

# PUR 425

## Standard Pure Polyurea

### Description

**PUR 425** is a two component 100% pure polyurea coating system with very fast setting, rapid curing, aromatic and flexible properties. It provides seamless and long term durable waterproofing and floor coating for concrete, metal, wood, ceramic, geotextile and PU foam substrates. It is applied at high pressure with heated multi-component spraying equipment.

### Fields of Application

- General water isolation of storage tanks, pools, ponds, pipes, waste water treatments, manholes, roof and terrace coatings.
- Floor coating on industrial floors, hospitals, car parks, garages.
- Roads, bridge decks, railways, tunnels, airport and line striping applications.
- Marine industry applications.
- Oil, gas, chemical, energy, mining industries.
- In leisure industry such as water parks, aquarium lining, play grounds and decorative applications.

### Features and Benefits

- Fast reactivity and fast curing.
- Seamless and jointless coating.
- 100% solid.
- VOC and odor free.
- No solvent content.
- Excellent thermal stability.
- Excellent chemical resistance.
- Excellent impact and abrasion resistance.
- Very good tensile and structural strength.
- Excellent water resistance.
- Excellent adhesion on concrete, steel, aluminum, plastics, fibers, wood, foam etc.
- Excellent flexibility.
- Excellent crack-bridging properties.
- Excellent corrosion protection.
- Ideal for complex and detailed applications.
- Temperature and moisture insensitive.
- UV, chlorine and saltwater resistant.

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- High application thickness is possible.

### Technical Data

Content	A: MDI Prepolymer – B: Amine Resin
Color	Broad Color
Solid Content	100%
Density of mixture	0,99 – 1,03 g/cm <sup>3</sup>
Hardness	40-45 Shore D / 90-95 Shore A (ASTM D 2240)
Elongation at Break	≥350 % (ASTM D 638)
Modulus (MPa)	%100 elongation ≥10 (ASTM D 638) %300 elongation ≥15 (ASTM D 638)
Tensile strength (MPa)	≥ 18 (ASTM D 638)
Tear strength (N/mm)	≥50 (ASTM D 624)
Taber abrasion (mg)	<30 (H22, 1000 cycle) (EN ISO 5470-1)
Impact resistance	Class III (EN ISO 6272-1)
Pull off strength (N/mm <sup>2</sup> )	Concrete: ≥2,5 Steel: ≥6 (ASTM D 4541)
Thermal Resistance	-30 °C / 100°C
Tack free time	15-25 sec
Recoat time	0-12 hours
Gel time	5-10 sec
HS Code	3208.90.91.00.23

### Application Procedure

#### **Preparation of Substrate**

All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum. Weak concrete must be removed and surface defects such as voids must be fully exposed. Repairs to the substrate, filling of blowholes/voids and surface leveling must be carried out using appropriate products. Optimum surface temperature is 5-30°C, air temperature is 20-30°C and relative air humidity is 25-50%

**EPOX PR 100** primer application is recommended for achieving good adhesion. Lightly broadcasting with quartz sand 0,3-0,8 mm is recommended because this provides higher adhesion values and extends the maximum waiting time of primer prior to the application of polyurea coating. In order to avoid the formation of blisters do not broadcast to excess. After 12-24 hours of primer application, polyurea application can be start.

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### ***Application Method***

Before the application B component must be stirred at least 30 minutes with using a barrel mixer until getting homogenous mixture and color obtained. A and B component must be applied by using a two components high pressure and heat spray machine with 1:1 volume ratio. Both component must be heated above 70°C and stable in this temperature during the application. Cured material is UV resistant but can be showed discoloration when exposed the sunlight. This does not influence service life or performance of material. If the color stability required, **PU TOP 210** aliphatic top coat must be applied within 12 hours of applying base coat.

Mixing ratio by volume: A Component: 100 / B Component: 100

Mixing ratio by weight: A Component: 112 / B Component: 100

Process temperature: A Component: 70-80°C / B Component: 70-80°C

Process pressure: 180-200 bar

### **Consumption**

Primer: 0,3-0,5 kg/m<sup>2</sup>

Quartz sand: 1-1,5 kg /m<sup>2</sup>

Polyurea coating: 1,05- 1,1 kg/m<sup>2</sup> /mm (recommended film thickness is minimum 2 mm.).

### **Packaging**

A component: 225 kg barrel – B component: 200 kg barrel

### **Shelf Life**

9 months in original, unopened package.

### **Storage**

Store in dry area between +20°C and +30°C. Protect from moisture, heat, freezing and direct sunlight.

### **Cleanup Information**

Clean tools and equipment with industrial type solvents immediately after use. Dried material can only be removed mechanically.

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### Cautions / Limitations

- It may be harmful with eye and skin contact.
- Avoid breathing vapors.
- The cured coating may exhibit discoloration when exposed to sunlight
- Wear suitable protective clothes, gloves and eye protection equipment.
- Do not apply in freezing conditions or during precipitation.
- Protect applied materials from rain, freezing, foot traffic and continuous high humidity until completely dry.
- Do not use when air and surface temperatures are below -10°C and above +50°C.
- Avoid heavy traffic for 24 hours.

### Health and Safety

**Warning!** Cause eye and skin irritation. If eye or skin contact, get immediate medical attention. If swallowed, do not induce vomiting. Call a physician or poison control center. Never give anything by mouth to an unconscious person.

Wash hands thoroughly after handling. Wear protective clothing, gloves, eye and face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash it before reuse. Dispose of unused, contents, container and other contaminated wastes in accordance with local, state, federal and provincial regulations.

Keep container closed when not in use. Keep out of the reach of children.

**Limited Warranty:** This product is subject to a written limited warranty which can be obtained free of charge from BAUMERK Company. Please contact with technical service department for further information and support.