H · A · N · S · U · K

KP POLY-UREA

USE

1. Floor Coating
- Parking area
- Chemical factory
- Gymnasium

2. Insulation
- Hot water storage
- Cold water storage
- Upper coating

3. Waterproofing
- Architectural
- Civil engineering

4. Steel coating
- Vessel
- Chemical tank

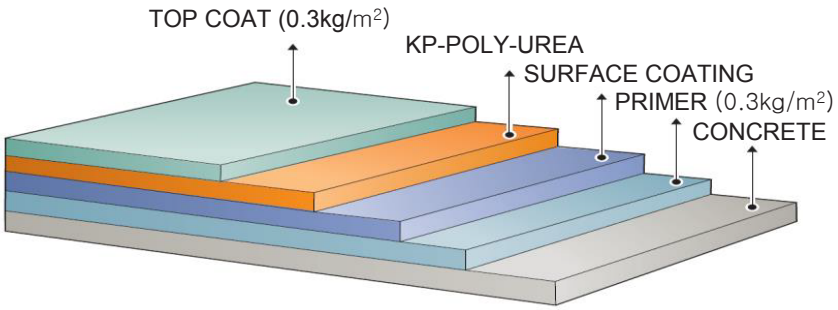
KEEPING & TREATING

- Keep the product in 5℃ ~ 35℃
- The injection hole must be facing upper part
- Do not mix with other materials
- Wash your skin after applying
- Check the expiry date before use
- Please use Poly-Urea in suitable amount
- Do not use in rainy season or wet place
- Check the Urea color before use

FEATURE

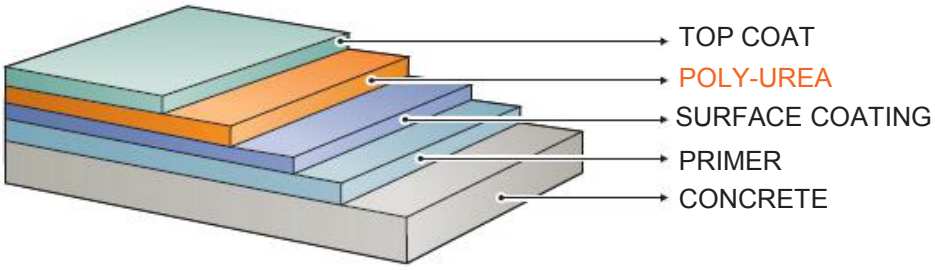
- Fast dry
- Easy to apply
- Possible to apply on vertical
- Wide applicability
- High construct ability

CROSS-SECTION

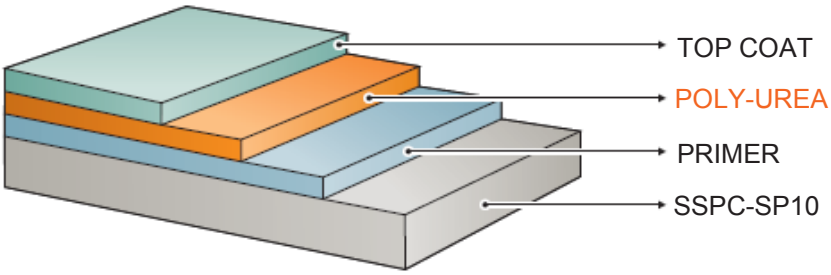


KP-POLYUREA COATING SYSTEM

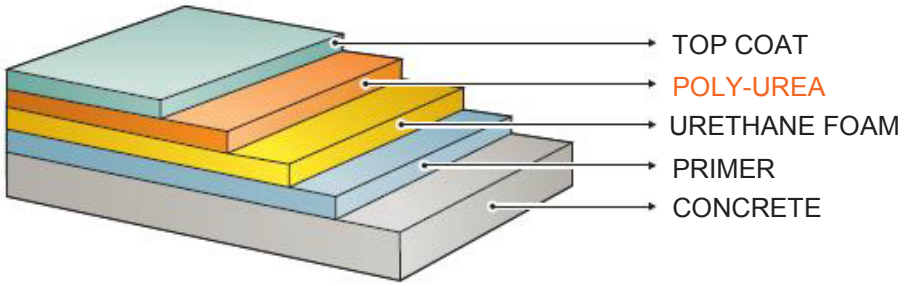
- Concrete waterproofing
- Normal floor
- Gym
- Rooftop



