

SPUA-101 Heavy-duty Anticorrosion Material

PRODUCT INFORMATION

PRODUCT DESCRIPTION

SPUA-101 is a 100% solid, fast set, spray-applied, two component aromatic polyurea elastomer. The system consists of the A component, a quasi-prepolymer rich of free NCO, and the B component, a mixture of polyetheramines, amine extenders and other additives. The unique polyurea chemistry allows this material to be tolerant of moisture and lower temperatures during application. This means that high humidity and hidden moisture in concrete has minimal effect on the application of this product.

- Fast cure, short downtime, but not-sagging
- Moisture and temperature insensitivity during processing
- High thermal stability
- Excellent anti-corrosive properties
- Resistant to solvents, caustics and many acids
- Extraordinary physical properties
- Excellent bond strengths
- 100% solids, No VOC's and odorless
- Superior weatherproofing
- No chalking and fading in long-term use outdoors
- Seamless, flexible, slick and non-porous

RECOMMENDED USES

Designed for use as heavy-duty anti-corrosion, seamless coating system for exteriors application of concrete tanks and other facilities in chemical plants, fuel plants and oil field ect.. Ideally suited for use in various areas, including:

- Secondary Containments
- Pickling Tanks
- Electroplating Bathes
- Charring Towers
- Evaporation Tanks
- Neutralization Tanks
- Treatment Tanks
- Barrel-Drains

PRODUCT CHARACTERISTICS

Color:	<i>Optional</i>
Solids:	<i>100%</i>
VOC(calculated):	<i>0</i>
Shelf Life:	<i>6 months, unopened at 15~40°C</i>
Flash Point:	<i>>200°C</i>
Gel time:	<i>10seconds</i>
Mix Ratio (by volume):	<i>1 : 1</i>
Recommended Spreading Thickness:	<i>2~3mm</i>

Drying time is temperature, humidity, and film thickness dependent.

PERFORMANCE CHARACTERISTICS

Tensile Strength:	<i>15MPa</i>
Tensile Elongation:	<i>350%</i>
Tear Strength:	<i>50KN/m</i>
Electric Strength:	<i>21Mv/m</i>
Impact Resistance:	<i>1.5Kg·m</i>
Abrasion Resistance:	<i>17mg</i>
Adhesion:	<i>10.2Mpa</i>
Durometer Hardness:	<i>Shore A85~95</i>
Specific Gravity:	<i>1.01g/cm³</i>
Chemical Resistance:	<i>Consult Chemical resistance Chart for specific information</i>

ORDERING INFORMATION

Packaging:

- Part A: 220 kilogram drums
- Part B: 200 kilogram drums

Freight Classification:

Coating Solution Non-Flammable Liquid

RECOMMENDED PRIMERS

Steel:

SPUA-D100 Anticorrosive Primer @ 5~6 sq.m./1 Kg per coat

Concrete:

SPUA-D400 Sealing Primer @ 8~10 sq.m./1 Kg per coat

Others: Contact us for a recommendation.

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CHEMICAL RESISTANCE CHART

6 months exposure per GB/T 1763 – Immersion @ 25°C

CHEMICAL

Results

Salt Solution

Ammonium Nitrate	No Effect
Brine (saturated 130,000 ppm)	No Effect
Sodium Chloride	No Effect
Sodium Hypchlorite (household bleach)	Slight Cracking and Moderate Discoloration
Trisodium Phosphate	No Effect

Solvent Solution

1, 1, 1Trichloroethane	Moderate Discoloration, Swelling
Acetone	Moderate Discoloration, Swelling
Benzene	Moderate Discoloration, Swelling
Dimethyl Formaldehyde	Moderate Discoloration, Cracking
Gasoline, Unleaded	No Effect
Hexane	No Effect
Isopropyl Alcohol	Slight Discoloration
Methanol	Moderate Discoloration, Swelling
Propane	Slight Crinkle
Toluene	Moderate Discoloration, Swelling
Xylenes	Slight Discoloration

Acid Solution

Acetic Acid (10%)	No Effect
Citric Acid	No Effect
Hydrochloric Acid (5%, 10%)	No Effect
Hydrofluoric Acid	Not Recommended
Lactic Acid	Slight Discoloration
Nitric Acid (20%)	Moderate Discoloration, Cracking and Swelling
Phosphoric Acid (10%)	No Effect
Phosphoric Acid (50%)	Not Recommended
Sulfuric Acid (5%, 10%, 20%)	No Effect
Sulfuric Acid (50%)	Not Recommended
Vinegar (5% Acetic Acid)	No Effect

