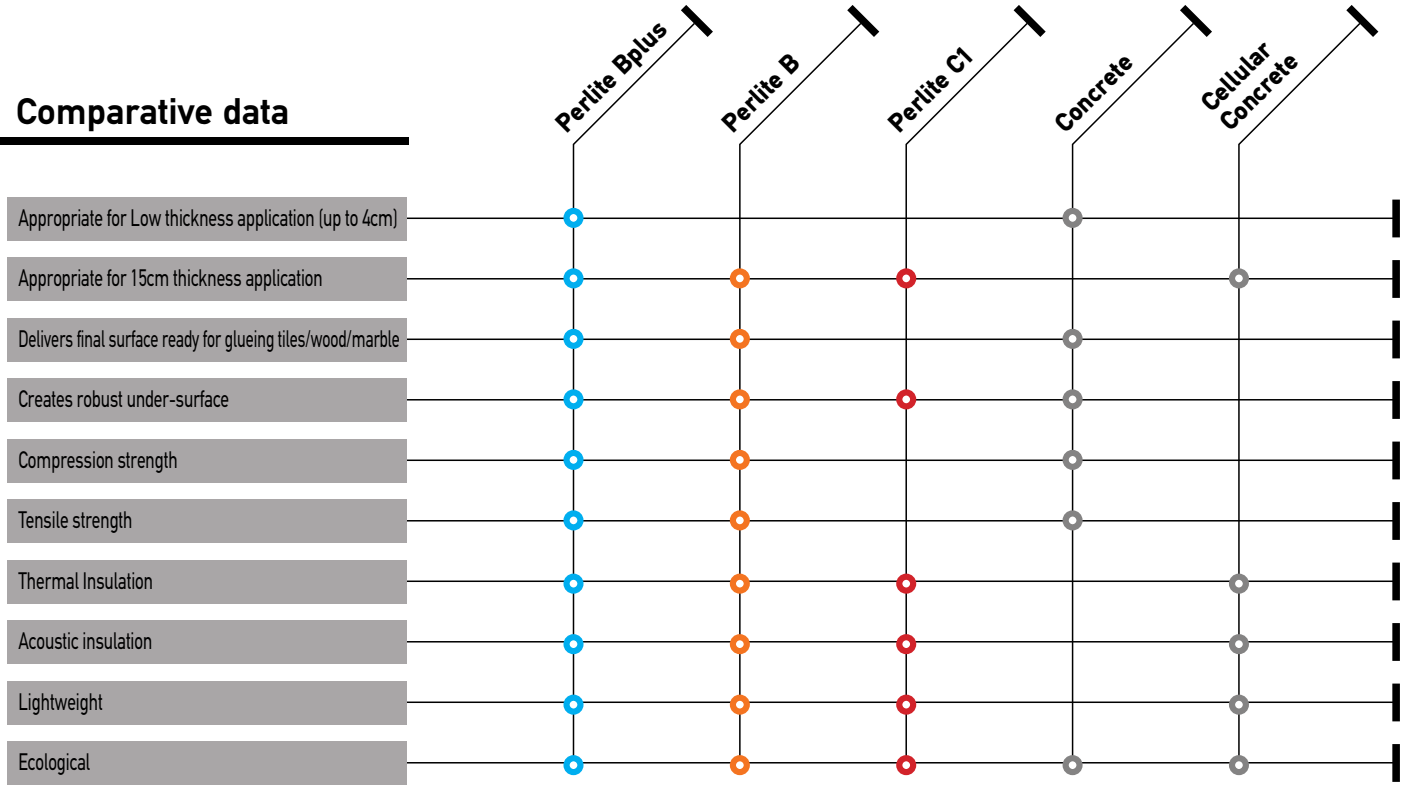
Vioryp's Perlite Bplus and **Perlite B** are ideal for lightweight applications and deliver highly resistant and robust surfaces. **High resistance properties and exceptional thermo-acoustic insulation** characteristics render Perlite a widely-used, highly competitive lightweight concrete in modern construction projects.

Vioryp's Perlite C1 is an expanded byproduct of natural perlite, fully natural and ecological. It is adequate for lightweight substrate applications, and is ideal for renovating old structures due to its light weight and exceptional thermo-acoustical insulation properties.

Due to the high thermal insulation power of **Perlite Bplus**, **Perlite B** and **Perlite C1**, **energy savings reach up to 50%** when used in the floors, roofs and walls of buildings.

As the following table illustrates, perlite products, while sharing the same properties with normal and cellular concretes, in addition display superior thermal and acoustic insulation performance.

