

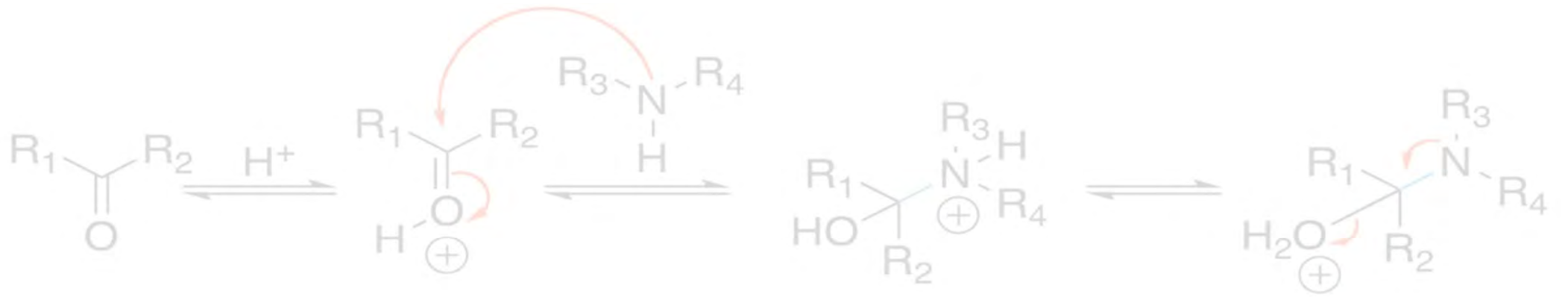
Development of Water Activated Cold Mix Asphalt **MILD PATCH**

