

**GreenShield™ Reinforced Membrane** is a high performance, heat weldable, thermoplastic polyolefin (TPO) sheet, manufactured & supplied in specified thickness, designed for waterproofing and heat shielding roofs, basements, podiums & facades of new and existing buildings.

GS TPO Membrane is based on advanced polymer technology, modified for weathering and fire protection, enabling the membrane to withstand extreme temperatures across hot and humid to very cold and dry climates and remain flexible over years. It sustains cycles of hot, cold, wet and dry environmental conditions, while maintaining its integrity and continuing to provide protection from water seepage as well as heat insulation.

Compared to other waterproofing systems – be it chemical, spray applied, or PVC, bituminous membranes; TPO membranes are longer lasting, with superior properties and performance, proven for over 40 years. GS membranes are available in the following ranges:

**1: GS TPO RF & GS TPO RF FR:** These membranes are reinforced with polyester scrim, encapsulated between the TPO top and bottom layers, combination of which provides high mechanical properties to the membrane ensuring superior puncture resistance, breaking & tearing strength. The smooth surface enables excellent heat weld which provides proper heat fusion along the edges, making the membrane monolithic with the roof, providing consistent and water-tight assembly.

The membranes are further formulated to provide high solar reflective index, thermal emittance, and solar reflectance,

enabling the membrane to provide insulation with high surface albedo.

**2: GS TPO RF BG (S) & (D):** These membranes are a bi or tri-layer of TPO sandwiched between specially formulated fleece, that allows webbing of cementitious adhesive or poured concrete, creating a monolithic solution with the RCC / PCC slab on roofs, podiums, balconies and walls, providing consistent thickness.

The concrete or adhesive is directly poured onto the membrane and allowed to set. Joints are heat welded and sealed, this providing a complete impermeable membrane within the sub-structure that does not allow any water, moisture to permeate between the top and bottom surfaces.

**3: HDPE Membranes RF BG (S) & RF BG (D):** These membranes are rigid compared to TPO and are suitable for waterproofing podiums, basements and balconies. The membranes are a bi-tri-layer polyethylene encapsulated between specially formulated fleece that allows webbing of adhesive or poured concrete, creating a monolithic solution.

#### Key characteristics:

- Solid Impermeable membrane
- Fully and permanently bonded with concrete substrate to create monolithic structure
- No migration of moisture, water from above or below substrate
- Easy to install with fully adhered joints – adhesive or heat welding
- Guaranteed for over 25 years\*\*  
(\* \*\* Refer GS installation guarantee conditions)

#### Instructions to read this sheet:

Read the left most column in dark grey first. Then, select the relevant criteria along the right side. This will provide suitable solution.

**STEP 1  
SELECT  
CRITERIA**



THE SYSTEM	APPLICATION & PRODUCT SELECTION CRITERIA									
Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof	Roof
Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement	Basement
Podium	Podium	Podium	Podium	Podium	Podium	Podium	Podium	Podium	Podium	Podium
Wall	Wall	Wall	Wall	Wall	Wall	Wall	Wall	Wall	Wall	Wall
Other	Other	Other	Other	Other	Other	Other	Other	Other	Other	Other

**STEP 2: SELECT SYSTEM**



# APPLICATION & PRODUCT SELECTION CRITERIA

## TPO MEMBRANE SYSTEM

### PURPOSE

WATERPROOFING AND / OR HEAT INSULATION

GREEN ROOF

### SUBSTRATE

RCC ROOF

PEB ROOF

BASEMENT, PODIUM, BALCONIES

RCC ROOF

### INSULATION SYSTEM

NO INSULATION

WITH INSULATION

WITH INSULATION

NO INSULATION

NO INSULATION

### EXPOSED / UNEXPOSED SUBSTRATE

EXPOSED NON ACCESSIBLE

UNEXPOSED ACCESSIBLE

EXPOSED NON ACCESSIBLE

UNEXPOSED ACCESSIBLE

EXPOSED

UNEXPOSED

UNEXPOSED

### INSTALLATION SYSTEM

MECHANICALLY FASTENED

BONDED

BONDED

MECHANICALLY FASTENED

BONDED

BONDED

MECHANICALLY FASTENED

BONDED

MECHANICALLY FASTENED

BONDED

### PRODUCT RECOMMENDED

GS TPO RF;  
GS TPO RF FR

GS TPO RF BG (S)

GS TPO RF BG (D)

GS TPO RF;  
GS TPO RF FR

GS TPO RF BG (S)

GS TPO RF BG (D)

GS TPO RF;  
GS TPO RF FR

GS TPO RF BG (D);  
GS PE RF BG (D);  
GS PE PSA

GS TPO RF

GS TPO RF BG (S);  
GS TPO RF BG (D)

### SYSTEM BUILD-UP LAYERS TOP TO BOTTOM

TPO  
SLOPE SCREED  
RCC SLAB

TPO  
ADHESIVE  
SLOPE SCREED  
RCC SLAB

TILE/PCC +  
ADHESIVE  
TPO + ADHESIVE  
SLOPE SCREED  
RCC SLAB

TPO  
INSU BOARD  
SLOPE SCREED  
RCC SLAB

TPO  
ADHESIVE  
INSU BOARD  
SLOPE SCREED  
RCC SLAB

TILE/PCC +  
ADHESIVE  
TPO + ADHESIVE  
INSU BOARD  
SLOPE SCREED  
RCC SLAB

TPO  
INSU BOARD  
VAP BARRIER  
PEB ROOF

RAFT  
POURED  
CONCRETE  
TPO/HDPE  
PCC/SLAB

GRASS / PLANT + SOIL  
GEOTEXTILE  
DRAINCELL  
TPO  
SLOPE SCREED  
RCC SLAB

GRASS / PLANT + SOIL  
GEOTEXTILE  
DRAINCELL  
TPO + ADHESIVE  
SLOPE SCREED  
RCC SLAB