# Estoflex Solar 801P

Pure Polyurea Coating

### Description

**ESTOFLEX SOLAR 801P** is a two-component Pure Polyurea elastomer system with high performance. This system is based on polyether resins, amine chain extenders and pre-polymers. It provides an extremely flexible, tough, resilient monolithic membrane with good water resistance.

### Feature

- Rapid Curing
- Excellent Elongation with great tensile and te ar strength
- Excellent Waterproofing properties
- Great Chemical Resistant
- Seamless Application
- Minimize noise
- Minimize heat dissipation through substrate media

### Usage

Area of application :

- Water containment areas (sewage and conta minated)
- Ground Water Tank, Water Treatment Plant, Waste Water Treatment Plant
- Primary & Secondary containment tanks; steel or concrete substrate
- Protection & waterproofing of infrastructures; roof waterproofing
  (steel or concrete substrate)
- Suitable for Marine and shore environment
- Swimming pool.

### Typical Properties

| Item | Value |
|---|---|
| Color | Blue, Green, Grey |
| Viscosity; cPs, 25°C | Part A : 400 – 800<br>Part B : 400 – 800 |
| Specific Gravity; 25°C | Part A: 1.16 ± 0.02<br>Part B: 1.01 ± 0.02 |
| Solid Content (V/V) | 100% |
| Volatile Organic Compound | 0 g/L |

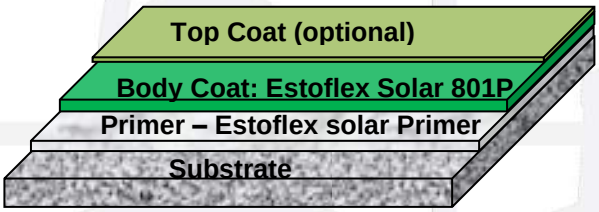
### Physical Properties

| Item | Specification | Data |
|---|---|---|
| Hardness Shore A | 95 ± 5 | 95 |
| Tensile Strength | 25 ± 5 | 25 |
| Tear Strength | 80 ± 20 | 80 |
| Elongation | 450 ± 110 | 440 |

### Curing Time

Setting time : < 15 sec.
Full-Service Use : > 72 hours at 20°C

### Construction Section



## Application

### Installation Equipment Recommendation

| | |
|---|---|
| Spray Machine | Graco Reactor E-XP2<br>PUSMAK KPX 20+<br>PUSMAK KPX 40 |
| Spray Gun | Graco Fusion AP<br>PUSMAK SP2 Spray Gun |
| Compressor | Dry Compressed Air<br>Pressure: 8 Bar<br>Power: 2 HP<br>Air Displacement: min. 0.200 L/min. |

### Process Condition

| | |
|---|---|
| Dispense pressure | >2,000psi(Dynamic) |
| Differential Pressure | < 300 psi (A and B Dynamic) |
| Spray Width | 40 - 80° |
| Main heater Temperature | 65°C (±10°C) |
| Hose heater Temperature | 65°C (±10°C) |
| Component Temperature | 35 – 55°C |
| Mixing ratio (V/V) | 1:1 |
| Theoretical coverage ratio | 1.1 Kg/m$^2$ |
| Recommended Coating Thickness | 2 – 3 mm |
| One Layer Thickness | 300 – 800 microns |
| Spray gun Swing Range | <120 cm |
| Recoat time | <24hours (20°C) |

If over the recoat time, use thin coat of the primer before spraying main coat.

## Application

1. Surface Preparation

   a. Concrete Substrate

- Concrete age minimum 21 days, or concrete moisture <6%.
  - All surfaces must be clean and free from debris, loosened or flaking material, standing water, oil, grease and organic growth.
  - Concrete surfaces must be free from laitance and any traces of shuttering, release oils and curing compounds.
  - Blasting is highly recommended as an effective method of surface preparation and to provide a suitable key for Polyurea coating
    - Abrasive blast per ICRI Technical Guideline No. 03732 or SSPC SP13
    - Achieve a Concrete Surface Profile of ICRI CSP-3 to CSP-5
  - The minimum blast profile must be 75 - 100 microns
  - Following the above preparation, care must be taken to ensure that any surface irregularities are filled with Epoxy Putty (Estobond EC)
    - Apply the mixed Epoxy Putty (Estobond EC) to the substrate using appropriate application equipment; such as trowel, scraper, filling knife, squeegee.
    - Once the Epoxy Putty (Estobond EC) is cured (approx. 4 – 6 hours at 35°C; 10 – 12 hours at 25°C) it shall be slightly abraded and cleaned to a dust-free surface before the application of primer
    - All cracks shall be chased to a 5mm x 5mm groove and filled using Epoxy Putty (Estobond EC)

