

# O-PHALT

One-component modified asphalt-based coating waterproofing material

**O-PHALT** is a one-component emulsion type coating waterproofing material made mainly of asphalt, which is reliable in waterproofing, and rubber, which enhances the elongation performance of the coating.

Regardless of the shape of the substrate, it forms a seamless waterproofing layer.

Since it does not contain substances that are harmful to environmental hormones such as formaldehyde, which adversely affect the human body, it can be used safely in various places both indoors and outdoors.



main component : asphalt SBR etc.

Solid content : 62~68%

viscosity : 150~8000mPa · s (77°F)

pH : 7±1

specific gravity : approximately 1.0

Color : dark brown (After drying, blackish brown)

Here is an experimental video that shows the watertightness of O-PHALT.



**No stirring required  
No weighing required**

You can use it as is.

**Quick drying**

Since it dries quickly, the construction period can be shortened.



# Adhesion method using O-PHALT

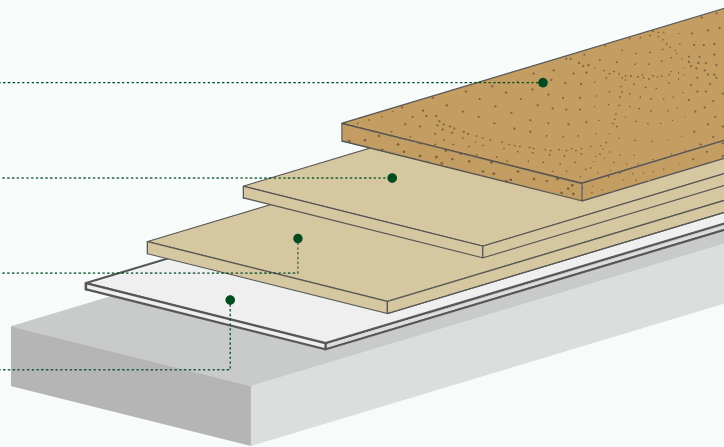
## O-M 5

④ OS Topcoat (Sand type)

③ O-PHALT

② O-PHALT

① O-PHALT Primer



①	②	③	④
O-PHALT Primer	O-PHALT	O-PHALT	OS Topcoat (Sand type)
0.04 lbs/ft <sup>2</sup>	0.16 lbs/ft <sup>2</sup>	0.12 lbs/ft <sup>2</sup>	0.06~0.12 lbs/ft <sup>2</sup>



## O-M 10

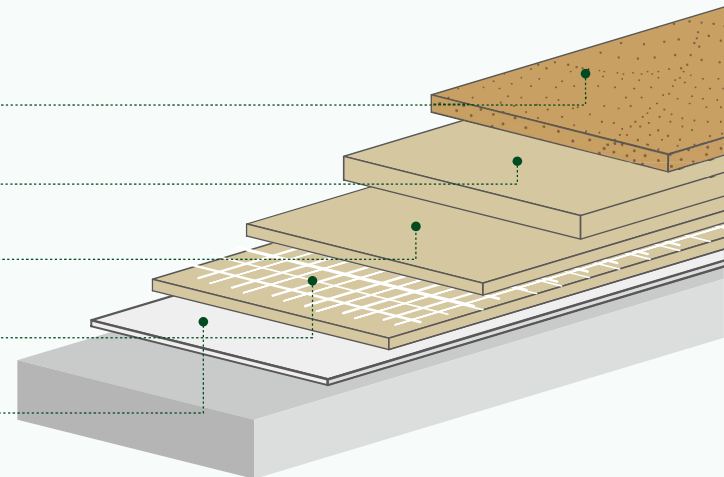
⑤ OS Topcoat (Sand type)

④ O-PHALT

③ O-PHALT

② O-PHALT + Cloth

① O-PHALT Primer



①	②	③	④	⑤
O-PHALT Primer	O-PHALT + Cloth	O-PHALT	O-PHALT	OS Topcoat (Sand type)
0.04 lbs/ft <sup>2</sup>	0.16~0.2 lbs/ft <sup>2</sup>	0.2~0.24 lbs/ft <sup>2</sup>	0.12~0.16 lbs/ft <sup>2</sup>	0.06~0.12 lbs/ft <sup>2</sup>



