YUXI

RIGID
SPRAY-ON POLYUREA COATING
FOR BLAST AND IMPACT PROTECTION

P-150

AMPP CORPORATE MEMBER

www.yuxi-anode.com

Rigid Spray-on Polyurea Coating for Blast and Impact Protection P-150

YUXI's P-150 spray-applied polyurea coating is a two-component protective coating, composed of amino-terminated polyether and isocyanate-terminated quasi-prepolymer. Owing to the special molecular structure of polyurea, this coating features superior mechanical properties combined with excellent resistance to abrasions, impacts, chemicals and water intrusion. It is especially designed to deflect or absorb the impact of heavy strikes and blasts, making it suitable for very specific defense and security applications and conditions.

ADVANTAGES

- Consecutive and seamless coating film
- High tensile and tear strength
- Excellent water insulation capability
- Unparalleled hardness to withstand serious impact, blast, abrasion
- Optimum shock and vibration absorption
- Outstanding resistance against chemical corrosion
- Extremely fast-setting for a quick turnaround
- Excellent hybrid spraying characteristics allows for easy application
- Exceptional durability and longevity

FIELD OF USE

YUXI's polyurea coating can be successfully applied on the substrates in the following:

- Cementitious substrates, such as concrete surface, cement board, mortar, etc.
- Plaster structure, such as gypsum board or similar surface
- High porous substrates, such as brick, marble and natural stones
- Non-porous substrates, such as ceramic tiles or other masonry structure
- Ferrous metal surface, such as steel, cast iron, galvanized steel, stainless steel, etc.
- Non-ferrous metal surface, such as aluminum alloy, copper, bronze, tin, etc.
- Wooden surfaces, such as parquet floor or otherwise
- Impervious substrates, such as plastic, glass, etc

* For application to other substrates or scopes of use, please contact our technician for further information.

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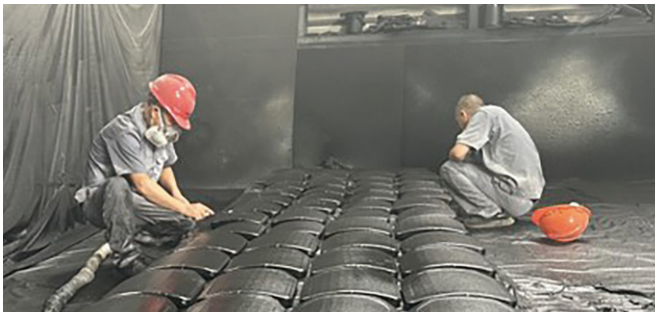
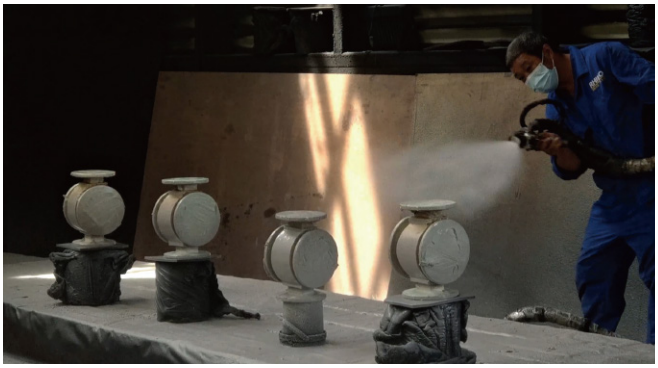
PRACTICAL APPLICATION

Regarded as a shield sheath, YUXI's P-150 polyurea coating creates an ultra-strong defensive barrier that minimizes infrastructural damages of your assets used in harsh external conditions and high-tension situations.



Reinforced impact absorption capacity of protective outfits for personal safety, such as helmet, protective shield, ballistic vest, etc.

Extraordinary mechanical structure protection for purpose-built vehicles, such as pickup trucks, armored cars, bulletproof SUVs, SWAT/APCs, etc.



Unmatched structural stability enhancement to guarantee a long functional lifespan for spare parts or workpieces regularly exposed to harsh operating conditions

Figure coating and strengthening consolidation for ephemeral architecture and stage props, such as ornamental building fascia, themed characters, foam sculptures, artificial rocks, SWD foams, etc.

High durability for engineering applications which require added protection against violent or severe damages, including puncture resistance of lithium-ion battery housing, abrasion resistance of cargo container, etc.

