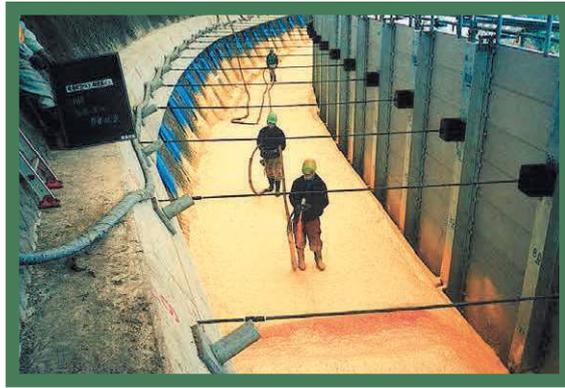


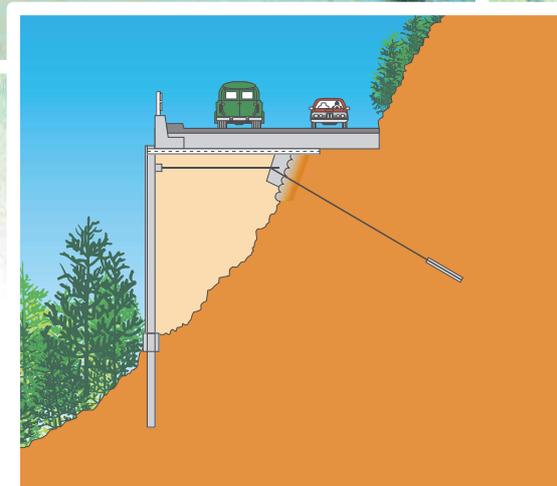
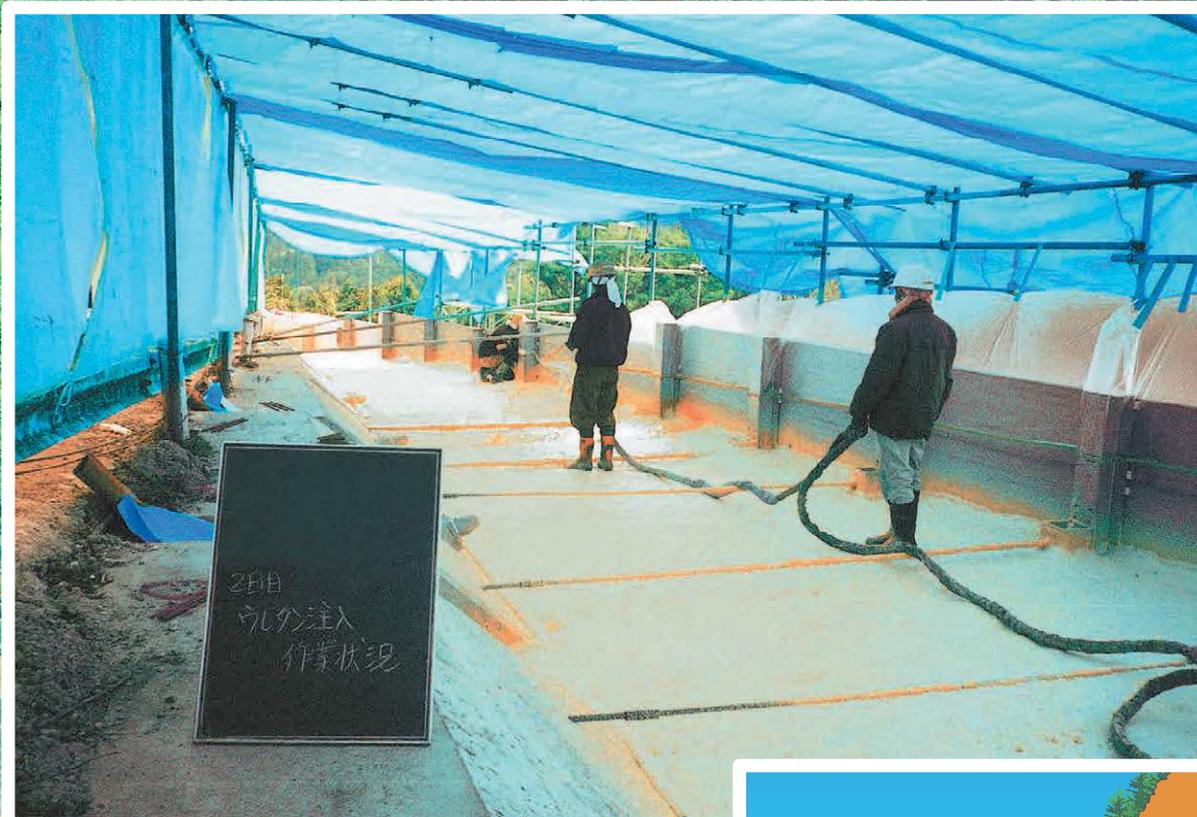
**R-PUR METHOD**

