# BETTER, FASTER, MORE EFFICIENT

As the leading and most innovative provider, we offer a perfectl matched range of products. More than 30 years of experience with over 38,000 objects realized. Acceptance report after installation Comprehensive, sound advice.

Fast response thanks to in-house expertise eco-friendly and sustainable zero-problem products. Can bear heavy-duty construction machines immediately after compaction – no waiting times.

# LIGHT

Although MISAPOR mainly consists of air, our foam glass is very stable at the same time. Available from 115 kg/m $^3$  upwards.



# NON COMBUSTIBLE

Glass is flameproof – MISAPOR consists of up to 98% glass and therefore accomplishes fire class A.



# SOLID

Optimal surface pressure resistance thanks to high compressive strength of the grains and high internal friction value.



# **DRAINING**

The compacted gravel also offers high water flow achievement. The water permeability coefficient kf is 6.8 x 10<sup>-4</sup>.



# **INSULATING**

MISAPOR consists of millions of closed cells. As a result our foam glass granulate creates an optimal insulation layer.



# FROST RESISTANT

Thanks to its properties, MISAPOR offers outstanding frost protection, starting at a layer thickness of 20 cm.



# **MODELLING**

It interlocks very well and does not roll; fillings with angles of up to 45 degrees are possible without additional stabilization.



# WE PROVIDE PERSONAL GUIDANCE - JUST CALL US UP!

MISAPOR has specialized in producing and distributing foam glass products for over 30 years. Our products are as varied as our crew is flexible.

Our employees are highly experienced specialists when it comes to finding a solution for object-specific foam glass challenges. Benefit from our longtime experience.

MISAPOR – personal, on site and there when you need us. We advise and support you from planning through to installation. This creates security and guarantees optimal quality.

On request, we will be pleased to confirm correct installation of MISAPOR in writing.

MISAPOR - easy to use, strong achievement.



### www.misapor.com





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# YOUR PARTNER IN SWITZERLAND

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# **NOT OURS!**

MISAPOR offers the perfect foam glass gravel for any requirement. Our stones stand out not only because of their size, but particularly because of their technical features.

**MISAPOR** 

# THE MISAPOR STONE-COLLECTION

# **GREENLIGHT 10/63**



For extremely light fillings and backfills with low load requirements and high drainage capacity. Ideal for shaping garden landscapes.

Grain size		10/63
Ø Bulk weight, dry		115 kg
Compressive strength at 10 % compression [1]		250
0% Long-term creep behaviour		approx.
λ <sub>Grenz</sub> Lambda measurements W/(m*K)	•	not measu

# STANDARD 10/75



For any perimeter insulations, even passive house standards, but also for lightweight fillings up to normal-load trafficable areas. Excellent insulation value in new buildings and renovations. Stability, upt to N2 class of use.

Grain size	10/75 mm
Ø Bulk weight, dry	135 kg/m <sup>3</sup>
Compressive strength at 10 % compression (1)	430 kPa
0% Long-term creep behaviour (2)	150
λ <sub>Grenz</sub> Lambda measurements W/(m*K)	0.08
<sup>(1)</sup> FN 826 <sup>(2)</sup> FN 1997-2 <sup>(3)</sup> FN 12667	

# **STANDARD PLUS 10/50**



For perimeter insulation with high load requirements, such as commercial and industrial buildings, but also for light-construction trafficable areas, squares, and streets. Very good long-term settlement behaviour. Very high stability.

Grain size		10/50 mm
Ø Bulk weight, dry		170 kg/m <sup>3</sup>
Compressive strength at 10 % compression [1]		660 kPa
0% Long-term creep behaviour (2)		250
$\lambda_{_{\text{Grenz}}}$ Lambda measurements W/(m*K)		0.083
(1) EN 826 (2) EN 1997-2 (3) EN 126	67	

# XTRA DYNAMIC 10/50



For lightweight fillings with the highest load requirements and dynamic loads, such as roads and airstrips. Extremely high stability, extraordinary long-term settlement behaviour.

Grain size	10/50 mm
Ø Bulk weight, dry	240 kg/m <sup>3</sup>
Compressive strength at 10 % compression (1)	900 kPa
0% Long-term creep behaviour (2)	500
λ <sub>Grenz</sub> Lambda measurements W/(m*K)	0.095
(1) EN 926 (2) EN 1997 2 (3) EN 12667	

# **MINI LINE 10/25**

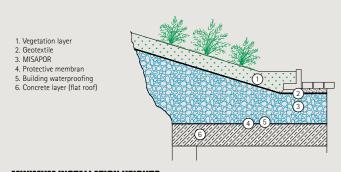


For frost-resistant foundations of paths and squares or fillings with a minimum layer thickness of only 7.5 cm. High drainage capacity at low weight. Also suitable for renovation of old buildings – for example, underneath floors.