MAEDA ROAD CONSTRUCTION CO., LTD., JAPAN

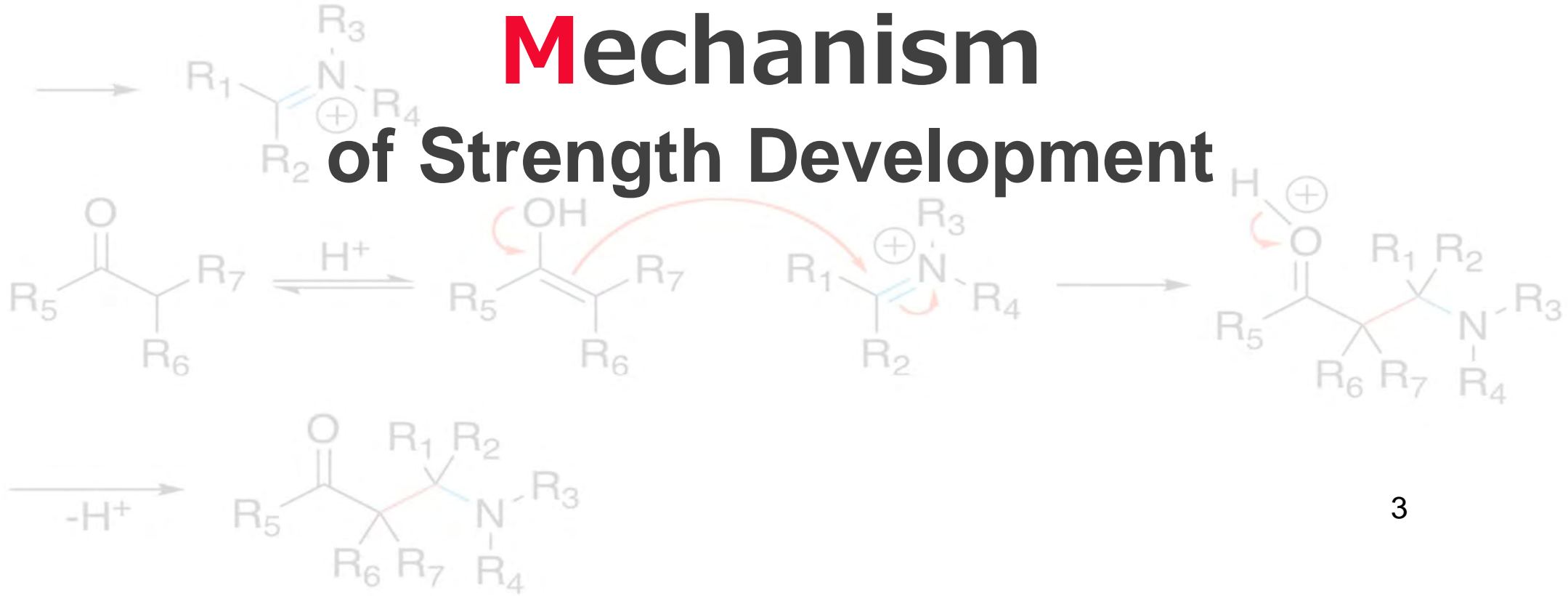


Agenda

- 1. Mechanism of Strength Development**
- 2. Installation Procedure**
- 3. Features**