**On-Site PU Foaming Lightweight Banking Method**

# FOAM LIGHT *W*

CFC-Free Material



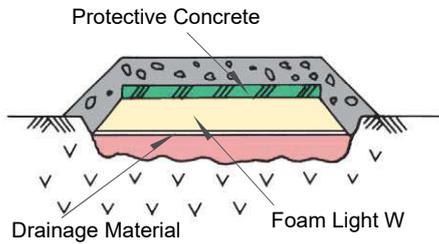


## Outline of On-Site PU Foaming Lightweight Banking Method

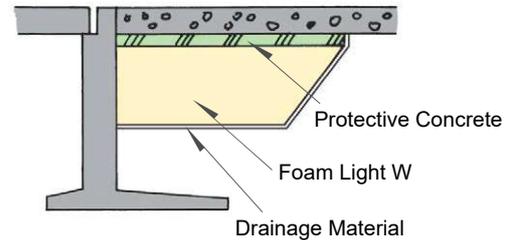
On-site PU foaming lightweight banking method is a civil engineering method in which hard urethane resin "Foam Light W" is foamed in the required amount at the site and into a shape that matches the geography and structure. Due to ultra-light density of  $36 \text{ kg/m}^3$ , it enables to reduce the earth pressure and load on embankment and earthen structure. It enhances a workability, enabling reasonable and speedy installation since it is foamed at the site.

## Application

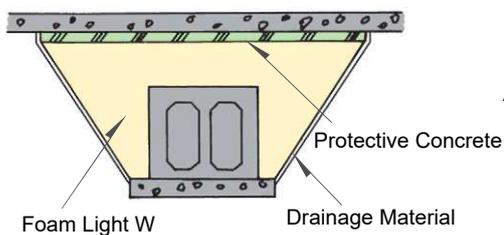
### *Subsidence Prevention During Banking Construction*



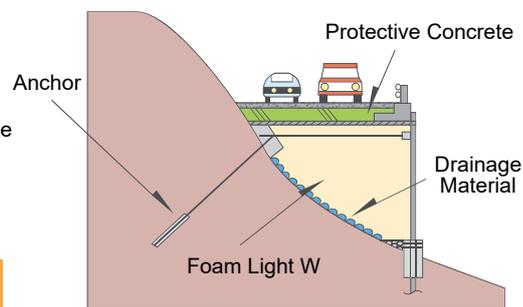
### *Earth Pressure Alleviation for Retaining Structures*



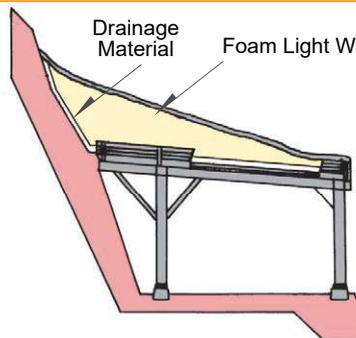
### *Load Alleviation for Structures*



### *Banking Construction on Steep Slopes*



### *Usage as a Buffer Against Rockfall*



## Features

### **1. Lightweight**

The density with  $36 \text{ kg/m}^3$  is 1/50 lighter compared with that of sand and this ultra light weight can realize a drastic load alleviation of the earth pressure.

