

Solvent-free, high durability, room temperature curable

Polyurea for hand-painting “Sterralock™”

Hand-paintable polyurea with long pot life, high strength, high durability, and easy handling.

Polyurea is also known as “stainless-steel like resin” or “100-year coating”. As Polyurea is known to have short pot life after mixing its monomer components due to quite rapid reaction. Thus its applications have been conventionally limited to a spray coating system. This new Polyurea has longer pot life than conventional polyurea to remain unhardened for hand-painting applications while retaining the advantages of common polyurea (high strength, high durability, and solvent-free).

- ▶ **No special equipment for painting, no anti-scattering equipment, and no operator training is required.**
- ▶ **It is applicable to complex shapes with thinner coating which has not been accomplished by spray coating system.**
- ▶ **You can get both all good characteristics such as higher strength, longer durability with easier handling.**

Technical data

Product form



- 2-component type
- Room temperature curable
- Solvent-free

Application example



Closed spaces and articles that are difficult for spray application



Protection and reinforcement of metals



Protection and reinforcement of structures



Waterproofing and anticorrosion paints

Polyurea for hand-painting

“Sterralock™”

Technical data

Properties and comparison with other products

Items	Unit/Condition	Properties of our products ^{*1}				Competitor's products ^{*4}	
		Strong type TD-123	Normal type BD-085	Clear type CD-032	High elongation type LD-060	Spray type	Hand Paintable
Viscosity	mPa · s (°C)	Approx.12,000	Approx.8,000	Approx.3,000	Approx.6,000	—	—
Pot life ^{*2}	25 °C	Approx.15min	Approx.25min	Approx.20min	Approx.2min		10-30min
Tack-free time	25 °C	Approx.6h	Approx.8h	Approx.16h	Approx.30min	5-10sec	4-6h
Color	—	Yellow	Yellow	Colorless	Yellow	—	—
Tensile strength	MPa	58	45	33	40	13-34	Approx.10
Tensile elongation	%	6	8	4	400	13-34	Approx.10
Surface hardness	Durometer hardness	D75	D65	D50	D50	A75-85 D50-70	A60 D20
Chemical resistance ^{*3}	10% H ₂ SO ₄	Good	Good	Good	Good	Good	Swollen
	5% CH ₃ COOH	Good	Good	Good	Good	Good	Swollen
	Ca(OH) ₂ (saturated)	Good	Good	Good	Good	Good	Swollen
adhesion strength to concrete	N/mm ²	>1.5	>1.5	>1.5	—	—	—
abrasion resistance (abrasion loss)	Taber abrasion 1000rpm CS-17,1kg	8-21mg	82mg	35-170mg	<1mg	35-170mg	25mg

*1: Not a guaranteed value *2: Time required for viscosity to double. It flows even after the Pot life.

*3: After immersion at 60°C for 6 days, visually observe the change in appearance. *4: The values are catalog value.

Adhesion to various substrates

Example of BD-085	Adhesion strength to various substrates (N/mm ²)						
Primer	Concrete	SPCC	SUS304	Al	PC	FRP(Epoxy)	EPS
None	3.3	2.4	1.0	1.8	1.6	2.7	Good
A(Urethane)	>4	>4	>4	>4	—	—	—
B(Acrylic urethane)	>4	>4	1.8	>4	2.7	3.0	—
C(Epoxy)	>4	>4	—	>4	—	—	—

>4: Above the upper limit of the test equipment. -: No data

Test condition: After applying the primer and drying for 1 to 3 hours, 1 mm of polyurea was applied and cured at 40°C for 24 hours, after which the adhesion strength was measured using a simple adhesion tester QR-40A.

It adheres well to concrete, metal, FRP, etc. Adhesion can be improved with a primer. We can also recommend suitable primers.



(Notice) This product is under development. The information in this document is presented without guarantee and warranty.