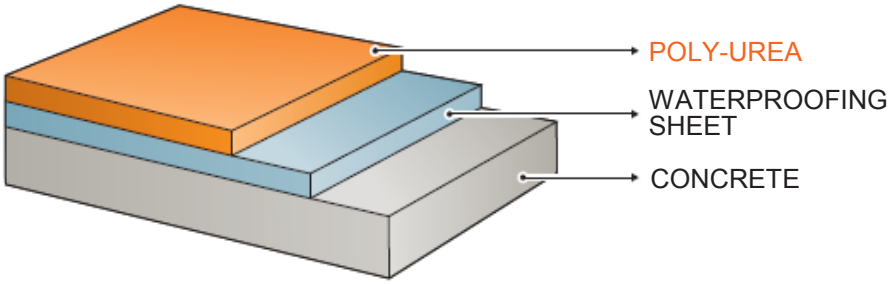
- Pipe
- Tank
- Steel structure



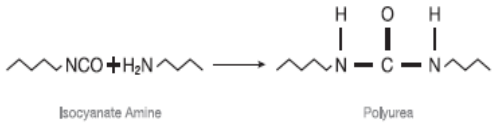
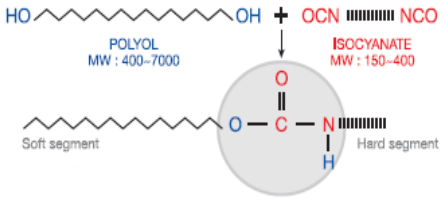
- Insulation



- Non exposed waterproofing



KP-POLYUREA / URETHANE CHEMICAL COMPARE

DIVISION	KP-POLYUREA	POLY URETHANE
MEANING	**HIGH MOLECULAR COMPOUND WHICH UREA INSIDE THE STRUCTURE. UREA COMBINE DEVELOPED BY ADDITION POLYMERIZATION REACT (AMINE + ISOCYANATE)**	URETHANE COMBINE DEVELOPED BY ADDITION POLYMERIZATION REACT (ALCOHOL + ISOCYANATE)
CHEMICAL STRUCTURE		
REACTIVITY	POLYAMINE AND ISOCYANATE (AT 25℃) 100,000	POLYOL AND ISOCYANATE (AT 25℃) 30

KP-POLYUREA / URETHANE

DIVISION	KP-POLYUREA	POLY URETHANE
FEATURE	ECO-FRIENDLY (NOT USING SOLVENT)	NON-FRIENDLY (USING SOLVENT)
STRENGTH	FAST CURING DRIPLESS POSSIBLE TO APPLY IN ALL CONDITION WATERPROOFING/ANTI CORROSION SELF-ADHESIVE HIGH STRENGTH	EASY TO APPLY HIGH ELONGATION JOINTLESS OF APPLYING
WAEKNESS	SKILLED WORKER NEEDED HIGH COST ELECTRICITY NEEDED	WEAK AT ULTRAVIOLET LOW ADHESIVE LONG CURING TIME SWELLING DEPENDING ON WEATHER POOR QUALITY OVER 8% MOISTURE RATE

PRODUCTS

KP-POLYUREA LINE-UP

Type	Product	Use	Hardness (Shore A)	Tensile Strength (N/mm2)	Elongation (%)	Properties
Pure Urea Coating	PU1001	Universal	95± 5	25± 5	400± 100	
	PU400	Universal	95± 5	25± 5	400± 100	Self-Leveling
	PU200	High Strength	60± 5 (Shore D)	35± 5	200± 100	High Tensile Strength
Hybrid Coating	HU400(H)	Parking Lot	95± 5	25± 5	400± 100	High Properties
	HU400	Universal	90± 5	20± 5	400± 100	
	HU550	Waterproofing	80± 5	18± 5	400± 100	High Properties Waterproofing
	HU750	Waterproofing	65± 5	12± 5	600± 100	High Elongation

MAIN PRODUCTS

Type	Product Description
PU1001	KS, KC Certified product suitable for drinking water, superior chemical resistance
HU400(H)	Optimized for parking lots and industrial water reservoir. Tear resistance is less than epoxy. Does not split even with 3mm crack. Almost same properties as pure urea.
HU550	Waterproofing optimized for roofing, exposed areas. Good elongation and tensile strength

More Detail "KP-PU1001"

DESCRIPTION

- **KP PU1001** is two component high quality polyurea and zero VOC's (Volatile Organic Compound), 100% solid
- **KP PU1001** can be applied for waterproofing and protection coating
  (It can be supplied strong resistance to UV with special additive)

FEATURES

- Zero VOC's (100% solid)
- Fast curing time (30sec)
- High tensile strength and elongation
- Curable even at -25℃
- Excellent resistance to Thermal Shock
- Excellent resistance to solvent
- Excellent resistance to oil and acid(chemical)
- Excellent bond strength to properly prepared surfaces

USE

- For multi purpose protection coating on steel and concrete
- For waterproof coating on concrete and wood structures
- For required chemical resistance area
- For required oil resistance (oil-proof) area

COLOR

- Clear/Neutral. Custom colors are available upon

PACKING

- **PU1001** "A"&"B" is available in 200L steel drum
- Contact KP for other packing

WET PROPERTIES

Appearance	liquid
Specific gravity (25℃)	"A" 1.12±0.1 "B" 1.02±0.1
Viscosity (cps)	"A" 600±100 "B" 500±100
Thermal stability	0℃ to 50℃
Shelf life (10-40℃) (Unopened containers)	12 months

PROCESS PROPERTIES

Tack free time	~ 15sec
Recoat time	~ 24hr

DRY PROPERTIES

Tensile strength (ASTM D 412)	Min.20 Mpa
Elongation (ASTM D 412)	Min.300%
Hardness (Shore, ASTM D 2240)	95± 5 (A) 50 ± 5 (D)
Tear strength (ASTM D 624)	Min.60 N/mm
Abrasion resistance (1kg ,1000rev)	38mg(CS-17)
Impact resistance (Thickness 1mm)	Above1.5kg.m