### **4. Easy-Construction**

Easy construction: No need of large-scale construction equipment, allowing human-powered construction.

### **2. Cost-Saving**

Cost-saving is possible due to foaming only a necessary amount at construction sites.

### **5. Cost Effective**

More economical construction of structure can be realized because of its light weight; No need of foundation work or improvement work that used to be required.

### **3. Stability**

It is safe because the foamed body is integrated and has no connection part or seam; it is also flexible to match with any bank or foundation.

### **6. Adherence Property**

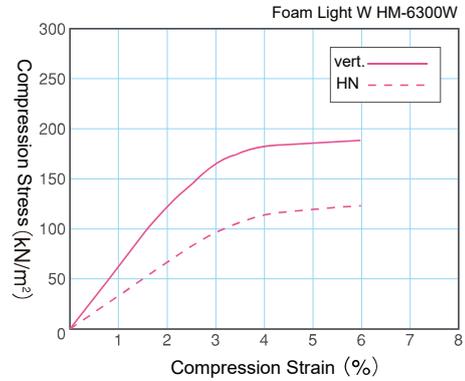
One of the benefits of the product is self adhesiveness and thus able to make a foam which is strongly adhered to an object in the hardening process.

## General Characteristics

### On-Site PU Foaming Material Properties of “Foam Light W HM-6300W”

ITEM	UNIT	Standard Value	Test Method
Density	kg/m <sup>3</sup>	36±4	JIS A9511
Water Absorption	g/100cm <sup>2</sup>	≤2.0	JIS A9511
Compression Strength	kN/m <sup>2</sup>	≤120	JIS A9511
Allowable Compressive Stress	kN/m <sup>2</sup>	≤60	JIS A9511
Poisson's Ratio		0.05	
Combustibleness		Self-Extinguish-ing	JIS A9511
Dissolution Test 1		Below Standard	Regulation 13
Dissolution Test 2		Below Standard	JWWA K143

### Compression Stress-Strain



## Material Characteristics

### ① Compressive Resistance

Foam Light W has excellent compression resistance and sufficient strength as banking material.

### ② Water Resistance

It has strong resistance to water intrusion and almost no change in physical properties due to closed cell structure of Foam Light W.

### ③ Chemical Resistance

Foam Light W has excellent chemical resistance. It does not dissolve in oils such as gasoline.

### ④ Heat Resistance & Thermal Insulation

Because Foam Light W is a thermosetting resin, it does not have a clear softening or melting point like other plastic foams.

Each of the foamed bubbles is constructed independently and has excellent heat insulation effects.

### Test Report of Chemical Resistance

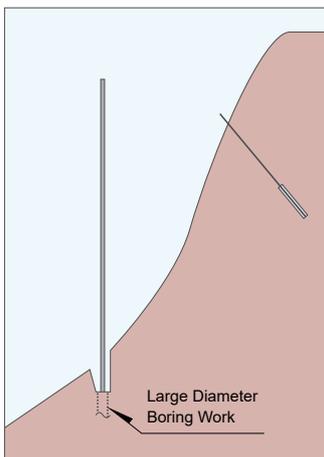
○: No Change △: Swelling

Name of Chemicals	Condition	Name of Chemicals	Condition
Gasoline	○	MEK	△
Soapy Water	○	Acetone	△
Toluene	○	Acetic Ether	△
Xylene	○	Styrene Monomer	○
Marine Water	○	Strong Caustic Soda	○
Heating Oil	○	Vegetable Oil	○
Methanol	△	※Animal Oil	○

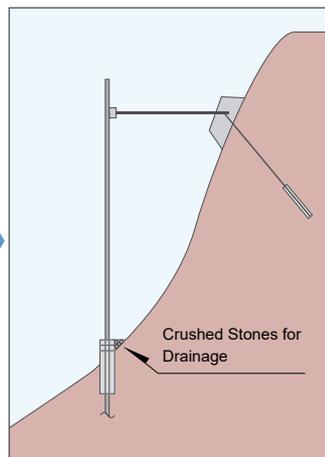
※Animal oil is solid at room temperature and thus it is tested by heating it to 50°C.

