

## Estoflex Solar 690

### PURE Polyurea Waterproofing Membrane

#### Description

**Estoflex Solar 690** is a rapid curing, chemical resistant **PURE Polyurea**, spray applied waterproofing membrane. **Estoflex Solar 690** consists of 2 components, ISO and Amine. In view of environmental concerns, it is solvent free and MDI as an isocyanate with low vapour pressure is added. 100% solids pre-heated, flexible, two-component polyurea elastomeric waterproofing membrane with excellent resistance to wide range of aggressive chemicals condition. The seamless coating provides an elastic yet tear resistant surface for applications subjected to extreme wear and tear, strong impact and chemical exposure. As with all aromatics, over a period of time colour change will occur if exposed to UV rays. This will not have any negative effect on the physical properties of the product. Suitable for outdoor applications. Available in wide range of attractive colour.

If long term aesthetics and excellent UV resistance is required, then spray/roller apply Estoflex Solar TC60 as top coat is recommended.

#### Uses

**Estoflex Solar 690** is suitable for indoor and outdoor applications as below:

- Waterproofing for commercial, industrial & manufacturing facilities.
- Sealing and substrate protection – Plant rooms, trafficable roof decks.
- Waterproofing and substrate protection for area exposed to high wind abrasion.
- Under concrete screed waterproofing of large-scale podium decks where residual moisture exists.
- Bridge, street and tunnel waterproofing particularly in high moisture environments.
- Lining of non-portable water tanks, waste water tanks.
- Loading docks and access ramps.
- For all waterproofing containment applications where there are no aggressive chemical and abrasive forces.

#### Advantages

- Can be applied even under extreme climate condition. Hot, cold and humid conditions.
- Good elongation and tensile strength.
- Environmental friendly – zero VOC
- Seamless and rapid curing.
- Hard wearing – exhibits excellent impact, abrasion and puncture resistance.
- Elastic – bridge cracks on concrete surface.
- Excellent adhesion to concrete, steel, aluminum, plastic, fibers, wood, foam, etc.
- Rapid application to any thickness and very fast cure results in faster turn around times.
- 100% solid, VOC -free and contain zero solvents.

#### Standard Compliance

- ASTM D638
- ASTM D-2240
- ASTM D-4541

#### Physical Properties

Solids	100%
Colour	Straw/Brownish colour Un-pigmented
Mixing Ratio	1 to 1 by volume
Recommended Thickness, mm	Minimum: 1mm on steel Max: Unlimited  1.5mm to 2.5mm on concrete
Gel Time at 20°C, sec	5 – 10 (depend on ambient and substrate temperature)
Tack Free Time at 20°C, sec	15 – 30 (depend on ambient and substrate temperature)
Curing / Loading, hour	
Walkable	1
Mechanical	2
Chemical	12 - 24
Tensile Strength, MPa ASTM D638	>17
Elongation ASTM D638, %	>300
Shore D Hardness ASTM D2240	45 ± 5
Tear Growth Resistance, N/mm ISO 34-1	>15
Viscosity at 25°C, mPa*s	
Component A	300 – 1000
Component B	600 – 1350
Density, g/cm <sup>3</sup>	
Component A	1.09 – 1.13
Component B	0.98 – 1.02
Mix	1.00 – 1.04
Adhesion to substrate (ASTM D4541)	
Concrete	≥ 1.5
Steel	≥ 5.0

#### Application Instruction

##### Surface Preparation

The surface must be sound, free of any laitance, loose and crumbly particles, and must be clean and free of products that can impair or inhibit adhesion of the primer or coating. (e.g. oil, grease, paraffin, rubber debris, release agents, post-treatment agents, organic additions, paint residues). The surface must neither be floury nor sandy.

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## Priming

It is recommended to apply **Estoprime LV** at rate of 5m<sup>2</sup>/L on the well-prepared concrete substrate and allow to dry before the spraying process.

## Application

This material is designed for application with heated, plural component airless spray equipment.

Actual spray trial shall be conducted to confirm the spray equipment adjustment.

### Notes:

*The gel time and tack free times depend on the surrounding climatic conditions, temperature, relative humidity and ventilation. Therefore, above specified data can only be used as a guide.*

## Packaging

Estoflex Solar 690 Part A	225 kg drum
Estoflex Solar 690 Part B	200 kg drum
Estoprime LV	5L/ set

## Cleaning

**Estoflex Solar 690** should be removed from tools and equipment immediately after use with suitable solvent.

## Coverage

Estoflex Solar 690	1.0kg/m <sup>2</sup> @ 1.0mm thickness
Estoprime LV	5m <sup>2</sup> /L

The coverage will depend on porosity of substrate surface to receive **Estoflex Solar 690**.

## Technical Support

**Denka Construction Solutions Malaysia Sdn Bhd** offers a technical support package to specifiers, end-user and contractors, as well as on site technical assistance.

## Storage

**Estoflex Solar 690** has a shelf life of 12 months in unopened containers, kept in a dry store. In high humidity locations, the shelf life may be reduced.

## Precautions

Gloves and goggles should be worn. Any splashes to the skin or eyes should be washed off with plenty of clean water. In the event of prolonged irritation, seek medical advice. Application areas must be well ventilated.

## Additional Information

Denka manufactures offer a wide range of complementary products which includes waterstops, waterproofing products, grouts, anchors, specialized flooring products. In addition, a wide range of products formulated for repair and refurbishment of spalled concrete are available.



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