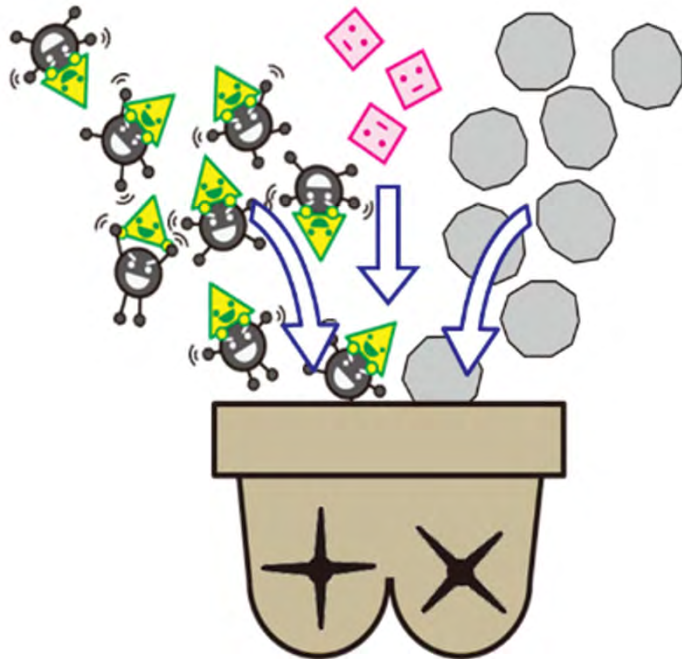


Mechanism of Strength Development



Manufacturing of this Mixture

~110°C



Mixing Illustration

Characters



Asphalt bitumen