Comparative data



Perlite Bplus

10.8 Mpa / 4cm

Fiber reinforced thermal/sound insulation perlite mix of high resistance

Light weight concrete for filling floors and roofs

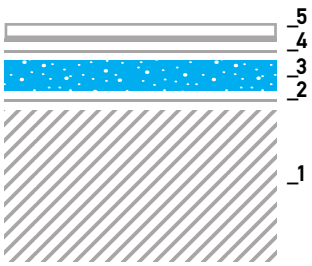
- **Cost efficient/High value-added product**
- **Ideal for low thickness coating (4cm)**
- **High compression strength (10,8Mpa)**
- **Thermal/sound insulation**
- **High tensile strength**
- **Exceptionally solid**
- **Does not create cracks**
- **Highly resistant to friction**
- **Improved antiseismic behaviour**
- **Smooth final surfaces**
- **Easy to handle/apply**

Applications

Perlite Bplus is mixed with cement and constitutes **an ideal lightweight concrete for substrates of high resistance.**

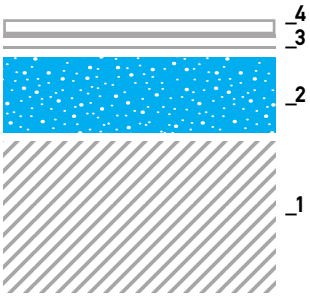
- **Ideal for thermo-sound roof insulation and for filling floors**

| A |
Application for **4cm** thickness



_1 Concrete
_2 Adhesion Reinforcer
_3 **Perlite Bplus (4cm)**
_4 Liquid additive for stabilization & water absorbance
_5 Final surface (ready for glueing tiles, wood, marble, etc)

| B |
Application for **10cm** thickness



_1 Concrete
_2 **Perlite Bplus 10cm**
_3 Liquid additive for stabilization & water absorbance
_4 Final surface (ready for glueing tiles, wood, marble, etc)

Technical Properties

Compression [1]	**10.80**	MPa
Tensile Strength [1]	**2.86**	MPa
Dry tap weight [2]	**796**	kgs/m³
Thermal conductivity λ_{10} [3]	**0.17 - 0.29**	m²hC/kcal
Sound proof		
Lightweight		
Inflammable		
Resistant to fire		
Inorganic	**ph < 7,5**	
Ecological		
Environmentally friendly		
Human friendly		
Testing Sample **4**cm X **15**cm X **15**cm	[1] ELOT 196-1 [2] ELOT EN933-1 [3] NCSR "DEMOKRITOS"	

Packaging

Pallets **1,5**m³	30 sacks of **50**L each
Pallets **2,0**m³	40 sacks of **50**L each

Application of Perlite Bplus & Perlite B

A | Application

_1 Filling up floors at a thickness of 4cm up to 1 cm in one go
_2 For larger thickness two or more successive layers can be applied, at intervals of about 3-4 hours
_3 The application surface has to be dust-free and clean
_4 The application surface needs to be leveled
_5 Watering of the sub-surface
_6 For fillings up to 4cm **(Perlite Bplus**) we recommend the addition of adhesive re-enforcer
_7 We then are ready to apply our lightweight concrete

B | Preparing the Mix

Per four 50-litre bags we add one 50-kilo bag of cement

In the mix we add up to 50 litres of water in order to achieve the required fluidity level

_1 We put **Perlite Bplus** or **Perlite B** in the pumping machine
_2 We add cement and we mix
_3 We add water and we mix

C | Comments

_1 In the first day of the application the spraying of the surface with a thin layer of water is necessary to prevent cracks
_2 Brushing should be carried out the same day or at the latest the day after
_3 For better results we recommend the use of piston/pumping machines
_4 For external surfaces (roofs, balconies, etc) we recommend applying water-resistant insulation (in liquid form) prior to applying tiles
_5 7-15 days required for drying up

Perlite B

11.7 Mpa / 15cm

Thermal/sound insulation perlite mix of high resistance

Light weight concrete for filling floors and roofs

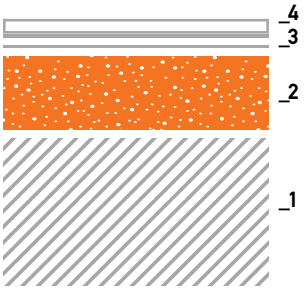
- **Cost efficient/High value-added product**
- **High compression strength (11,7Mpa)**
- **Thermal/sound insulation**
- **Exceptionally solid**
- **Does not create cracks**
- **Highly resistant to friction**
- **Improved antiseismic behaviour**
- **Smooth final surfaces**
- **Easy to handle/apply**

Applications

Perlite B is mixed with cement and constitutes an **ideal lightweight concrete for substrates of high resistance.**

- **Ideal for thermo-sound roof insulation and for filling floors**

Application for **10cm** thickness



_1 Concrete
_2 **Perlite B (10cm)**
_3 Liquid additive for stabilization & water absorbance
_4 Final surface (ready for glueing tiles, wood, marble, etc)

