

TECHNICAL DATA SHEET

Product Document: Aliphatic_Polyurea_Waterproof_System_TDS_EN.pdf

System Name: Aliphatic Polyurea Waterproofing & Protective Coating System

Product Category: 1. Epoxy & Polyurethane Flooring & Paving Systems

Aliphatic Polyurea Waterproof System is a two-component, high-build elastomeric polyurea coating engineered for high-performance waterproofing, roof decks, balconies, and industrial wear protection. Utilizing 100% aliphatic isocyanates and polyaspartic/polyetheramine technology, it delivers permanent UV stability, extreme crack-bridging, and rapid curing.

Features:

100% Aliphatic zero yellowing / Extreme elongation & crack bridging / Rapid return-to-service / Outstanding hydrostatic water resistance / Low temperature cure.

Properties:

Physical Properties			
Property	Test Method	Units	Typical Value
Mix Ratio (Part A : Part B)	By Weight	—	1 : 1
Solids Content	ASTM D2369	%	≥ 98
Specific Gravity (Mixed)	ISO 2811-1	g/cm³	1.08 ~ 1.14
Viscosity (Part A / Part B, 25°C)	Brookfield	mPa·s	800 ~ 1,200 / 600 ~ 1,000
Gel Time (25°C)	Hand Applied Formulation	min	20 ~ 30
VOC Content	EPA Method 24	g/L	< 20
Mechanical Properties			
Tensile Strength	ASTM D412 / ISO 37	MPa	16 ~ 22
Elongation at Break	ASTM D412 / ISO 37	%	350 ~ 550
Tear Strength (Die C)	ASTM D624	kN/m	≥ 55
Shore Hardness	ASTM D2240	Shore A	85 ~ 92 (Shore D: 40 ~ 45)

Crack Bridging Ability (-10°C)	EN 1062-7	mm	Class A5 (> 2.5 mm)
Hydrostatic Head Pressure	DIN 1048	bar	≥ 5 bar (impermeable)
Taber Abrasion (H-22, 1000g, 1000r)	ASTM D4060	mg loss	≤ 60
Thermal Properties			
Service Temperature Range	Internal Standard	°C	-35 ~ +100

Recommended Application Conditions:

Parameter	Specification / Recommended Value
Application Method	Roller, squeegee, or plural-component airless spray
Substrate Temperature	5 ~ 35°C (Min. 3°C above dew point)
Consumption Rate (Per 1 mm DFT)	1.1 ~ 1.2 kg/m²
Recommended Dry Film Thickness	1.5 ~ 2.0 mm (Waterproofing membranes)
Tack-free Time (25°C)	60 ~ 90 minutes
Recoat Window (25°C)	2 ~ 12 hours
Foot Traffic / Light Service	4 ~ 6 hours
Full Immersion / Chemical Exposure	48 hours

Cautions:

Ensure concrete substrate is primed with a suitable epoxy or polyurea moisture-barrier primer to prevent pinholing caused by concrete outgassing. Part A (Isocyanate) is moisture sensitive; keep containers tightly sealed with nitrogen blanketing if partially consumed.

Disclaimer:

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