b. Metal Substrate

- For Bare Steel all welding seams must have a surface finish which ensures that the quality of the paint system will be maintained in all respects.
- Holes in welding seams, undercuts, cracks, etc. must be avoided. If holes are found, they must be remedied by welding and/or grinding. All weld spatters must be removed. All sharp edges must be removed or rounded off in such a way that the specified film thickness can be build-up on all surfaces. The radius of the rounding must be minimum 2 mm.
- The steel must be of first-class quality and must not have been allowed to rust more than corresponding to grade B of ISO 8501-1:2007. Any laminations must be removed
- Blast cleaning to Sa 2½. (ISO 8501-1:2007)

2. Primer Application

- Primer to be used on sound, dry concrete and at ambient/substrate temperature of ≥ 10°C. Primer options are:
- Concrete: using Estogard CS primer ( for high traffic) and using Estoflex Pu 980 Primer ( for normal traffic)
- Steel including galvanized: Estocard CS primer
- Always make sure surface temperature is at least 3°C above dew point.
- Apply the mixed primer by roller (not spray) at a consistent coverage rate (in the range 0.20 – 0.30 Kg/m$^2$ dependent on concrete porosity). Note on occasions where the substrate is extremely porous, >0,45 Kg/m$^2$ may be required.
- Allow the primer to become touch-dry before applying the **Estoflex Solar 801P**

  2 hours at 35°C
  4 hours at 20°C
  6 hours at 10°C
  8 hours at 5°C

3. Body Coat Application (Spraying)

- Mix Part B AMINE drum at low speed 300 – 400 RPM for 10 minutes or until a homogeneous mixture is formed without any streaks
- DO NOT mix at higher speed, in order to avoid air entrapment
- DO NOT dilute the product under any circumstances
- **Estoflex Solar 801P** is spray-applied using a plural-component proportioner with air purge or mechanical purge spray gun and tip. The components in the line hoses must be circulated and heated to 65 ± 10°C\
  - Part A ISO
  - Part B Amine
  - Under no circumstances add water to Part A or Part B
- Recommended maximum single layers of 2mm
- Apply **Estoflex Solar 801P** at a consistent rate using a standard cross-hatch spray pattern, with a minimum of 2 alternate directional passes for complete coverage. Minimum overcoating time is 10 – 15 minutes
- Special coating properties may be provided by the introduction of specialized fillers and fibers, provided as a separate component supplied in-situ by modified spray gun.
- Consumption: 1.20 – 3.60 kg/m2 for average 1000 – 3000 microns

## Important Note

4. Top Coat Application (Optional)

    - Apply Topcoat (Estoflex PU TC) when the surface is dry, typically at temperatures of 20 - 35°C
    - Apply to the **Estoflex Solar 801P** surface at the required coverage rate, generally 0.2 mm thickness, using a medium-hard rubber squeegee.
    - Lightly back-roll with a roller to remove the squeegee lines, leaving a uniform finish.
    - Allow to dry, approximately 6 hours at 20°C.
    - Sand broadcast systems can be used for anti-slip effect

**Packaging**

Part A : 210 Kg
Part B : 200 Kg

**Storage Stability**

8 months in unopened and undamaged packaging.
Store in dry cool place within 5 – 35°C.

**Limitation**

- Apply when ambient temperature 5 – 35 °C
- Surface temperature must be at least +3 °C above dew point
- Relative humidity must be less than 85%
- Need preheating of A, and B Component to 35 – 55 °C
- Recommend using ‘Drum heating band’ for preheating
- Need to mix well the toner in B Component. Some part of the toner may be settled down to bottom.

**Safety Measures**

Full body protection must be used for all-time.
Impervious gloves and barrier cream should be used when handling these products.
Eye protection should be worn. In case of contact with eyes, wash thoroughly with plenty of water and seek medical advice if symptoms persist.
If contact with skin occurs, it must be removed before curing takes place. Wash off with an industrial skin clearer followed by plenty of soap and water. Do not use solvent.
Ensure adequate ventilation when using these products.