Specialty lubricant



Chemical reaction catalyst

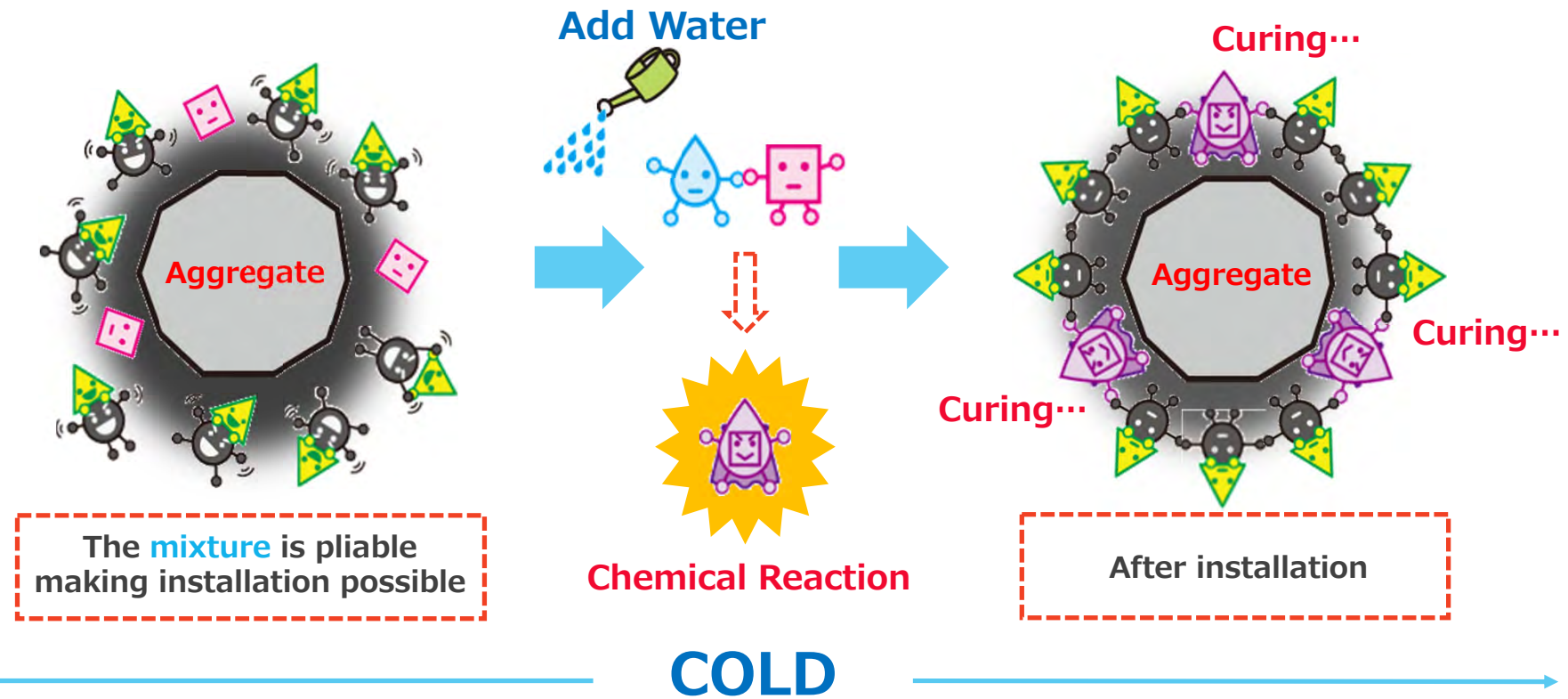


Aggregate



Mild Patch

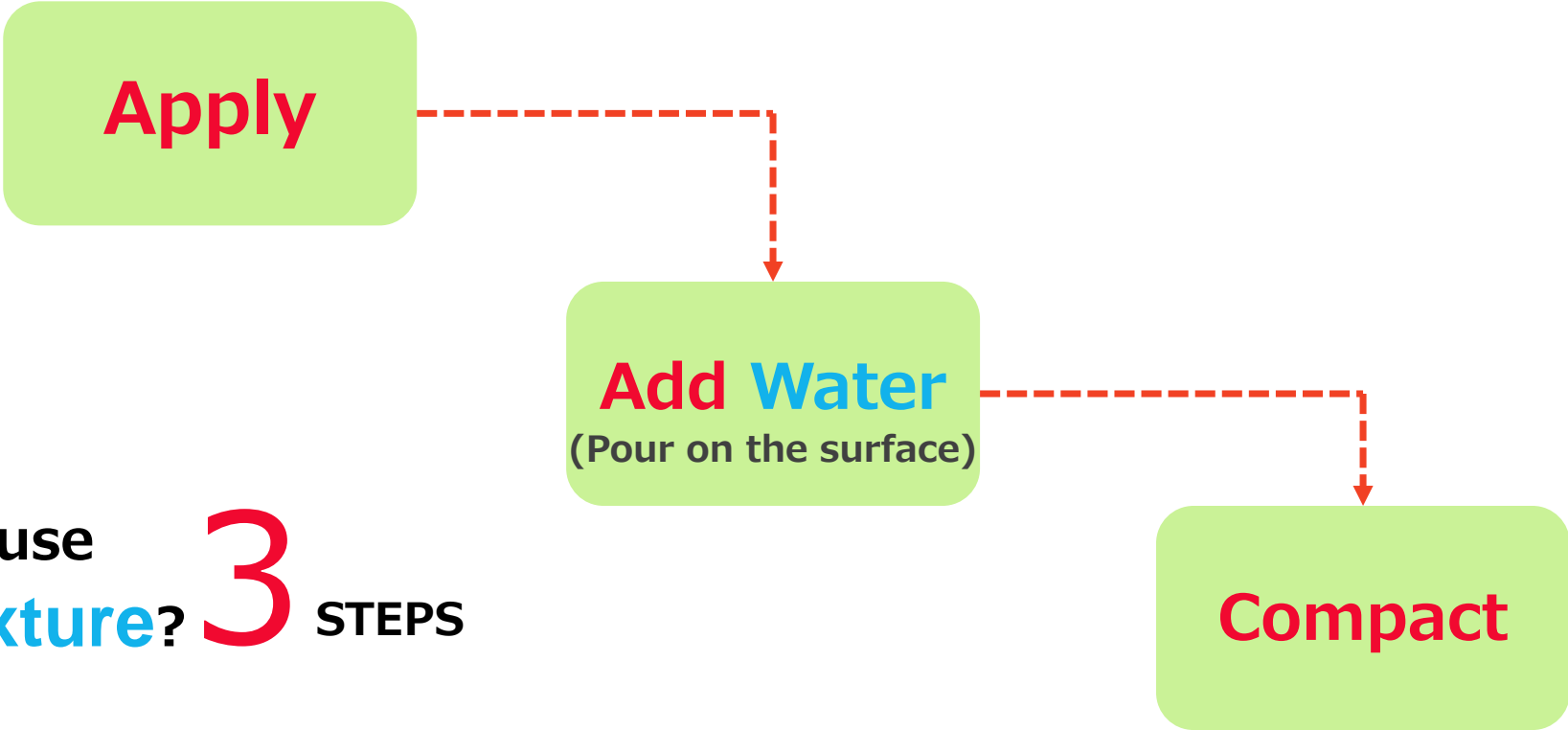
Hardening Mechanism of this Mixture



