



ENTECH HFA RESPECT SYSTEM

HOT APPLIED, BITUMEN RUBBER BASED
WATERPROOFING SYSTEM

ENTECH HFA RESPECT SYSTEM

Entech HFA Respect system is a hot applied it is a homogeneous mixture of refined asphalts, mineral fillers and synthetic rubber materials.

It is poured and applied by pulling with a squeegee after getting melted in ELECTRIC MELTER 500 special melting boilers with mixers at a suitable temperature (195 degrees), produced by Entech.



PRODUCT ADVANTAGES



- Creates a hard, flexible, self-renewing **waterproofing** layer.
- Creates a 100% **solid monolithic layer** and does not contain volatile substances.
- Usage cost is lower than water-based systems. For example, a 4.5 kg/m^2 application creates a **3.75 mm net dry film thickness** in Entech HFA Respect System. In water-based systems, an application of approximately $6.0\text{-}6.5 \text{ kg/m}^2$ is required to obtain this amount of dry film.
- It is poured at high temperatures, fills all gaps, adheres completely to surface and **does not allow water to flow underneath** in the event of a possible puncture.
- **Since no curing is required after application**, and cooling of the hot application is sufficient for area to be service ready.
- Creates a monolithic waterproofing layer by adhering very strongly to **metal and concrete surfaces**.
- It is **acid and alkali** resistant.
- It has **high crack bridging** properties.
- It is a **high viscosity** material.
- It is suitable for **cold climate** applications. (-18°C)



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FIELDS OF APPLICATION

- Roofs and terraces.
- Green roof applications.
- Underground-above ground parking lots.
- Underground tunnels.
- Viaducts.

Since it is not a UV resistant product, it should be covered appropriately after application.



◦ **System Components :**


- Entech **HFA BITUMEN** rubberized bitumen packaged in cardboard boxes with silicone foil.
- Entech **HFA PRIMER WB C** Water-based concentrated emulsion primer.
- Entech **HFA REINFORCE DONATI** Spunbond reinforcement fabric.
- Entech **HFA PROTECTION MEMBRANE** 2.5mm SBS bitumen, polyester reinforced double-sided sanded membrane.
- Entech **KSK FELT PAH BANDI** 20 cm Self-adhesive geotextile-laminated special chamfer band for corners.
- Entech **ENFELT PES300** 300 gr/m² polyester non-woven geotextile.
- Entech **ENDRAIN DP600** 200kNm hdpe drainage board.

◦ **Equipments :**


- Entech **ELECTRIC MELTER 500** 500 Double-walled electric melting tank with mixer.
- Entech **ÇEKPAS** special heat-resistant silicone tipped squeegee.
- Entech **KOVA** special hot asphalt carrying bucket.
- Entech **FIRÇA** Firça special heat-resistant brush.
- Entech **ELDİVEN** Eldiven special protective gloves.

TECHNICAL SPECIFICATIONS


ENTECH Electric Melter 500

	Capacity	500 lt (max.)
	Weight	1100 kg
	Power	380 V. (three phase)
	Automatic Fuse	3 X 40 Ampere (min.)
	Leakage Current Relay	4 X 40 Ampere (min.)
	Oil	Heat Transfer Oil
	Oil Amount	200 lt


HFA Bitumen Rubberized Asphalt


	Color	Black
	Reaction to Fire	E (EN 11925-2:2010)
	Softening Point	121 °C (EN 1427)
	Density	1,20 kg/dm ³ (EN 13880-1)
	Cone Penetration	67 dmm (25 °C) (EN 13880-2)
	Penetration and Recovery	%65 (EN 13880-3)
	Change in Penetration Value	56 dmm(70 °C) (EN 13880-4)
	Fludity 60 °C	0 mm (EN 13880-5)
	Compatibility with Asphalt	Compatible (EN 13880-9)
	Fraas Breaking Point	-15 °C
	Application Temperature	+180 °C 205 °C

HFA Protection Membrane

	Bitumen Structure	Elastomeric
	Reinforcement	Polyester Fabric
	Top / Bottom Surface	Sand
	Thickness	2,5 mm
	Weight	3 kg/m ²
	Length	10 m
	Width	1 m
	Flexibility in Cold	-25 °C
	Tensile Strength (Length/Width)	700 N/5 cm - 500 N/5 cm
	Elongation (Length/Width)	%45 - %45
	Tear Resistance	180 N
	External Fire Performance	Broof (t ²)