# Insulation method using O-PHALT

## O-Z10H

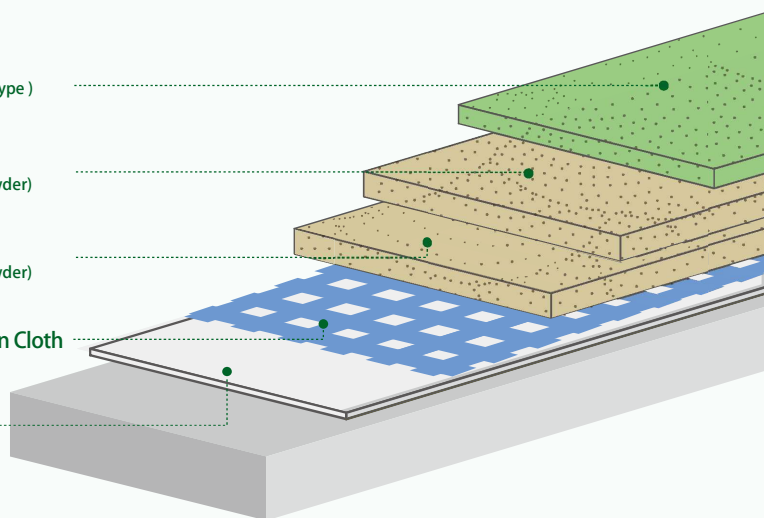
⑤ OS Topcoat ( Sand type )

④ O-PHALT<sup>H</sup>  
(O-PHALT + O-PHALT Powder)

③ O-PHALT<sup>H</sup>  
(O-PHALT + O-PHALT Powder)

② O-PHALT Ventilation Cloth

① O-PHALT Primer



①	②	③	④	⑤
O-PHALT Primer	Cloth for O-PHALT	O-PHALT <sup>H</sup> (O-PHALT + O-PHALT Powder)	O-PHALT <sup>H</sup> (O-PHALT + O-PHALT Powder)	OS Topcoat ( Sand type )
0.04 lbs/ft <sup>2</sup>	Ventilation Cloth	0.28~0.32 lbs/ft <sup>2</sup>	0.2~0.28 lbs/ft <sup>2</sup>	0.06~0.12 lbs/ft <sup>2</sup>



## O-PHALT Products used

### O-PHALT Primer



It is an asphalt emulsion type water-based primer.  
It is a material for good adhesion with the base material.  
It is suitable for asphalt-based waterproofing materials.

Specification : 39.7 lbs / steel can

Solids : 18~22%

### O-PHALT



This is an emulsion-type one-component modified asphalt-based coating waterproofing material made mainly of rubber and asphalt.  
Regardless of the shape of the substrate, it forms a seamless waterproofing layer.  
It is an environmentally friendly waterproof material that is safe for the human body and does not use fire or solvents.

Specification : 39.7 lbs / steel can

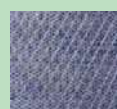
Solids : 62~68%

Standard : JIS A 6021 Rubber asphalt type

### O-PHALT Cloth



O-PHALT Cloth S



O-PHALT Cloth M

[ O-PHALT Cloth S ]

Material : Tetoron cloth

Size : 3.41 ft × 164.04 ft

[ O-PHALT Cloth M ]

Material : Non-woven fabrics

Size : 3.41 ft × 328.08 ft

### O-PHALT Thickeners



Viscosity modifier

3.38oz of thickener is used for 39.7lbs of O-PHALT. Adjust as needed.

