

Friction reducing material that swells only in alkaline environments

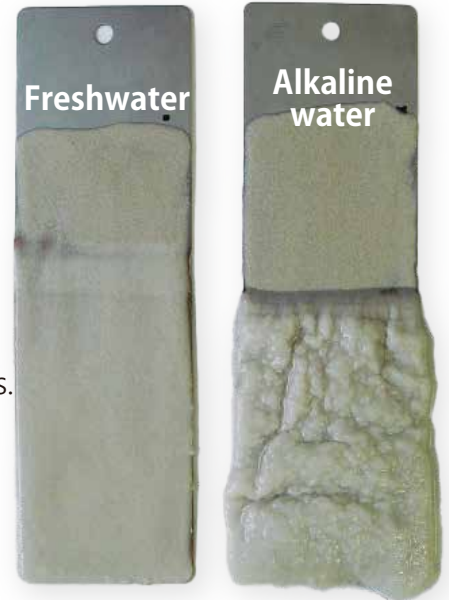
# LUB-CHEMICA® AL

## Use

- (1) For friction reduction by applying to the sides of steel sheet piles, H-beams, etc. to prevent adhesion with mortar, cement milk, etc. and to facilitate withdrawal.
- (2) Friction reduction measures and loading test applications for temporary support piles.

## Features

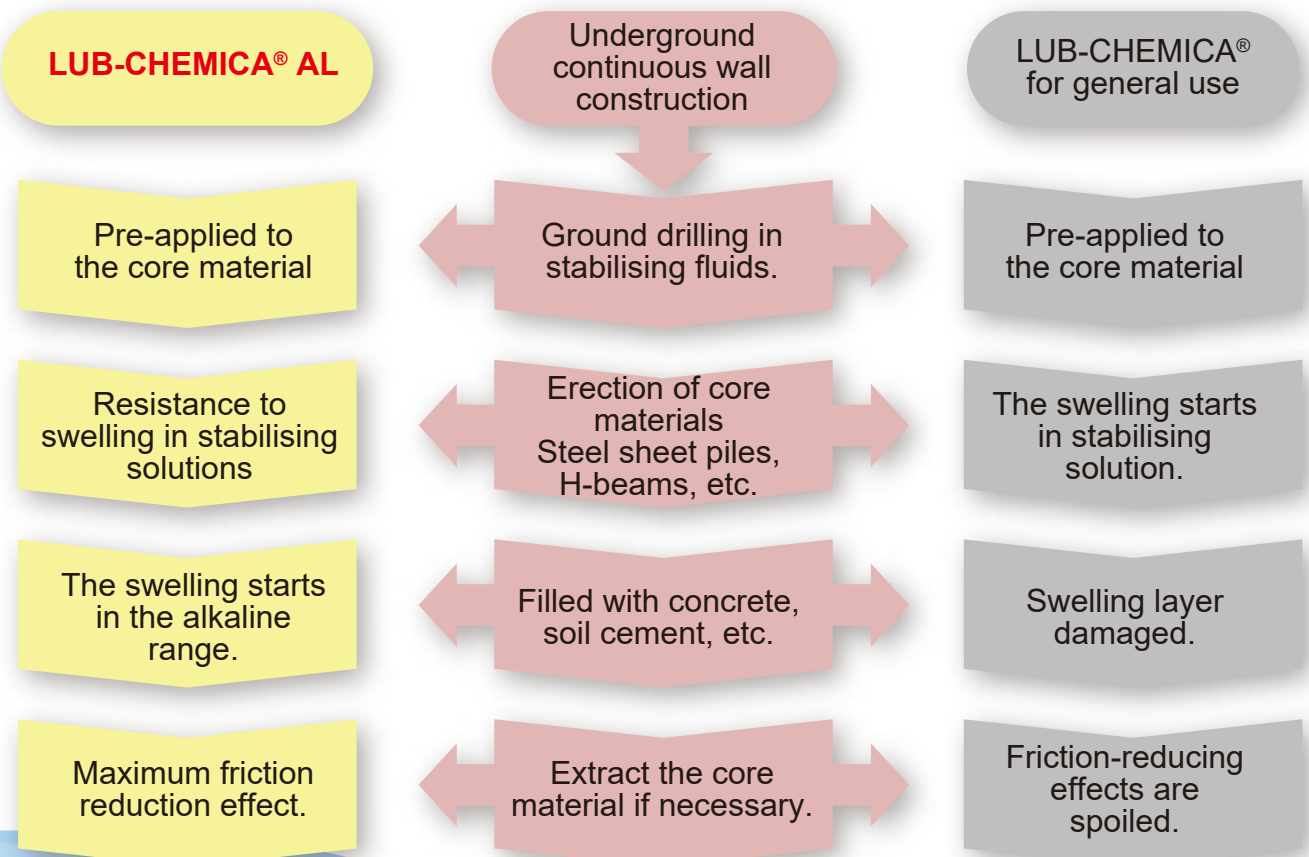
- (1) Alkaline-environment-exclusive swelling.  
This coating film does not swell in freshwater or seawater environments.
- (2) Versatile application options.  
Liquid paint can be applied at factories, on-site stockyards, and other locations without the need for dedicated application lines.
- (3) User-friendly application method.  
The coating can be easily applied with a brush, roller, or other tools.
- (4) Easy-to-manage coating film.  
The quick-drying formula results in a hard and durable coating film.