Alkalis Solution

Ammonium Hydroxide (20%)	No Effect
Potassium Hydroxide (10%)	No Effect
Potassium Hydroxide (20%)	Slight Discoloration
Sodium Hydroxide (5%, 10%, 20%)	No Effect
Sodium Hydroxide (50%)	Slight Discoloration c

Other Solution

Anti-Freeze (50% Ethanol Glycol)	Not Recommended
Chlorine (2,000 ppm in H ₂ O)	No Effect
Copper Chromate Arsenic (4% working sol'n)	No Effect
Diesel Fuel	No Effect
Hydraulic Oil	Moderate Discoloration, Cracking & Swelling
Liquid Nitrogen Fertilizer (28-0-0)	No Effect
Liquid Urea Fertilizer	No Effect
Mineral Spirits	No Effect
Motor Oil	No Effect
Sea/Tap Water	No effect
Stearic Acid	No Effect

Caution: Chemical reagents are often very selective in their effects on elastomers. Do not assume chemical resistance of unlisted chemical reagents or unlisted temperature conditions without prior testing.

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APPLICATION INFORMATION

SURFACE PREPARATION

Surface must be properly prepared. Remove all oil, dust, grease, dirt, loose, and foreign materials to ensure adequate adhesion.

Steel

Surfaces must be a "near white metal" blast to SIS-Sa 2 1/2. with a 3 mil profile. Prime with SPUA-D100 Anticorrosive Primer prior to spraying. Steel surfaces shall be dry and clean, free from any dirt, grease, oil and other contamination before priming and spraying.

Concrete

Concrete surfaces prepared according to NACE standard RP0892-92. Allow substrate to dry thoroughly prior to priming (minimum substrate of new concrete cure is 28 day). Remove all from loose dust or other foreign matter and prime with primer SPUA-D400 Sealing Primer at 1~2 coats prior to spraying.

CURE TIME

Surface dry (25°C)	< 1 minute
Hard film (25°C)	< 10 minutes
Recoat time	minimum unlimited Maximum ≤3 hours

Due to rapid cross-linking, recoating must be done as soon as the first coat is dry.

If maximum recoat time is exceeded, abrade surface before recoating.

Consult us for recommended recoat procedures.

APPLICATION CONDITIONS

Temperature:

Air and surface: -20°C~40°C
At least 3°C above dew point
Relative humidity: ≤90%

Materials must be preheated to 21°C prior to use.

Contact us for detailed application information.

CLEAN UP INSTRUCTIONS

Clean tools and equipment immediately after use with SPUA-PC Proportioner Cleaner or SPUA-GC Spray Gun Cleaner.

Consult *Plural Component Equipment Guide* for specific information.

APPLICATION EQUIPMENT

Plural Component Heated Spray Equipment (Required)

Equipment.....	Gusmer H-20/35
Gun.....	GX7 DI, GX7-400, or GX-8
Fluid Pressure.....	50--60kg/cm ²
Air Pressure.....	≥7kg/cm ²
Inlet Strainer Screen.....	30mesh
Gun Screen.....	80mesh
Heaters and heated hose.....	65°C
Mix Ratio.....	1:1

If specific application equipment is listed above, equivalent equipment may be substituted.

Contact us for specific information.

STORAGE CONDITIONS

- The A component is affected by moisture and must be protected from moisture contamination. Containers are factory sealed with an inert gas to prevent contamination. Keep all containers tightly closed during storage. For further storage after opening, containers must be purged with nitrogen gas or dry air and tightly sealed to protect from moisture contamination.
- Store drums and pails in a cold, dry and ventilated location between 15°C and 40°C
- Keep away from rain and sun
- Keep away from fire and heat source

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APPLICATION INFORMATION

THINNING

DO NOT THIN!

SAFETY PRECAUTIONS

Consult MSDS sheet before use. Use proper ventilation and respiratory equipment when spraying. Protect skin and eyes. Follow disposal methods in accordance with local and federal disposal regulations.

MIXING INSTRUCTIONS

Thoroughly mix container of B component with an air-driven power mixer for a minimum of 5 minutes prior to application.

This product is intended for industrial use by properly trained professional applicators only.

Published technical data and instructions are subject to change without notice. Contact Us representative for additional technical data and instructions.