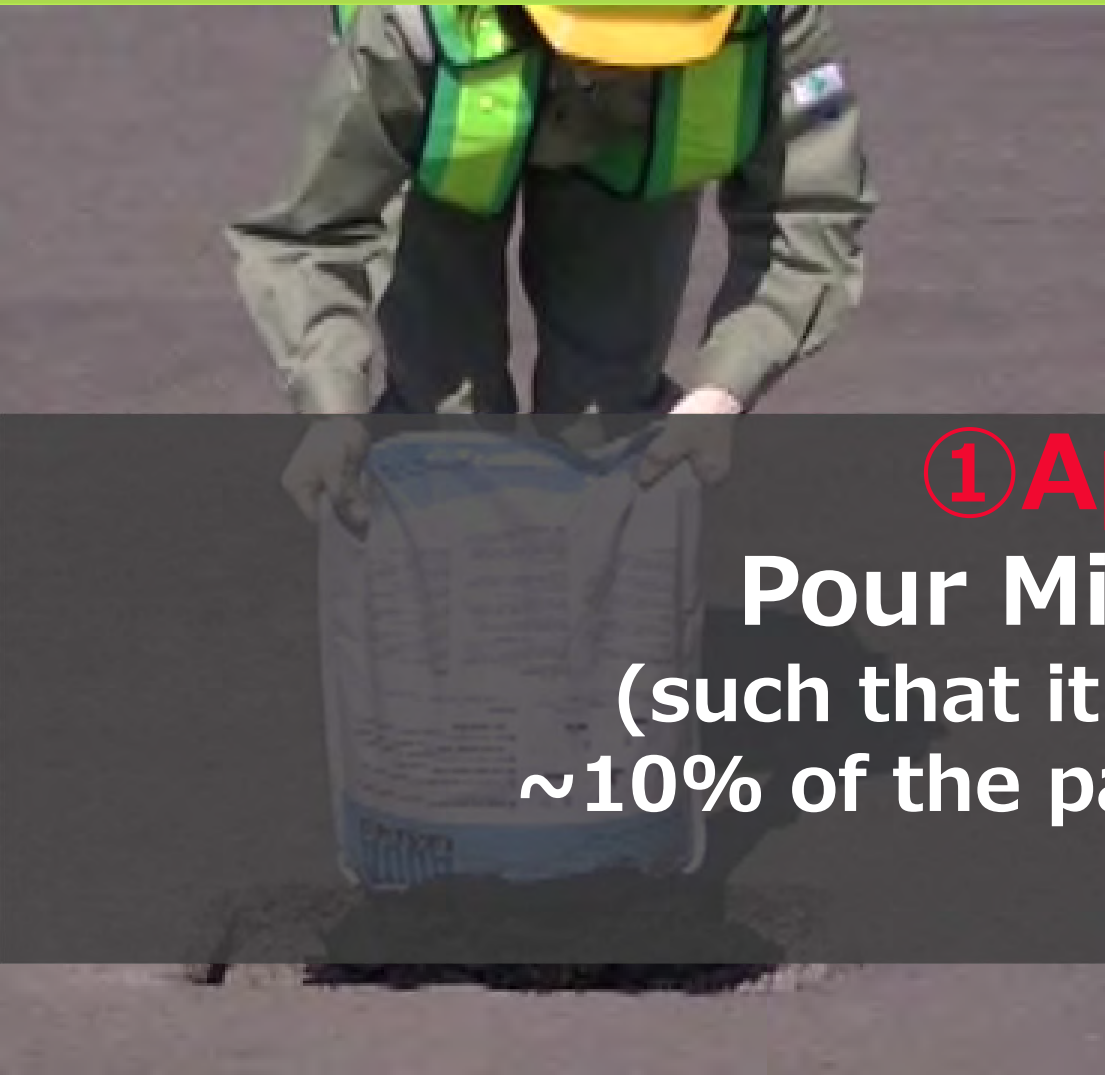


Installation Procedure

Installation Procedure



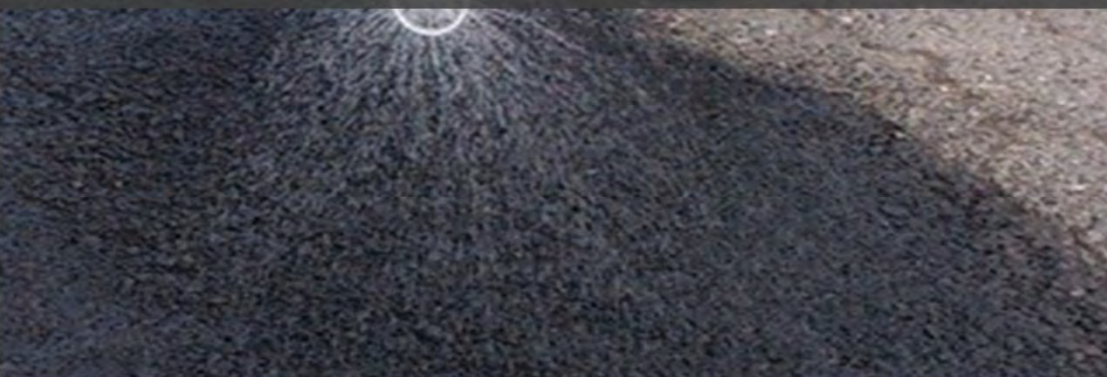
How to use
this **Mixture?** **3** STEPS

