AKFIX POLYUREA HB 1015 (ECO HYBRID)

1 – PRODUCT DESCRIPTION

Akfix Polyurea HB 1015 is a very fast set, 2-component, 100% solid, flexible hybrid polyurea system. It is derived from a reaction of an aromatic isocyanate prepolymer and an amine terminated resin blend. As alternative to pure polyurea systems, it can be used on various substrates for coating and protecting purposes. The product reacts within seconds and once cured, leaves a durable and tough surface. The product is VOC free and environmentally friendly. The material must be applied utilizing high pressure, heated plural component spray proportioning equipment.

2 – FEATURES

- Economic alternative to pure polyurea products
- Fast reactivity and fast return to service time
- %100 solid, VOC free, no odor
- No catalyst
- Seamless and joint-less coating with water resistance
- Excellent adhesion on concrete, steel, aluminum, ceramic, wood, geotextile etc.
- Excellent flexibility
- No sensitivity to temperature and humidity
- Variable application thickness possible
- Broad color spectrum

3 – APPLICATION AREAS

- General water isolation
- Public areas with low pedestrian traffic
- Pick-Up cases
- Roofs, terraces and balconies
- Parking lots and garages
- Water parks, gaming fields and decorative applications

4 – SURFACE PREPARATION & APPLICATION

- Surface preparation strongly affects coating performance. Concrete substrates must be prepared mechanically using abrasive blast cleaning to remove cement laitance and achieve an open textured surface. Weak concrete must be removed and surface defects such as voids must be fully exposed. Repairs to the substrate, filling of blowholes/voids and surface

leveling must be carried out using appropriate products. The application surface has to be primed in order to achieve an even surface and good adhesion.

- All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum. For application pull off strength of the surface should be min. 1.5 N/mm² and concrete residual moisture should be max. 6 %.
- Isocyanate prepolimer and amine resin must be applied using a 2-component high pressure and heat spray machine. The machine should be able to spray the components in 1:1 volume ratio. In order to achieve good performance, the temperature and pressure should stay same during the application.
- Before application, amine component must be stirred using a barrel mixer.

5- PACKAGING

200 kg barrel (Amine side)
225 kg barrel (Iso side)

6- SHELF LIFE & STORAGE CONDITIONS

Polyurea components are sensitive to moisture. Keep polyurea components in closed containers. Store the product in a ventilated place away from direct exposure to sunlight. Keep polyurea components between 20 -30 °C for quality reasons. Shelf life of the unopened original packaging is nine months from manufacturing date.

7- SAFETY

Contains isocyanate MDI. Avoid breathing vapors. Avoid contact with skin and eyes. Take precautions during application. Wear suitable protective clothing, gloves and eye/face protection. Adequate ventilation of the working area is recommended.

Refer to SDS sheet prior to use.

9- TECHNICAL FEATURES

Component Properties

	Unit	Method	MDI Prepolymer (A)	Amine Resin (B)
Density (25°C)	gr/cm^3	ASTM D 1217	1,11±0,03	1,02±0,02
Viscosity (25°C)	mPa.s	ASTM D 4878	700-800	300-600
Shelf life	-----	-----	9 months	9 months

Process Properties

	Birim	Datas
Mix Ratio	By volume	A= 100 B= 100
	By weight	A= 112 B= 100
Process temperature(°C)	°C	A: 70-80 B: 70-80
Process pressure (bar)	Bar	A: 150-200 B: 150-200

Physical Properties

	Metod	Değer
Chemical structure		A: MDI Prepolymer
		B: Amine Resin
VOC content (%)	ASTM D1259	0
Solid conten (%)	ASTM D2697	100
Gel time (sec)	--	10-15
Tack free time (sec)	--	40-45
Recoat time(hr)	--	0-12
Density (gr/cm^3)	ASTM D792	0,99-1,03
Tensile strength (MPa)	ASTM D638	≥9
Modulus (MPa)	ASTM D638	%100 elongation ≥ 5
Elongation at break (%)	ASTM D638	≥300
Hardness (Shore A)	ASTM D2240	70-75
Pull off strength (N/mm^2)	ASTM D4541	Concrete: ≥2,5 Steel: ≥6