TECHNICAL SPECIFICATIONS

HFA Primer WB-C		
	Color	Black
	Solid Content	60-65%
	Density	0,95-1kg/lit
	Viscosity	120 seconds (25°C)
	Penetration of Residue	45 mm (100 gr, 25°C, 5 sn)
	Solubility in Carbon Sulfide	%99,9
	Consumption	400-500 gr/m ² in one layer
	Surface Temperature	+5 °C +35 °C

HFA Reinforce Donatı		
	Weight	50 gr/m ²
	Thickness	0,23 mm
	Tensile Strength	130 N/5 cm (MD) - 65 N/5 cm (CD)
	Elongation	%30 (MD) - %34 (CD)
	Air Permeability	1426 l/m ² /sn
	Average Pore Diameter	46 micron
	Compressive Strength	200 kpa
	Flexural Strength	40 mg (MD) – 60 mg (CD)
	Tear Resistance	30 N (MD) – 42 N (CD)

APPLICATION DETAILS

Surface Preparation

It is recommended that the surface to be applied is dry, clean, free of loose parts and that it is grinded with a machine when necessary. Sharp edges and corners on the surface should be rounded with grinding and bigger gaps should be filled with repair mortar. Corners should be chamfered with structural repair mortars. The surface to be applied should be primed with water-based bitumen primer and the application should be started after the primer is completely dry. **ENTECH HFA BITUMENFLEX PRİMER WB C** water-based insulation primer (400-gr/m²) is applied as a primer to the prepared surface. Surfaces that will reduce the adhesion of the material should be roughened.

Product Preparation

ENTECH Electric Melter 500 Double-walled electric mixer melting boiler will be filled with a suitable amount of **ENTECH HFA BITUMEN** and will start to heat. According to the machine capacity, as the **ENTECH HFA BITUMEN** melts inside, new blocks can be added in it.

The boiler should be able to maintain the material temperature of 177 to 204 °C as heat range and the oil temperature of 260 to 288 °C. **ENTECH HFA BITUMEN** is continuously added to the boiler to always keep it at 3/4 capacity.

APPLICATION

LIQUID APPLICATION SYSTEM WITH REINFORCEMENT

- The material is poured onto the primed concrete surface with a **minimum of 2.50 kg/m² consumption** as the 1st layer with **ENTECH Kova (special hot asphalt carrying bucket)** and applied by spreading homogeneously with **ENTECH Çekpas (special silicone tipped squeegee)**.
- **ENTECH Eldiven (special protective gloves)** and **ENTECH Fırça (special heat-resistant brush)** should be used in all applications.
- While the material is still hot, **ENTECH HFA REINFORCE Spunbond reinforcement felt** is immediately laid on the material with overlapping overlaps of 10 cm.
- **ENTECH HFA BİTUMEN** material should be applied with the same method as the 2nd layer with a minimum of 2.00 kg/m² consumption.
- Since the material cools down very quickly, it should be consumed within **2 minutes after being** filled into the bucket.
- In parapet applications, **ENTECH KSK FELT PAH BANDI** 20 cm should be placed on the corners and pressed with a silicone roller to ensure full adhesion (corner detail solution is applied after hot insulation when necessary) **Entech BitümEnflex 1KD UV1000 single component UV resistant liquid water insulation material** should be applied to the entire parapet surface with reinforcement.
- **PENTECH KSK ALUPET self-adhesive membrane** or slate stone coated elastomer bituminous membrane can also be applied on parapets.
- Waterproofing applications should be extended up to 30 cm above the finishing level of surface on parapets.



CONSUMPTION

min. 4,50 kg/m² (depending on the surface conditions)



APPLICATION

COMBI APPLICATION SYSTEM WITH PROTECTION MEMBRANE

- The material is poured onto the concrete surface, which has been **primed with a consumption of 400 gr/m²**, with a **minimum consumption of 2.00 kg/m²** using an **ENTECH Kova (special hot asphalt carrying bucket)** and spread homogeneously using an **ENTECH Çekpas (special silicone tipped squeegee)**.
- **ENTECH Eldiven (special protective gloves)** and **ENTECH Fırça (special heat-resistant brush)** should be used in all applications.
- While the material is still hot, **ENTECH HFA REINFORCE Spunbond reinforcement felt** is immediately laid on the material with overlapping overlaps of 10 cm.
- **ENTECH HFA BITUMEN** material should be applied with the same method as the 2nd layer with a **minimum of 2.50 kg/m² consumption**. While the material is still hot, **ENTECH PROTECTION MEMBRANE** final layer protection membrane is immediately laid on the material with overlaps of 10 cm.
- Since the material cools very quickly, it should be **consumed within 2 minutes** after filling the bucket.
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CONSUMPTION

min. 4,50 kg/m² (depending on the surface conditions)