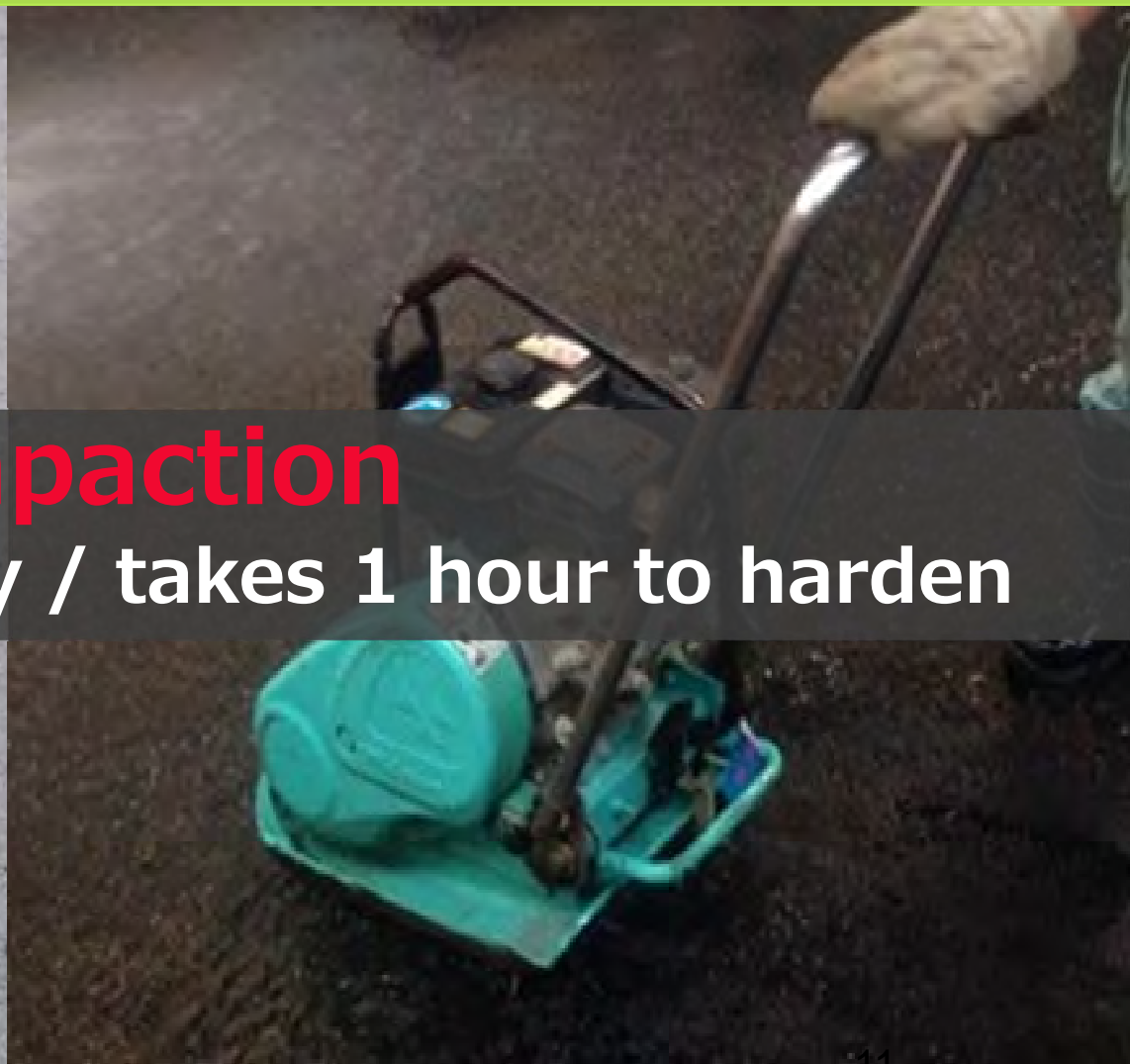


① Apply
Pour Mild Patch
(such that it protrudes by
~10% of the pavement depth)



② **Add Water**
at least 1L/bag
(extra water is not a problem)





③ **Compaction**

immediately traffic-ready / takes 1 hour to harden



Features

Features of this **Mixture**



Durable



Usable in the Rain



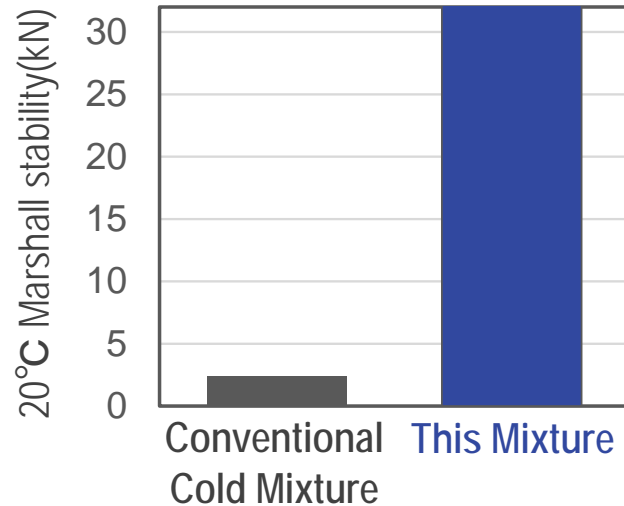
Fast Traffic Opening



Eco-Friendly

How durable is **this Mixture**? (Compared with conventional cold mixture: 20°C)