Technical Properties

Compression [1]	**11.70**	MPa
Dry tap weight [2]	**810**	kgs/m³
Thermal conductivity λ_{10} [3]	**0.17 - 0.29**	m²hC/kcal
Sound proof		
Lightweight		
Inflammable		
Resistant to fire		
Inorganic	**ph < 7,5**	
Ecological		
Environmentally friendly		
Human friendly		
Testing Sample **15**cm X **15**cm X **15**cm	[1] ELOT 196-1 [2] ELOT EN933-1 [3] NCSR "DEMOKRITOS"	

Packaging

Pallets **1,5**m³	30 sacks of **50**L each
Pallets **2,0**m³	40 sacks of **50**L each

Perlite C1

7.5 Mpa / 15cm

Natural expanded perlite

Lightweight concrete for exceptional thermo-acoustic insulation when filling roofs, floors and walls.

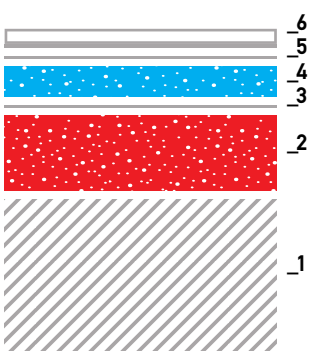
- **Cost efficient/High value-added product**
- **Ideal for low density applications**
- **Exceptional Thermal /sound insulation**
- **Improved antiseismic behaviour**
- **Easy to handle/apply**

Applications

Perlite C1 when mixed with cement constitutes a light weight concrete for substrates **with high thermal insulation capabilities.**

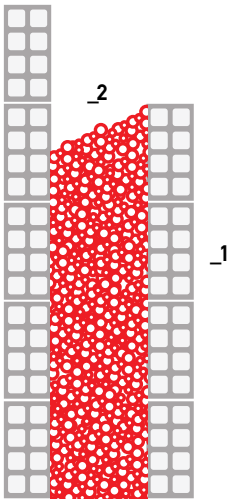
- **Ideal for thermo-sound insulation of roofs & floors**

Application for **7cm - 15cm** thickness



_1 Concrete
_2 **Perlite C1 7cm - 15cm**
_3 Adhesion Reinforcer
_4 **Perlite Bplus 2cm - 4cm**
_5 Liquid additive for stabilization & water absorbance
_6 Final surface (ready for glueing tiles, wood, marble, etc)

Application in-between walls



_1 Bricks
_2 **Perlite C1**

Technical Properties

Compression [1]	**7.50** MPa
Dry tap weight [2]	**230** kgs/m³
Thermal conductivity λ_{10} [3]	**0.063 - 0.085** m²hC/kcal
Sound proof	
Lightweight	
Inflammable	
Resistant to fire	
Inorganic	**ph < 7,5**
Ecological	
Environmentally friendly	
Human friendly	
Testing Sample **15**cm X **15**cm X **15**cm	[1] ELOT 196-1 [2] ELOT EN933-1 [3] NCSR "DEMOKRITOS"

Packaging

100 L sack	
Pallets **2,0**m³	40 sacks of **50**L each

Application for Perlite C1

A | Application

_1 Filling up floors at a thickness of 6cm up to 15cm in one go
_2 For larger thickness two or more successive layers can be applied, at intervals of about 3-4 hours.
_3 The application surface has to be dust-free and clean
_4 The application surface needs to be leveled
_5 Watering of the sub-surface
_6 We are then ready to apply our lightweight concrete
_7 After 2-3 hours we apply a layer of 2-4cm of **Perlite Bplus**

B | Preparing the Mix

Per every 100-litre bag we add 15 kgs cement

In the mix we add up to 17 litres of water in order to achieve the required fluidity level

_1 We put **Perlite C1** in the pumping machine
_2 We add cement and we mix
_3 We add water and we mix

C | Comments

_1 For better results we recommend the use of piston/pumping machines

_2 In the first day of the application the spraying of the surface with a thin layer of water is necessary to prevent cracks

_3 Brushing should be carried out the same day or latest the day after the application

_4 For external surfaces (roofs, balconies, etc) we recommend applying water-resistant insulation (in liquid form) prior to applying tiles

_5 7-15 days required for drying up

The Company

Vioryp SA is run by highly experienced engineers and has invested in cutting edge technologies, thus guaranteeing for top quality and reliability both in production and final packaging. Vioryp's fully vertically-integrated, newly-built plant, fully addresses the needs of modern construction building.

High quality Greek Natural Perlite procurement, combined with our independent operations and modern production processes deliver perlite products that meet and surpass even the most demanding specifications.

Our 30,000 m^2 production site, which is fully automated and runs under continuous monitoring by our experienced team, safeguards the highest standards of service and consistent quality of final perlite products to our customers. Our factory constitutes one of the most technologically updated perlite expansion plants in Greece.

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