

# Teknomer 655

## Hybrid Polyurea Coating



### Product Description

Rapid curing, hybrid polyurea system, which has a feature of crack bridging, has designed as a waterproofing membrane. It can be applied as an economic waterproofing and coating alternative to pure polyurea products. This solvent-free, hybrid polyurea consists of two components and can be applied to all weather conditions because of its rapid curing chemical structure.

### Areas of Usage

- Terrace, roof, balcony and stream gutter
- Flowertub insulation.
- Foundation Wall water insulation.
- On reinforced concrete and sheet metal plate.
- Hangars, swimming pools, water parks / theme parks, otopark insulation, underground water tanks and the places that need water insulation and coating.
- For UV resistance, it is applied with Teknobond 650 P.

### Features and Benefits

- Economic alternative to pure polyurea products.
- It has high crack bridge feature.
- Keeps its elasticity even at low temperatures.
- The place where Teknomer 655 is applied, can be put into service after a few minutes because of its rapid curing feature.
- It provides excellent adhesion and has chemical and mechanical strength.
- It provides a seamless application due to its one-component and high flexibility feature.
- It shows high resistance to water ponding
- It is resistant to salts, bases, diluted acids and diluted sulfates.
- 100% solid, VOC free, no solvents
- Environmentally friendly
- Seamless coating
- Variable application thickness.

### Application Instructions

**Surface Quality:** Surfaces should be clean, smooth, strong, free of any kind of dust, oil, dirt, rust, mold oil, detergent and similar anti-sticking materials. If there is segregation in concrete, defective and loose parts should be discarded and weak parts should be removed. If there is any crack or cavity on the floor or wall, it should be repaired with appropriate TEKNOREP 300 repair mortars. The TEKNOMER 655 application must be started at least 7 days later.

**Surface Preparation:** If there is a dilatation, the dilatation should be isolated using the TEKNOMER PAH TAPS and TEKNOBOND 400 D before the application of TEKNOMER 655. The isolation of dilatations is more difficult and cost more when you do it later. All drain around and grooves should be insulated by using filters and Pah Taps (chamfering bands).

The surface which will be insulated, must be dry. If there is any ponding or puddle, it should be removed.

### Priming:

As a primer, for the concrete surface, the two-component, epoxy-based TEKNOBOND 300 or TEKNOBOND 300 NB should be applied with a brush or a roller between 200 - 400 grams / m<sup>2</sup>. Lightly spreading out with quartz sand 0,3-0,8 mm is recommended because this provides higher adhesion values and extends the maximum waiting time of primer prior to the application of polyurea coating. In order to avoid the formation of blisters do not spread to excess. Liner consumption varies according to the quality and absorbency of the concrete. Before application of TEKNOMER 655, at least 4 hours and maximum 24 hours should be waited.

### Polyurea application:

TEKNOMER 655, can be applied on primed surfaces by spraying with the suitable equipment) As it does not have UV resistance, it should be covered with TEKNOBOND 650 P, heat insulation boards, protective plates or geotextile felt, etc. after the application. The polyurea must be applied within 12-24 hours of applying the primer. Component A and component B must be applied using a two component high pressure and heat spray machine. The machine should be able to spray the components in 1:1 volume ratio. Both components must be heated above 70°C. In order to achieve good performance, the temperature and pressure should stay same during the application and must be controlled regularly. Polyurea system components might not diluted under any circumstances. Before application, component A must be stirred at least 30 minutes using a barrel mixer until a homogenous mixture and colour obtained. If the color stability required, an aliphatic top coat must be applied within 12 hours of applying TEKNOBOND 650 P.

### Consumption of Coating Components:

Primer: 0,2-0,4 kg/m<sup>2</sup>

Quartz sand: 1-1,5 kg/m<sup>2</sup>

Polyurea coating: 1,05- 1,1 kg/m<sup>2</sup> /mm (recommended film thickness is minimum 2 mm.)

### Application conditions/limitations:

	Surface Temperature	Ambient Temperature	Relative Air Humidity
Optimum	5-30 °C	20-30 °C	25-50 %
Minumum	0 °C	0 °C	0%
Maximum	50 °C	50 °C	85 %

### Process Properties:

	UNIT	DATAS
Mix Ratio	By volume	A=100 B=100
	By weight	A= 100 B= 110
Process temperature (°C)	°C	A: 70-80 B: 70-80
Process pressure(bar)	Bar	A: 180-200 B: 180-200

### Application Notes/ Restrictions

- Foreign materials should not be added.
- Shouldn't be applied in a rainy weather while it is raining.
- The product should not be diluted, it is ready to use.
- Newly applied material / place, must be protected against weather conditions.

Technical Data		
General Information		
Chemical Structure	Hybrid polyurea	
Appearance	Grey	
Package	420 kg set ( 200 kg A + 220 kg B)	
Density (kg/ltr)	Component A : 1,15 gr/cm <sup>3</sup> Component B : 0,98 gr/cm <sup>3</sup>	
Shelf Life	12 months in unopened package in dry environment	
Application Information		
Consumption	1,00- 1,10 kg/m <sup>2</sup> (For 1 mm Film thickness)	
Viscosity	Component A: 800 ± 200 mPas Component B: 1000 ± 200 mPas	
Solid Content	% 100	
Performance Information		
Adhesion strength to the concrete	> 2 N/mm <sup>2</sup>	TS EN 4624
Adhesion strength to the metal	> 1,5 N/mm <sup>2</sup>	
Tensile strength	> 7 N/mm <sup>2</sup>	DIN 53504
Tear strength	≥ 25	
Breaking strain	> %400	DIN 53504
Humidity tolerance	%5	
Soil temperature of the surface	-5°C/+40°C	
Servcie Temperature	-40°C/+120°C	

\*All these technical data are approximate values that are obtained from the laboratory study of Tekno Construction Chemicals for finished products obtained at +20 (±2) air temperature and %50 relative humidity and valid for its performance after 28 days.