Superior blast mitigation and anti-shock ability for military equipment that are constantly placed in harmful weather and extreme combat conditions caused by explosions, firearm assaults, ballistic attacks and shrapnel fragmentation.

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TECHNICAL CHARACTERISTICS

Component Properties

	Component A	Component B
Type	Base	Hardener
Composition	Isocyanate Prepolymer	Polyether Polyol
Consistency	Liquid	Fluid
Color	Yellowish	Black, Green, White
Weight	220 kg	210 kg
Packaging	Metal Barrel	Metal Barrel

* Other RAL colors are available on request.

Physical Properties

The parameters are given under specific test conditions in accordance with the requirements specified in the HG/T 3831-2006 (2017) standards.

Technical Measurement	Performance
Tensile Strength	24 MPa
Elongation at Break	112%
Tear Strength	83 kN/mm
Hardness (Shore D)	56
Impact Resistance	1.8 kg/m
Adhesion Strength (to Steel)	8.9 MPa

Chemical Properties

The results are performed under lab controllable conditions. These values may vary based on the application, climatology, or substrate conditions.

Technical Measurement	Performance
A/B Ratio (by volume)	1:1
Solids Content	99%
Theoretical Coverage	1.07 kg/m² (at 1 mm dry film thick)
Dry Film Thickness (DFT)*	1.5~3 mm
Gel Time	10 seconds
Tack-free Time	18 seconds

*Actual required DFT may vary in certain applications, please contact us for technical clarification.

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Chemical Resistance

The results are performed under lab controllable conditions. These values may vary based on the application, climatology, or substrate conditions.

Chemical Substance	Concentration	Contact Time	Rusting	Blistering	Flaking
Sulphuric Acid (H_2SO_4)	10%	30 d	No	No	No
Hydrogen Chloride (HCl)	10%	30 d	No	No	No
Sodium Hydroxide (NaOH)	10%	30 d	No	No	No
Sodium Chloride (NaCl)	3%	30 d	No	No	No
Salt Spray (NaCl)	50g/L	2000 h	No	No	No
Distilled Water	/	30 d	No	No	No
Petrol	/	30 d	No	No	No
Diesel Fuel (0#)	/	30 d	No	No	No

Notice: The technical data contained herein are true and accurate to the best of our knowledge. Published technical data are subject to change without prior notice. Test report issued by the third-party accredited laboratory is available upon request.

APPLICATION INSTRUCTIONS

Surface Preparation

All surfaces should be prepared accordingly depending on the type of substrate, for example by brushing, rubbing, sand blasting, shot blasting, scarifying, bush hammering. For optimum adhesion, the substrate must be sound, dry and clean. Remove all loose materials and contaminants, such as dirt, dust, debris, rust, grease, oil, wax, etc.

Priming

The substrate must be treated with suitable prime. If needed, mid coat can be applied.

Mixing

Thoroughly premix component B prior to use. Then mix component A with the component B in the indicated mixing ratio till homogenous mixture is obtained. Do not add solvents or thinners.

Equipment

Our polyurea coating should be sprayed using a regulated high-pressure, high-temperature two-component airless spray rig. All tools should be cleaned immediately after use.

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STORAGE

Store the product in a dry, ventilated, covered area at temperatures between 5˚C and 35˚C. Protect from heat, frost and direct sunlight. The shelf life is 12 months from the date of production under suitable storage conditions in its original sealed packing. Once open, use it immediately. Opened containers can be resealed, but the material shelf life will ultimately shorten.

SAFETY PRECAUTIONS

Carefully read and follow all instructions on the safe handling and disposal of chemical products.

- **Warning:** This product contains isocyanate MDI, which may cause skin irritation and inhalation can be toxic. Avoid contact with eyes and skin.
- **Eye protection:** Wear safety goggles to prevent splashing and exposure to particles in the air. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- **Skin protection:** Wear suitable protective clothing and gloves. In case of skin contact, wash with thoroughly soap and plenty of water. Get medical attention if irritation develops or persists.
- **Respiratory protection:** Adequate ventilation of the working area is recommended. When spraying, use an air-purifying respirator to protect the respiratory tract.
- **Fire prevention:** This product is flammable. In case of fire, blanket flames with foam, carbon dioxide or dry chemicals.
- **Waste disposal:** The product is hazardous for aquatic life, do not dispose of the product down the drain. Follow and observe any applicable local or national laws and regulations.

For further and complete information about the safe use of our product, please refer to the latest version of our Material Safety Data Sheet (MSDS).

YUXI

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