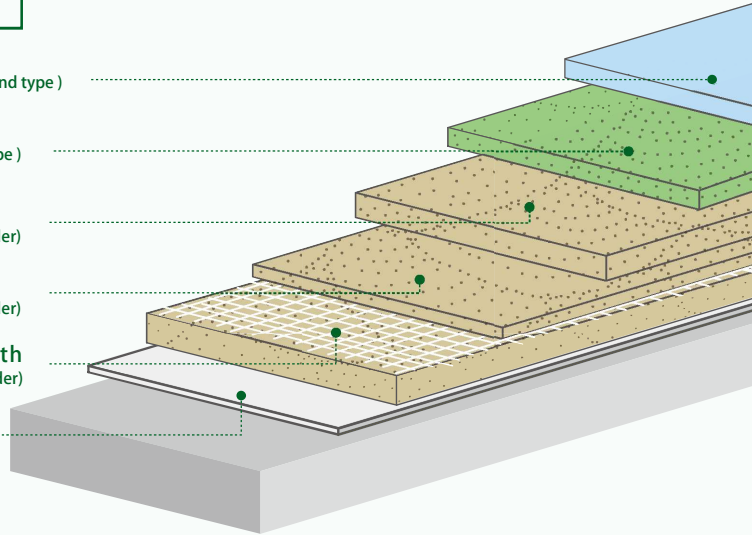
Specification : 33.8 oz or 3.38 oz



# Cement Reaction Type Modified Asphalt Coating Film Waterproofing

## O-PHALT<sup>H</sup>

- ⑥ OS Topcoat (None sand type)
- ⑤ OS Topcoat (Sand type)
- ④ O-PHALT<sup>H</sup>  
(O-PHALT + O-PHALT Powder)
- ③ O-PHALT<sup>H</sup>  
(O-PHALT + O-PHALT Powder)
- ② O-PHALT<sup>H</sup> + Cloth  
(O-PHALT + O-PHALT Powder)
- ① O-PHALT Primer



①	②	③	④	⑤	⑥
O-PHALT Primer	O-PHALT <sup>H</sup> (O-PHALT + O-PHALT Powder)	O-PHALT <sup>H</sup> (O-PHALT + O-PHALT Powder)	O-PHALT <sup>H</sup> (O-PHALT + O-PHALT Powder)	OS Topcoat (None sand type)	OS Topcoat (Sand type)
0.04 lbs/ft <sup>2</sup>	0.16 lbs/ft <sup>2</sup> + Cloth	0.24 lbs/ft <sup>2</sup>	0.16 lbs/ft <sup>2</sup>	0.06 lbs/ft <sup>2</sup>	0.04 lbs/ft <sup>2</sup>



## PRODUCTS

### O-PHALT Primer (for metal parts)



Water-based epoxy-modified acrylic resin primer.

Specification : 35.3 lbs / steel can

### O-PHALT Powder



30.8 lbs



6.6 lbs

It is an O-PHALT admixture that is a blend of special cement and aggregates. It is used in the O-PHALT<sup>H</sup> method.

Specification : 30.8 lbs/bag or 6.6 lbs/box

### O-PHALT Ventilation Cloth EMT0308AL 1000



There is adhesive on the back of the cloth sheet, and the ventilation path is an aluminum foil ventilation sheet.

Size : 3.28 ft × 164.04 ft

### OS Topcoat (Sand type)



It is an emulsion-type paint based on acrylic resin that protects the O-PHALT. Strengthens the surface of the waterproof layer. Prevents deterioration of O-PHALT and improves durability.

Specification : 44.1 lbs / steel can

Principal component : Acrylic emulsion

Color : Grey & Green

Solids : 55%



It has the advantages of modified asphalt-based coating waterproofing and polymer cement-based coating waterproofing.

# O-PHALT<sup>H</sup>

Ensuring  
quality

Simple  
&  
easy  
constru-  
ction

Modified asphalt-based polymer cement waterproofing



O-PHALT

Cement Powder

## Advantages of modified asphalt-based coating waterproofing

### Advantages

- Proven waterproofing of asphalt
- Good elongation of asphalt and elasticity of rubber
- High adhesion to asphalt tarpaulin

## Advantages of polymer cementitious coating waterproofing

### Advantages

- Stable adhesion that can be applied to a slightly damp base
- Durability such as water resistance, adhesion, and weather resistance
- Accelerated curing by hydration reaction

- **Retains the reliability and high elasticity of modified asphalt-based coating waterproofing**
- **Cement powder formulation accelerates curing and improves strength**
- **Environmentally friendly and safe coating waterproofing material that does not contain**

## Products used

### OS Primer



The ground treatment material adheres dirt and dust that cannot be removed from the surface of the base to the base and improves the adhesive strength of OS-sheets. It is a solvent type with little odor.

