

## Aromatic Pure Polyurea System

### Product Definition

It is a fast set, rapid curing, 100% solids, mixing ratio with 1:1 by volume, solventless, two component spray aromatic pure polyurea that can be applied to suitably prepared concrete, metal and different surfaces. It is a hard- flexible waterproofing membrane with high mechanical, chemical resistance. It must be applied with special machines cause of its fast reaction.

### Application Areas

- Roof, balcony, terrace,
- Water insulation of foundation and concrete shear wall,
- Indoor of flower beds, waste water and eaves trough, concrete flumes,
- Tunnels, underpass and overpass,
- Trick beds,
- Aircraft hangar floors,
- Petroleum refineries and petrochemical industries ,
- As a anticorrosive and protective coating for steel structure of steel silos indoors, ports facility, ships, chemical industry.

### Usage and Consumption

Apply 2, 0-2, 2 kg/m<sup>2</sup> to obtain 2 mm of dry film thickness.

### Advantages

- It can be used on many surfaces with the use of the correct primer,
- 100 % solid, zero VOC and odorless,
- Can be applied on horizontal and vertical surfaces,
- It creates a monolithic and do not require grouting surfaces,
- Application and the surface to be ready for use is very fast,
- It is proper for contact with water,
- Flexible, high mechanical and corrosive resistance,
- Resistance to the underground of chemicals.

### Package

A set of BILIZO® POLYUREA PR Component A weighs 200 kg in a drum and the Component B weighs 220 kg in a drum.

### Technical Data

Appearance	Semi-Matt
Color:	Colorless or Grey/Oxide red/Black
Density:	A:1,02 - B:1,1 ± 0,02 kg/lit
Mixing ratio	1:1 (A:B – by volume)
Solid by Volume	%100 (A+B)
Pot life (+10°C)	3-5 secs
Tack free time(@3 mm. thickness)	10-30 secs
Recoat time	0 – 8 hours / at 20°C
Viscosity A Component (25°C)	500±50 cps. (Brookfield)
Viscosity B Component (25°C)	1300± 200 cps. (Brookfield)
VOC Content	0 gr/ml
Hardness (ASTM D-412)	55 ± 5 Shore D
Tensile Strength (ASTM D-412)	2000 ± 200 psi
Elongation (ASTM D-412)	200 ± 20%
Tear (ASTM D-624) (Angle Type)	90 – 100 N
Tear (ASTM D-624) (Trousar Type)	40 – 50 N
Service Temperature - Dry	-30 / +120°C
Service Temperature - Wet	+4 / +50°C
Recommended Applied Thickness /Consumption	2mm/2,0 – 2,5 kg/m2
Return to Service: Foot Traffic	1- 4 hour / at 20°C
Return to Service: Full Service	> 24 hour / at 20°C
Water Absorption (ASTM D471)	<%0,5 (max.25°C, 24 hours)
Crack Bridging (ASTM C836)	Pass (-25°C, 1.6mm crack, 25 cycles)
Impact Resistance (TS EN 12691)	800 mm
<b>Pull-Off Strength (ASTM D4541)</b>	
Concrete (Shot blasted profile)	≥2 N/mm2
Steel (75-100 micron)	≥5 N/mm2
Flexibility (ASTM D1737)	Pass (1/8”(3mm) Mandrel Bend Test)

Our technical advice for use, whether verbal, written or in tests, is given in good faith and reflect the current level of knowledge and experience with our products. When using our products, a detailed object-related and qualified inspection is required in each individual case in order to determine whether the product and /or application technology in question meets the specific requirements and purposes. We are liable only for our products being free from faults; correct application of our products therefore falls entirely within your scope of liability and responsibility. We will, of course, provide products of consistent quality within the scope of our General Conditions of Sale and Delivery. Users are responsible for complying with local legislation and for obtaining any required approvals or authorizations. Values in this technical data sheet are given as examples and may not be regarded as specifications. For product specifications contact our R+D department. The new edition of the technical data sheet supersedes the previous technical information and renders it invalid. It is therefore necessary that you always have to hand the current code of practice.

## Application

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**Surface Preparation:** In general, coating performance and adhesion are directly proportional to surface preparation. Cause of this, application surface should be free of any damages and surfaces must be free of dust, oil, grease, rust, corrosion and contaminants. When coating substrates previously used, it is important to consider the possibility of substrate absorption, which may affect the adhesion of the coating system, regardless of the surface preparation. It should be free of any loose and friable particles paint leftovers and cement grout. Wide cracks and defects should be repaired beforehand. Should be prepared a high adherence and strength mechanical surfaces.

**New and Old Concrete:** New concrete must be cured for 28 days prior to product application and concrete surface must contain maximum %4 moisture. Surface must be clean, dry, sound and offer sufficient profile for product adhesion. Remove all dust, dirt, oil, form release agents, curing compounds, salts, efflorescence, laitance and other foreign matter by shotblasting and/or suitable chemical means, in accordance with local chemical regulations. . If old concrete has a surface that has deteriorated to an unacceptably rough surface, BILIZO<sup>®</sup> MACRO PRIMER and a mixture of sand/powder should be used as a repair agent for cracks, spalls, bug holes and voids. If the old surfaces are very glossy, it must be roughen or primed with BILIZO<sup>®</sup> MACRO PRIMER.

**Wood Surfaces:** All wood should be clean, dry and free of any knots, splinters, oil, grease or other contaminants. Splintered or rough areas should be sanded. Knots should be primed using BILIZO<sup>®</sup> MACRO PRIMER.

**Steel Surfaces:** Oil and grease on the metal surface should be cleaned off by help of detergent or steam; salt and other impurities should be removed off by high pressure fresh water. After cleaning, scraping should be performed at level of 2½ as per ISO 8501-1 to get a surface profile of 70 – 100 microns. After scraping the surface, must be primed.

**Textiles, Canvas, Fabrics:** Adhesion to most fabrics, geothermal membranes and textiles does not require a primer.

**All Other Surfaces:** An adhesion test is recommended prior to starting the project. Please consult to Izobil Construction Chemicals – Technical Service for application to different surfaces.

**Application to Surface:** BILIZO<sup>®</sup> POLYUREA PR may not be diluted under any circumstances. Thoroughly mix B component ( resin side), with air driven power equipment until a homogeneous mixture and color is obtained.

Surface temperature should be 3°C above the then dew point. Both materials (A and B sides) must be warm up to 25-30°C before application. Should be applied using a plural component, heated, high pressure 1:1 spray mixing equipment to the ready application surface.

Both Part-A and Part-B materials should be sprayed at a minimum of 2000(135 bar) psi and at temperatures above 70-80 °C . Adequate pressure and temperature should be maintained at all times.

BILIZO<sup>®</sup> POLYUREA PR should be sprayed in smooth, multidirectional passes to improve uniform thickness and appearance.

Should be adhered to the recommended consumption on application, out of the special cases, 45 degrees with the surface to be sprayed.

The system must be protective from UV with aliphatic topcoat paint on outdoor applications.

## Storage

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The product must be storage in a cool and dry area. The product has a shelf life of six (6) months from date of manufacture in original, factory sealed containers. Store drums on wooden pallets to avoid direct contact with the ground and the temperature must be above 15 °C. If stored for a long period of time, rotate Side-A and Side-B drums regularly.

## Safety Information

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Please refer to the Material Safety Data Sheet (MSDS) prepared as per the related EU directives before use.