



Flame Retardant Polyurea (TH901&TH902)

Polyurea elastomer is a compound formed by the reaction of isocyanate component (component A) and amino compound component (component R).

Spray polyurea elastomer (SPUA) technology is a new solvent-free and pollution-free green construction technology developed to meet the needs of environmental protection after (pollution-free) coating technologies such as high solid coating, water-based coating, radiation curing coating and powder coating in recent 20 years.

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APPLICATION

It can be applied to the waterproof, anti-corrosion and flame retardant protection of tunnels in transportation facilities such as railways, highways, and intercity subways. It can also be used in vehicles, ships, machinery, high-speed railway sound insulation belts and other occasions that require drag reduction, vibration reduction and noise reduction.

FEATURES

- ▶ Flame retardant performance reaches B1 level
- ▶ Not sensitive to humidity, high and low temperature environment, good thermal stability
- ▶ Good adhesion to various substrates, good water resistance
- ▶ Good environmental protection, solvent-free, safe construction and environment-friendly
- ▶ The coating is dense and continuous without seams, resistant to abrasion, impact and salt spray
- ▶ Mechanized construction, fast curing to form a film, can be sprayed and formed on any special-shaped surface without sagging
- ▶ Excellent corrosion resistance and resistance to water, acid, alkali, salt, oil and other chemical media

ATTENTION

- ▶ During construction, the substrate temperature must be 3°C higher than the dew point temperature
- ▶ Before using the product, component B should be fully stirred
- ▶ The system is 100% solid content, and diluent is strictly prohibited
- ▶ Good ventilation must be maintained during construction in confined space
- ▶ When using this product, you must wear work clothes, gloves, goggles, gas masks and other protective equipment

SPECIFICATIONS

Items		Parameters
		TH-901
Solid Content (%)		99
Gel Time (s)		18
Surface Dry Time (s)		2
Hardness (Shore A)		90
Impact Resistance (kg/m)		1.5
Tensile Strength (MPa)		10
Elongation at Break (%)		155
Tear Strength (N/mm)		65
Adhesion (MPa)	Steel	8
	Concrete	3
Wear Resistance (750g/500r)/mg		5.1
Low Temperature Flexibility (- 30 °C 180 ° bending at 10mm axis)		No cracking
Impermeability (0.3MPa / 30min)		Impervious
Electric Strength (MV/m)		18
Salt Spray Resistance (2000h)		No embroidering, no blistering, no shedding
Liquid Medium Resistance (10%H ₂ SO ₄ , 10%HCl, 10%NaOH, 10%NaCl, 30d)		No embroidering, no blistering, no shedding
Water Resistance (30d)		No embroidering, no blistering, no shedding
Oil Resistance (0# diesel, crude oil, 30d)		No embroidering, no blistering, no shedding
Flame Retardant Performance Level		B ₁

Items		Parameters
		TH-902
Solid Content (%)		99
Gel Time (s)		15
Surface Dry Time (s)		45
Tensile Strength (MPa)		12
Elongation at Break (%)		350
Tear Strength (N/mm)		56
Low Temperature Bending Property (°C)		-40
Impermeability (0.4MPa,2h)		Impervious
Heating Expansion Rate	Elongation (%)	0.5
	Shrink (%)	0.5
Bond Strength (MPa)		2.8
Water Absorption (%)		2.5
Agingn at Constant Elongation	Heating Aging	No crack and deformation
	Artificial Climate Aging	No crack and deformation
Heat Treatment	Tensile Strength Retention (%)	98
	Elongation at Break (%)	350
	Low Temperature Bending Property (°C)	-32
Alkali Treatment	Tensile Strength Retention (%)	100
	Elongation at Break (%)	330
	Low Temperature Bending Property (°C)	-32
Acid Treatment	Tensile Strength Retention (%)	95
	Elongation at Break (%)	343
	Low Temperature Bending Property (°C)	-32
Salt Treatment	Tensile Strength Retention (%)	98
	Elongation at Break(%)	358
	Low Temperature Bending Property (°C)	-32
Artificial Climate Aging	Tensile Strength Retention (%)	95
	Elongation at Break(%)	330
	Low Temperature Bending Property (°C)	-32

Hardness (ShoreA)	90±5
Wear Resistance (750g/500r)/mg	20
Impact Resistance (kg/m)	1.2
Flame Retardant Performance Level	B ₁

Product Ratio

Material A : Material B = 1:1

Material A: 220kg/barrel; Material B: 210kg/barrel

Application Guidance

Recommended spraying machine: Graco H-XP3 polyurea spraying equipment or mechanical self-cleaning polyurea spray gun

Static pressure 2300-2500 psi

Dynamic pressure 2000-2200 psi

Recommended dry film thickness: 1000-3000 μm

Coating interval ≤ 6h

Product storage

Storage temperature: 5-40 °C

Under normal storage and transportation conditions, the storage period shall not be less than 6 months from the date of production

Store in a cool and ventilated environment, avoid direct sunlight, do not approach the fire source and prevent collision