## Construction Method

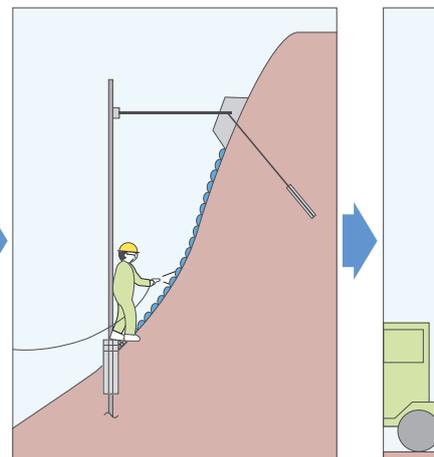
### ① Anchor Work Large Diameter Boring Work



### ② Pressure Plate, Tie Rod, Wall Installation Work

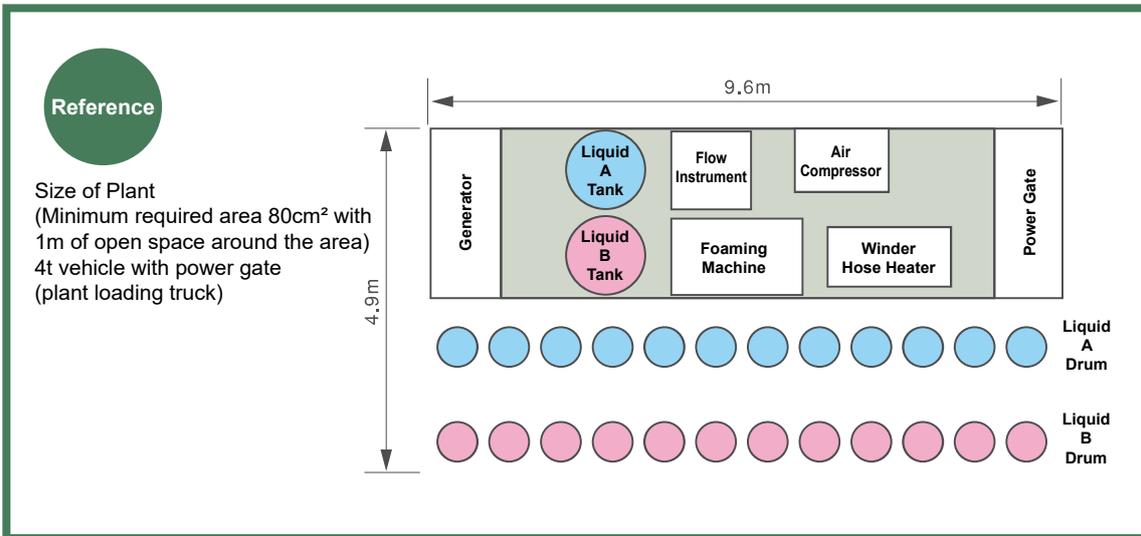
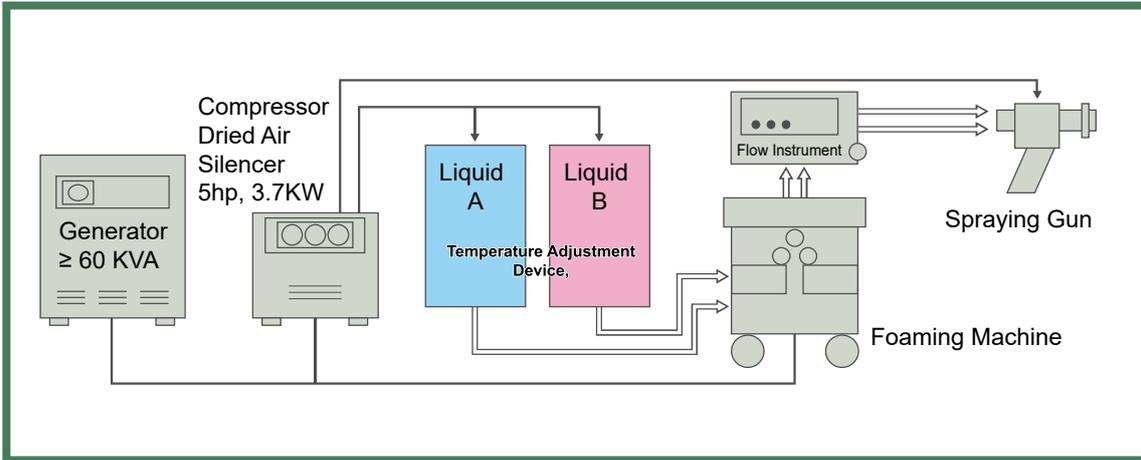