Swelling after immersion for 24 hours

## Construction examples

Ideal for reducing friction during the removal and withdrawal of H-beams and other core materials in underground continuous wall construction methods, such as H-beam and core material erection, concrete filling, soil cement filling, and solidifier filling.



## State of swelling



Fig1 After 24 hours in freshwater

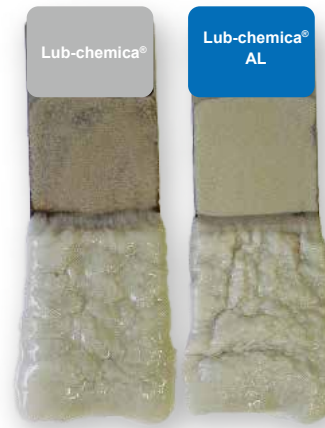


Fig.2 In alkaline water (pH 14) after 24 hours

## Swelling characteristics

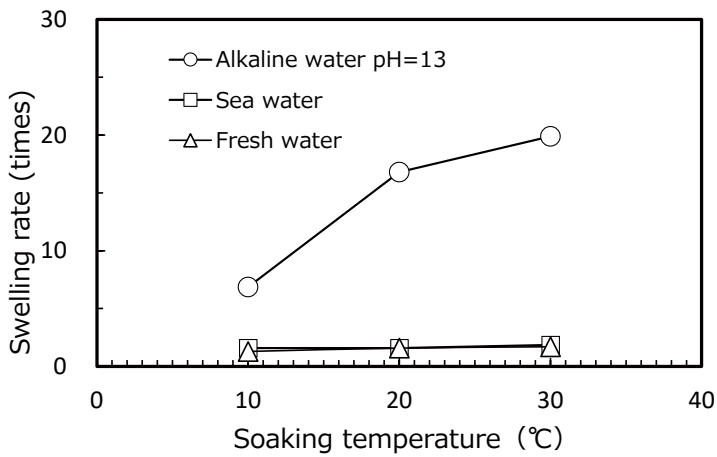


Fig.3 Soaking water temperature and swelling rate

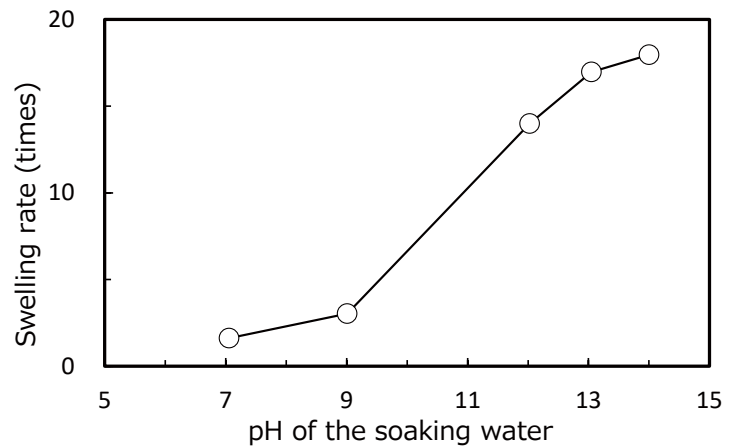


Fig.4 Soaking water pH and swelling rate

## Extraction characteristics



Steel flat bar and extraction specimen

Extraction force measuring tester

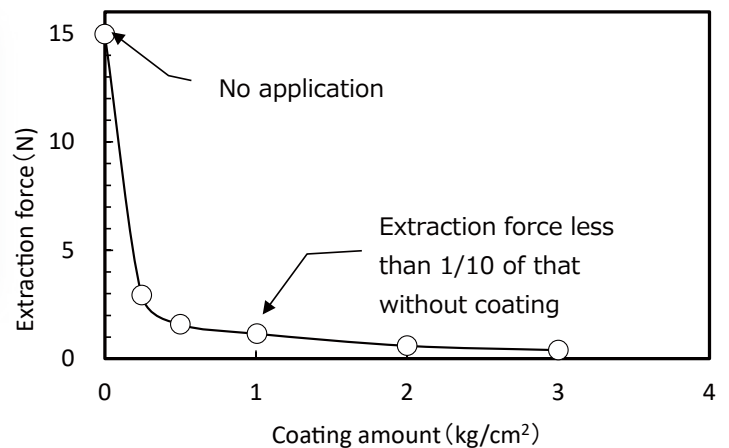


Fig.6 Coating volume and extraction force

Fig.5 Extraction test of simulated temporary piles