Grain size					10/25
Ø Bulk weight, dr	У			_	220 kg
Compressive stre	ngth at 10 % com	pression (1)		_	660
0% Long-term cr	eep behaviour (2)				
$\lambda_{_{\text{Grenz}}}$ Lambda me	asurements W/(m	*K)			0
(1) EN 826	(2) EN 1997-2	(3) EN 126	67		

# MODELING WITH SURFACE DRAINAGE

- Easily malleable to an angle of up to 45°
- Won't roll and is therefore easy to apply
- Excellent longitudinal and transverse draining
- Weight-stable



### MINIMUM INSTALLATION HEIGHTS

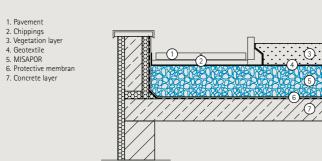
10/25	Greenlight	10/75 S
from 7 cm	from 14 cm	from 18 cm

### COMPRESSED WEIGHT 1,2:1 DRY

10/25	10/75 S	Greenlight
from 260 kg/m³ wet density	from 180 kg/m³ wet density	from 150 kg/m³ wet den

# **GREEN ROOFS AND TERRACES**

- Extremely lightweight structures with surface drainage.
- Safe for plants, even in raised beds or extensive green roofs.
- Protects against severe heat exposure in summer
- Incombustible
- Also for minimal structures of at least 7.5 cm

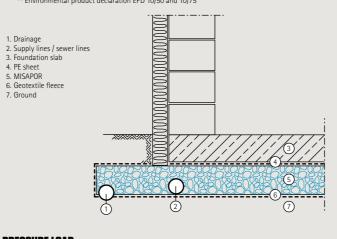


## MINIMUM INSTALLATION HEIGHTS

10/25	Greenlight
from 7.5 cm, inflatable	from 14 cm

# PERIMETER INSULATION

- No thermal bridges; load-bearing thermal insulation beneath foundation plates
- Simultaneous blinding, capillary-breaking, and insulating layer
- Quick and efficient installation
- Insulation without performance loss
- As good as new even after 50 years
- Tested, environmental, and sustainable solution (2) (2) Environmental product declaration EPD 10/50 and 10/75

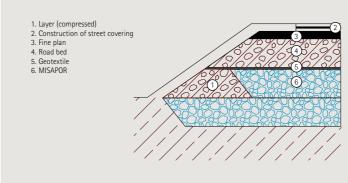


### I IILUUUIIL LUAD

10/75 S	10/50 S+	10/50 XD
Single-family home	from 15 cm, li	ndustrial plant

# ROAD AND INFRASTRUCTURE CONSTRUCTION

- Tried and tested for road beds on poor surfaces
- Ideal for bridgeheads and suitable for road widening with a steep slope angle
- One tenth the weight of gravel, weight-stable
- Resistant to frost and de-icing salts
- Up to N3 class of use



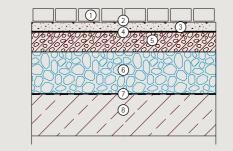
## LONG-TERM CREEP BEHAVIOUR (50 YEAR) AND SETTLEMENT <2%

10/50 S1	10/50 XD
until 250 kPa Communal roads	until 500 kPa Motorways/Airfields

# TRAFFIC AREAS ON CONSTRUCTION SITES

- Increased usage leeway on construction sites
- Higher loads possible thanks to extremely lightweight design
- Bears traffic up to N3 class of use
- <2% settlement (Technical University of Munich test report)





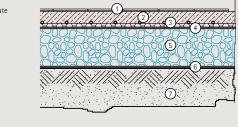
### LONG-TERM CREEP BEHAVIOUR (50 YEAR) AND SETTLEMENT <2%

	10/75 S	10/50 S+	10/50 XD
	until 150 kPa Classes of usage 1	until 250 kPa Classes of usage 2/3	until 500 kPa Classes of usage 3+
Classes of usage according to ZIV road construction 2013			

# **FLOOR RENOVATION**

- Insulate cellars with natural flooring or screed and make them habitable
- Uneven surfaces are easy to level out with aggregate
- Pipes are easy to insulate
- No mould formation thanks to humidity compensation
- Rodent-proof and non-flammable
- Suitable below underfloor heating systems





### MINIMUM INSTALLATION HEIGHTS

10/25	10/50 S+	10/75 S
until 7.5 cm	until 15 cm	until 18 cm