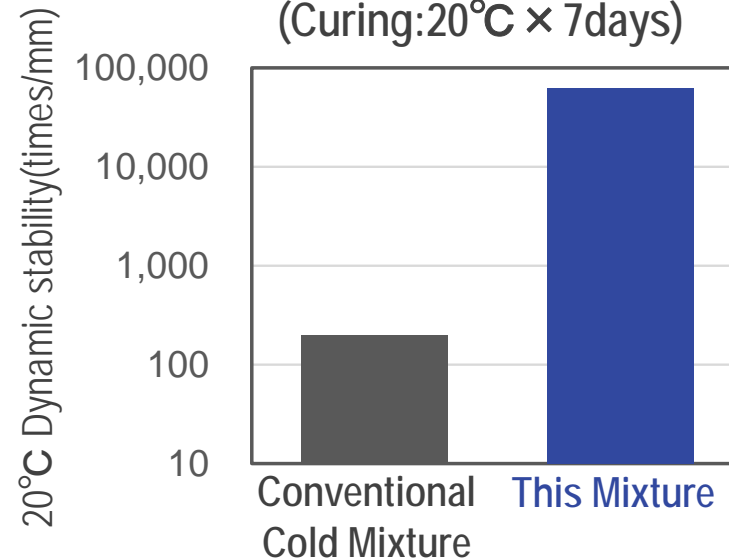
Marshall Stability Test (Curing: 20°C × 7 days)



This Mixture

is durable against more than **30kN** pressure.

Wheel Tracking Test (Curing: 20°C × 7 days)

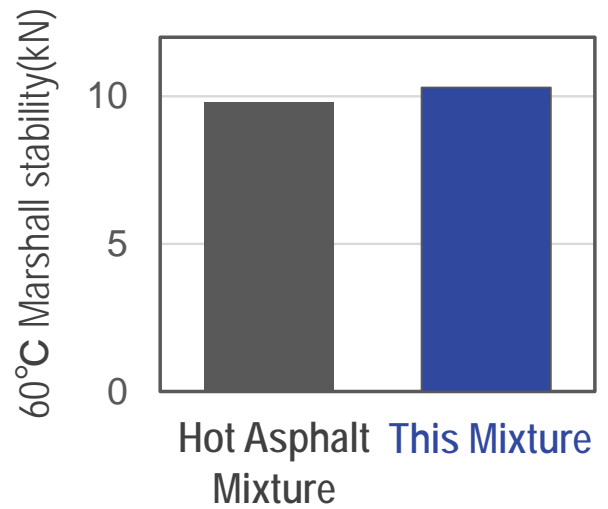


This Mixture

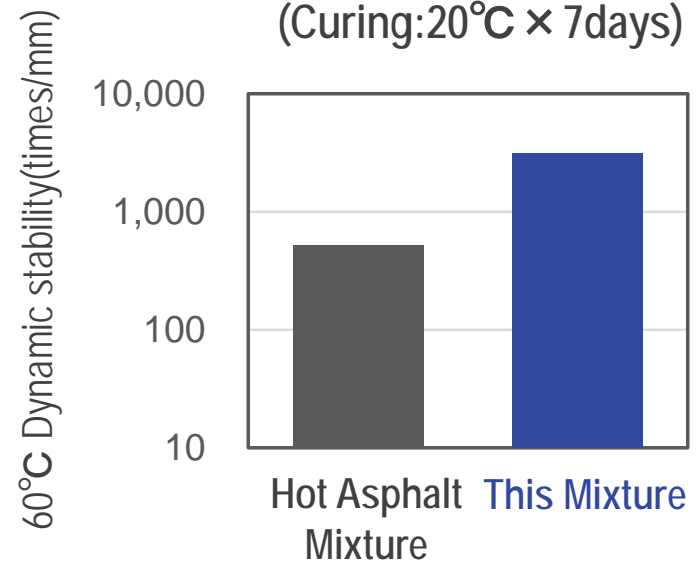
is durable for **tens of thousands** of wheel tracking passes before developing a millimeter of rutting. (less rutting than conventional cold mixture)

How durable is **this Mixture**? (Compared with Hot Asphalt Mixtures: 60°C)

Marshall Stability Test (Curing: 20°C × 7 days)