Specification : 35.3 lbs / steel can

Solids : 45%

dangerous goods

Solvent : Acetone, xylene

### OS BASE



It is an organic solvent-based primeractive modifier and has an excellent conditioning effect.

※ Inhalation may cause poisoning, so be careful of ventilation and fire.

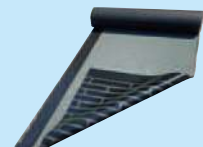
Specification : 44.1 lbs / steel can

Solids : 75%

dangerous goods

Solvent : Asphalt Mineral Spiri

### OS-sheets OS-Z40



A hybrid modified asphalt tarpaulin with a striped self-adhesive layer on the back of the sheet, which functions as both a ventilation layer and a waterproof layer.

Torch only the seat joint part.

J I S : A6013 Class R Class 2 for exposed single layer

Thickness : 157 mil

Length : 3.28 ft × 22.97 ft

# OS-sheets & O-PHALT (O-PHALT<sup>H</sup>) combined construction method

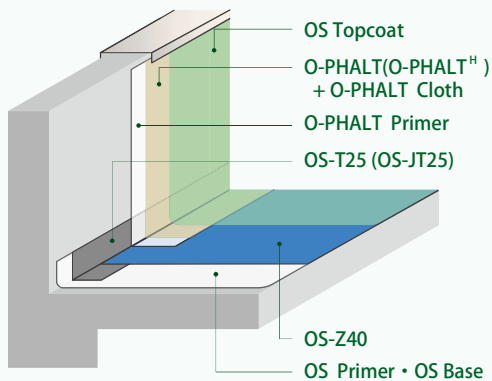
## Compatible with various shapes !

### Hybrid Modified Asphalt Tarpaulin

## Combined waterproofing method with OS-sheets

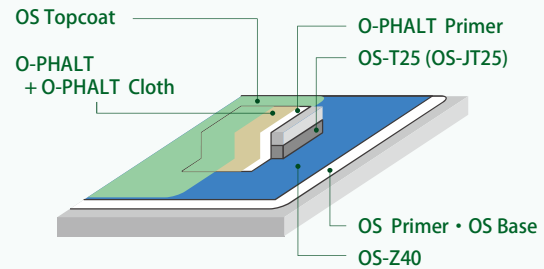
### Rising part : Waterproof O-PHALT (O-PHALT<sup>H</sup>)

- Flat area part : OS-sheets ( OS-Z40 )
- Rising part : O-PHALT ( O-PHALT<sup>H</sup> )



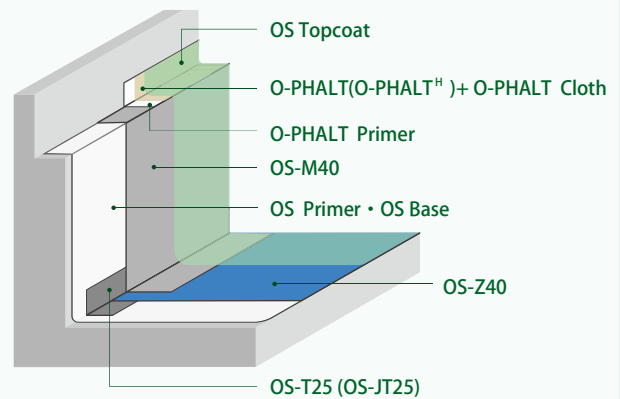
### Trestle part : O-PHALT (O-PHALT<sup>H</sup>)

- Flat area part : OS-sheets ( OS-Z40 )
- Trestle part : O-PHALT ( O-PHALT<sup>H</sup> )



### OS-sheets edge : O-PHALT (O-PHALT<sup>H</sup>)

- Flat area part : OS-sheets ( OS-Z40 )
- Rising part : O-PHALT ( O-PHALT<sup>H</sup> )
- OS-sheets edge : O-PHALT ( O-PHALT<sup>H</sup> )



# PRODUCTS

## OS-sheets OS-M40



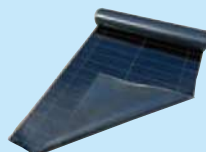
Modified asphalt tarpaulin by torch method.  
It is a type of sheet that torches the entire back of the sheet.

