YUXI

SOLVENT-FREE SPRAY-ON POLYURETHANE COATING FOR CORROSION PROTECTION

P-170

AMPP CORPORATE MEMBER

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Solvent-free Spray-on Polyurethane Coating for Corrosion Protection P-170

YUXI's P-170 spray-applied polyurea coating is a solvent-free, two-component material with excellent corrosion resistance and superior hardness. This coating is applied by spray with a high-pressure, bi-mixer type pump, to form a protective film for surface particularly prone to erosion due to constant exposure to corrosive elements. Our polyurethane coating represents a reliable solution for permanent corrosion prevention, making it suitable for a wide range of applications in wastewater treatment plant, power plant distribution station and gas compression station.

ADVANTAGES

- VOC free, no solvents and environmental protection
- Consecutive and seamless coating film
- Strong sealing ability
- Outstanding corrosion resistance
- Excellent resistance to alkalis and acids
- Robust resistance to thermal shock
- Superior hardness enables surfaces to resist impact, abrasion, scratches, etc..
- 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.
- 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.

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

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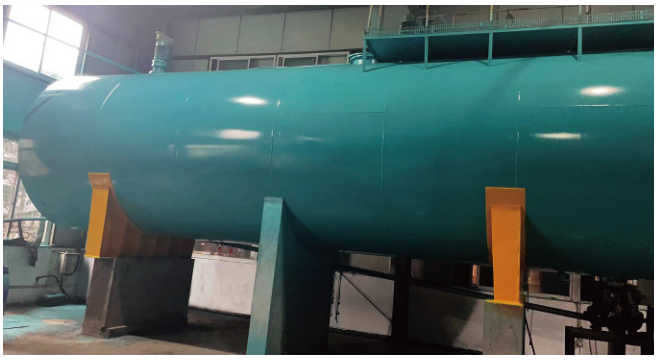
PRACTICAL APPLICATION

YUXI's P-170 polyurethane coating is a solvent-free topcoat that can be applied at the factory or on the construction site. It is widely utilized in high-maintenance areas, uneven surfaces around fittings and flanges, and sensitive connections or moulded parts that require outstanding corrosion protection without affecting their functionality.

High-performance corrosion resistance of long-distance metal pipelines used for the transport of natural gas, crude oil, water, biofuels, etc.



Permanent corrosion protection for both interior and exterior surfaces of industrial steel tank used to store aggressive chemicals and liquids

Long-lasting rust prevention for specialized shipping containers exposed to heavy-duty humid or corrosive environment

High-level corrosion resistance for outer casing of battery pack or fuel cell

Robust corrosion protection for metalic and non-metalic facilities in sewage treatment plants, including sewage pool, wastewater tank, pipes and fittings in sewer system, etc.

Long-term protection for steam trace, pumps, valves or any similar structures susceptible to both internal and external corrosion

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TECHNICAL CHARACTERISTICS

Component Properties

	Component A	Component B
Type	Base	Hardener
Composition	Isocyanate-terminated Quasi-prepolymer	Polyether Polyol
Consistency	Liquid	Fluid
Color	Yellowish	Black, White, Ivory
Weight	220 kg	200 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 GB/T 1728-2020, GB/T 1408.1-2016 standards.

Technical Measurement	Performance
Hardness (Shore D)	72
Abrasion Resistance (Taber Test)	32.3 mg (1000g load/1000r)
Impact Resistance	No leakage points (5J, 23 ℃)
Flexibility	No Cracking (@-18 ℃)
Adhesion Strength	23.24 MPa
Water Absorption	1.5%
Resistance to Thermal Shock	No dripping, No Blistering. (@150 ℃, 5 hrs.)
Electrical Strength	24.3 MV/m
Cathodic Disbondment	5.6 mm (0.2")
Volume Resistivity	1.1×10^{14} Ω·m

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	98.3% (Component A), 99.3% (Component B)
Theoretical Coverage	1.07 kg/m² (at 1 mm dry film thick)
Dry Film Thickness (DFT)*	1.5~3 mm
Tack-free Time	2 minutes
Dry-through Time	5 minutes

*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%	28 d	No	No	No
Sodium Hydroxide (NaOH)	30%	28 d	No	No	No
Sodium Chloride (NaCl)	3%	28 d	No	No	No
Salt Spray (NaCl)	50 g/L	1000 h	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.

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.

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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).

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