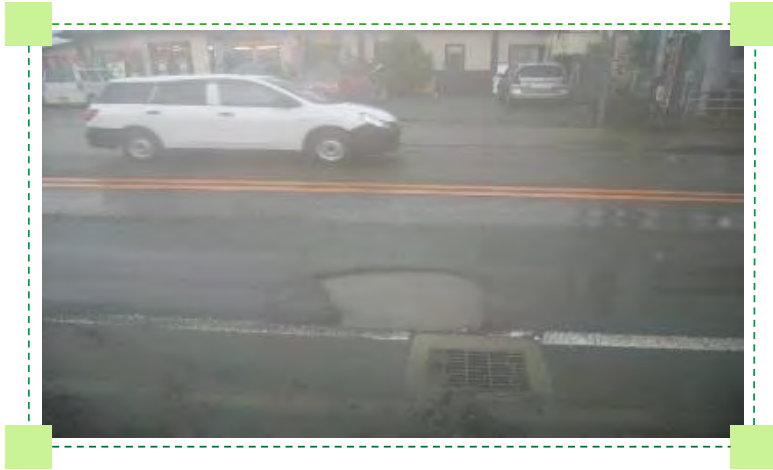
Wheel Tracking Test (Curing: 20°C × 7 days)



This Mixture

develops **similar strength** values as hot asphalt mixtures even though it is a bagged cold mix asphalt.

Usable in Rainy Conditions



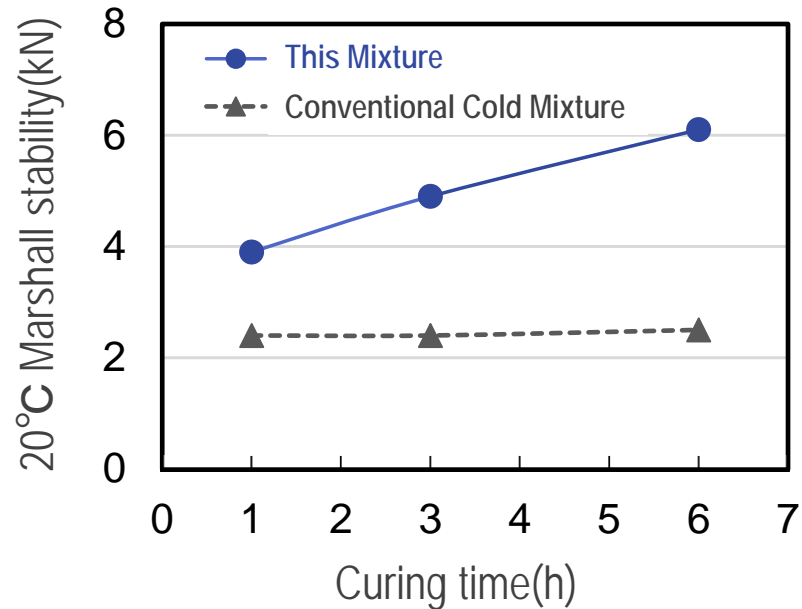
Rain or **Puddle**



Can Still be Used

Fast Traffic Opening

Marshall Stability Test
(Curing: 20°C)



This Mixture

develops strength through a **chemical reaction**.
It develops strength faster than conventional, volatile cold asphalt mixtures.

Fast Traffic Opening



Measuring Conditions		
	Item	Details
Paving work	Paving Scale	Approx. 0.15 m ² (t = 50 mm)
	Compaction Method	Compacted by stepping with foot
Running vehicle	Vehicle Used	Passenger car (Tire contact pressure: 0.37 N/mm ²)
	No. of Runs (Running time)	10 times (within 3 minutes from completion of paving work)
Road Surface Profile Measuring Device		MRP (multi-road profiler)

Fast Traffic Opening

This Mixture



Conventional Cold Mix Asphalt



Rut depth	
Type	Rut depth (mm)
This mixture	2.7
Conventional Cold Mixture	5.1

- **Immediately Traffic-ready**
- **Minimal rutting = High initial durability**

Testing on Roads with Heavy Traffic

<Test Conditions>

- **Traffic Volume:** About 1000 vehicles/day
- **Open to Traffic:** Right after installation



Pothole



Fix via **This Mixture**



6 months after installation

Eco-Friendly: Protection of the environment

- Organic Additives



Reduced
Environmental impact

- Replaces part of the asphalt bitumen with **Organic Additives**

First step to
De-asphalting Society



International Production / Sales



EU

Sales and Manufacturing

JAPAN
Manufacturing

Asia

Sales



(product name for overseas sale)

<https://www.aquapatchasphalt.com/home>



ご静聴ありがとうございました。
Thank you for your attention!



CREATIVE MIND ———— 創造的
MAEDA ROAD