CHEMICAL RESISTANCE (ASTM D 3912)

10%-Sulfuric acid	No change
30%-Sodium chloride	No change
30%-Sodium hydroxide	No change
50%-Sodium hydroxide	No change
Diesel	No change
Salt water resistance	No change

COVERAGE RATES

Thickness	Requirement
1 mm	1.0kg/m^2
2 mm	2.0kg/m^2
3 mm	3.0kg/m^2
Without any loss	

More Detail "KP-HU550"

DESCRIPTION

KP-HU550 is a two component hybrid poly-urea elastomer system with high performance. This system is based on polyether resins, amine chain extenders and pre-polymers. It provides an extremely flexible, tough, resilient monolithic membrane with good water resistance.

FEATURES

- Zero VOC's (100% solid)
- Fast curing time (30sec)
- High tensile strength and elongation
- Curable even at -25℃
- Excellent resistance to Thermal Shock
- Excellent resistance to solvent
- Excellent bond strength to properly prepared surfaces

USE

- For multi purpose protection coating on steel and concrete
- For waterproof coating on concrete and wood structures

COLOR

- Clear/Neutral. Custom colors are available upon

PACKING

- **HU550** "A"&"B" is available in 200L steel drum
- Contact KP for other packing

WET PROPERTIES

Appearance	liquid
Specific gravity (25℃)	"A" 1.09±0.1 "B" 1.03±0.1
Viscosity (cps)	"A" 600±100 "B" 600±100
Thermal stability	0℃ to 50℃
Shelf life (10-40℃) (Unopened containers)	12 months

PROCESS PROPERTIES

Tack free time	~ 15sec
Recoat time	~ 24hr

DRY PROPERTIES

Tensile strength (ASTM D 412)	18±5 Mpa
Elongation (ASTM D 412)	Min.450%
Hardness (Shore, ASTM D 2240)	85±5 (A)
Tear strength (ASTM D 624)	Min.60 N/mm
Abrasion resistance (1kg ,1000rev)	65mg(C8-17)
Impact resistance (Thickness 1mm)	Above1.5kg.m

CHEMICAL RESISTANCE (ASTM D 3912)

10%-Sulfuric acid	No change
30%-Sodium chloride	No change
30%-Sodium hydroxide	No change
50%-Sodium hydroxide	No change
Diesel	No change
Salt water resistance	No change

COVERAGE RATES

Thickness	Requirement
1 mm	1.0kg/m^2
2 mm	2.0kg/m^2
3 mm	3.0kg/m^2
Without any loss	

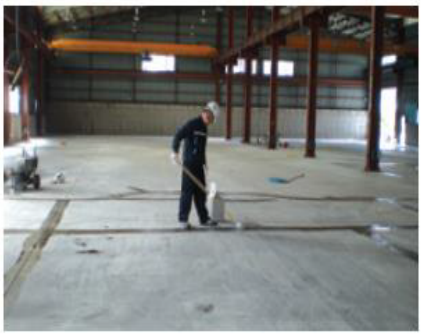
APPLYING PROCESS

SURFACE TREATMENT

1. SURFACE TREATMENT

• **Concrete** should be allowed to cure minimum 28 days. The surface of a concrete subfloor should be dry such as moisture content below 8%, It should also be blasting to remove all laitance and expose all voids and fill below hole with high quality filler such as mortar and epoxy

• **Metal** All the processes should be based on the Specification. If no provisions are in the Specification, the following basic methods and SSPC should be consulted to prepare a surface. Rusts, dusts, and other contaminants on the surface should be completely eliminated according to the instructions of the supervisor. The surface should be fully dried before coating



APPLYING PRIMER

2. APPLYING PRIMER

- Use private primer which could be attached well with Poly-Urea. When applying primer is done, keep in clean condition. Adjust the surface with urethane after applying primer if needed

APPLYING PROCESS

APPLYING KP-POLYUREA

APPLYING TOP-COAT

3. APPLYING Poly-Urea

- Apply Poly-Urea when the surface is fully dried and prepare additional spray machine to avoid working delay
- Spray machine must be maintained at 60℃ ~ 75℃
- Mix ratio 1:1, It must be applied by spraying equipment for polyurea such as Graco's Reactor, Glass Craft or other equivalent machine
- Keep the pressure minimum 1500psi with heating to 65-70℃
- Component "B" must be mixing for 1 hour before spraying, and while spraying
- Spray as 0.6mm thickness and check the pin-hole. If there is pin-hole, make sure to fill it with putty and spray again to make perfect waterproofing system
- Spray as 0.3~2mm thickness for the first time and re-spray to make equal thickness
- When re-spray time is over 24hours, apply primer again and then apply Polyurea
- When overlap happens while using Polyurea: the overlap part of Polyurea should be over 50mm, re-apply primer and apply Polyurea

COMPLETE

4. APPLYING TOP COAT

- Use private top coat which should be well attached with Polyurea

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