J I S : A6013 Class R Class 2 for exposed single layer

Thickness : 157 mil

Length : 3.28 ft × 26.25 ft

## OS-T25



It is used for reinforcement.  
It is constructed with a double-sided torch.

J I S : A6013 Class R Class 2 for non-exposed multi-layer waterproofing

Thickness : 98.4 mil

Length : 3.28 ft × 26.25 ft

## OS Topcoat (Non sand)



This is an emulsion-type protective paint based on acrylic resin used for exposure waterproofing.  
It protects the waterproof layer, maintains durability, prevents the temperature rise due to heat, and prevents the deterioration of the waterproof layer due to ultraviolet rays.

Specification : 39.7 lbs / steel can

Principal component : Acrylic emulsion

Color : Grey & Green

# Technical data

## O-PHALT/JIS A 6021 Rubber asphalt type

Test items			O-PHALT	JIS A 6021 Rubber asphalt type
Pulling Performance	Tensile strength	N/mm <sup>2</sup>	0.37	Over 0.25
	Elongation at break %		Over 1000 ※	Over 600
Tear Performance	Tensile strength	N/mm <sup>2</sup>	4.13	Over 2.0
Temperature Dependence	Tensile Strength Ratio %	Test Temperature -4°F	747	Between 700 and 2000
		Test Temperature 140°F	19.3	Over 5.0
	Elongation rate between grips at break %	Test Temperature -4°F	290	Over70
		Test Temperature 73.4°F	Over 1000 ※	Over 360
		Test Temperature 140°F	Over 1000 ※	Over 360
		Heat expansion and contraction properties		Stretch rate %
Tensile perfo- mance after aging treatmen- t	Tensile Strength Ratio %	Heat Treatment	112.2	Over 80
		Alkaline Treatment	90.1	Over 80
	Elongation at break %	Heat Treatment	Over 2300 ※	Over 480
		Alkaline Treatment	Over 2400 ※	Over 480
Deterioration properties when stretched		Heat Treatment	No abnormality	No cracks and significant deformations

※No breakage at maximum test stroke

## Maintenance of waterproofing layer

### In case of exposed waterproofing

- As a general rule, the top of the waterproof layer cannot be used, except for the maintenance of the waterproof layer.
- If you are going to walk on a waterproof layer, use shoes with soft and flat soles.
- Fire, solvents, and chemicals may damage the waterproof layer, so be careful.
- Even in the case of light walking, please take the same measures as exposure waterproofing.

### Maintenance

- Regularly clean and inspect the waterproof layer (about twice a year). In particular, make sure that there are no clogs in drains, drains, etc.
- If the protective paint has deteriorated, please reapply the protective paint.



# Robusto Co.,Ltd.

#### [ Head Office ]

9F Sanken Kitahama Building, 1-6-10 Hirano-machi, Chuo-ku, Osaka 541-0046, Japan  
Phone: +81-6-6201-2290 Fax: +81-6-6201-2291

#### [ Neyagawa Warehouse ]

10-10 Utani-cho, Neyagawa city, Osaka 572-0856, Japan  
Phone: +81-72-821-0150 Fax: +81-72-821-7578

#### [ Saitama Laboratory ]

6-10-23 Inari, Souka city, Saitama 340-0003, Japan

# Notes

## Installation precautions

- If rainfall is expected, avoid construction.
- The drying time fluctuates depending on the weather, temperature and humidity.
- Use O-PHALT and O-PHALT PRIMER undiluted.
- Use the prescribed amount.

## Handling precautions

- Please refrain from rough handling.
- Beware of accidental ingestion.
- If it gets in your eyes, it may cause irritation, so use protective eyewear.
- It can cause skin irritation, so use protective gloves.

## Storage precautions

- Do not freeze.
- Do not expose to direct sunlight.
- After opening, keep it sealed.

## Disposal precautions

Please dispose of the contents and containers in accordance with the laws and regulations.



<https://robusto.jp/>