### ③ Waterproof Primer Coating Work

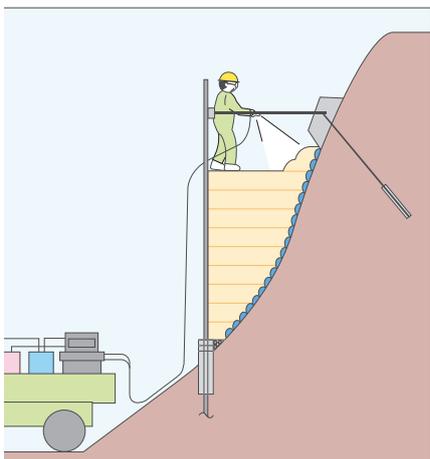


# Foaming Method

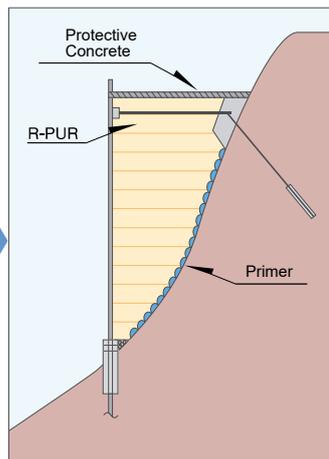
On-Site PU Foaming is possible by Simple Equipment



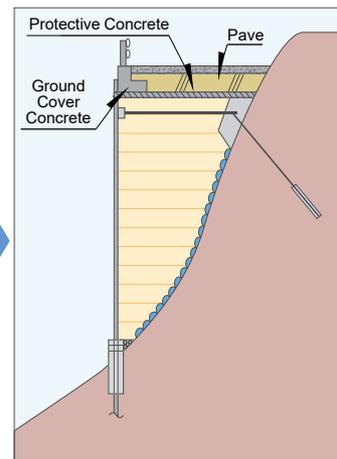
④Foam Light W Foaming Work



⑤Foam Light W Foaming/Protective Concrete Installation Work



⑥Casing Soil/Pave Work



## For Your Safety

- Please read the separate volume of installation manual thoroughly and understand correctly before use in order to install the urethane method safely.
- Please keep the manual handy and use it at the work site.
- Our company cannot be held responsible for matters not covered in the manual.



On-Site PU Foaming Lightweight Banking Method  
Spraying Machine

# SPRALE TR-280R

Using SPRALE for installation is recommended.



# INOAC Housing & Construction Materials Co., LTD.

INOAC Hibino Building 2F, 4-9-27, Taiho, Atsuta-ku, Nagoya, Aichi, 456-0062, JAPAN

Tel: (+81)52-684-0266 Fax: (+81)52-684-0277