APPLICATION

FAST APPLICATION SYSTEM WITH PROTECTION MEMBRANE

- The material is poured onto the concrete surface, **which has been primed with a consumption of 400 gr/m²**, with a **minimum consumption of 3.00 kg/m²** using an **ENTECH Kova (special hot asphalt carrying bucket)** and spread homogeneously using an **ENTECH Çekpas (special silicone tipped squeegee)**.
- **ENTECH Eldiven (special protective gloves)** and **ENTECH Fırça (special heat resistant brush)** should be used in all applications.
- While the material is still hot, **ENTECH PROTECTION MEMBRANE** final layer protection membrane is immediately laid on the material with overlaps of 10 cm.
- Since the material cools very quickly, it **should be consumed within 2 minutes** after filling the bucket.
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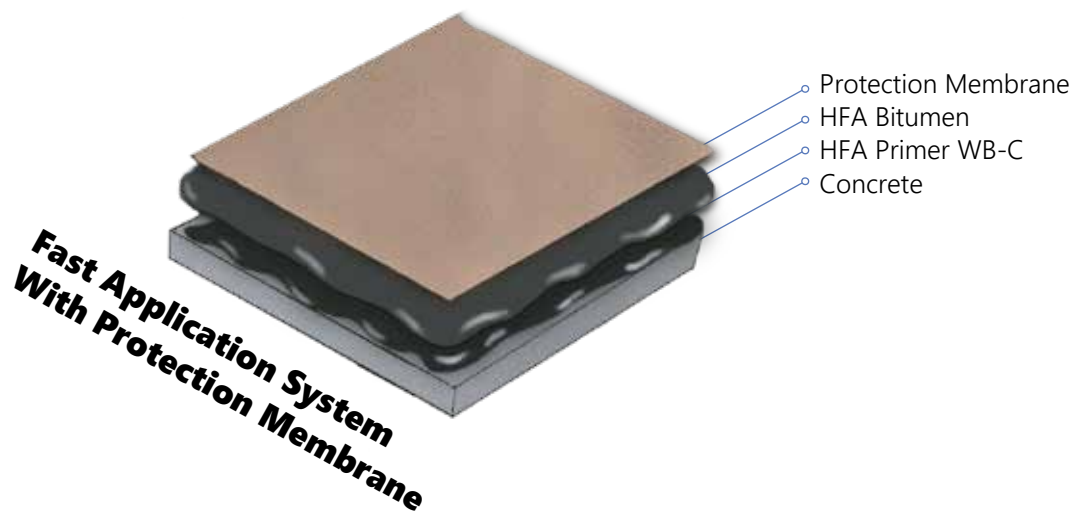
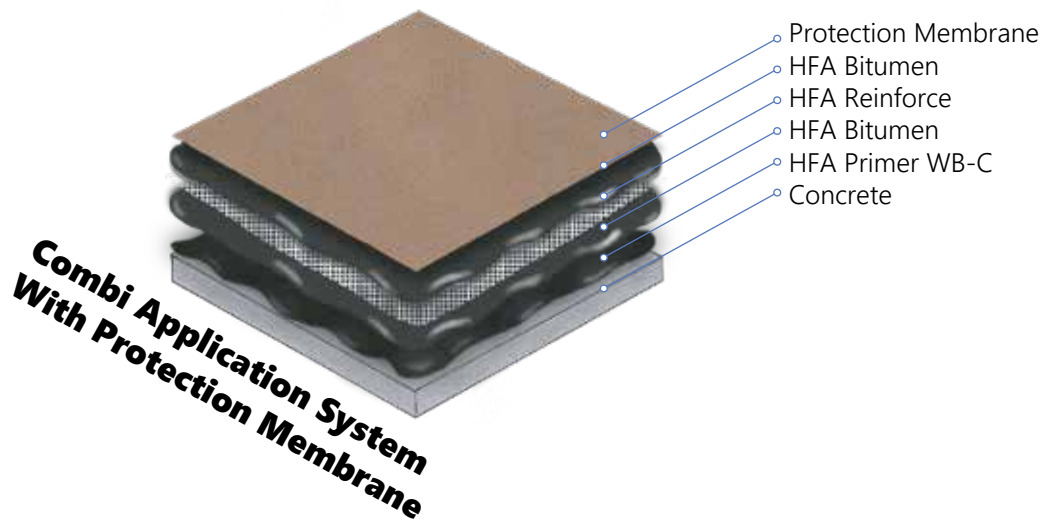
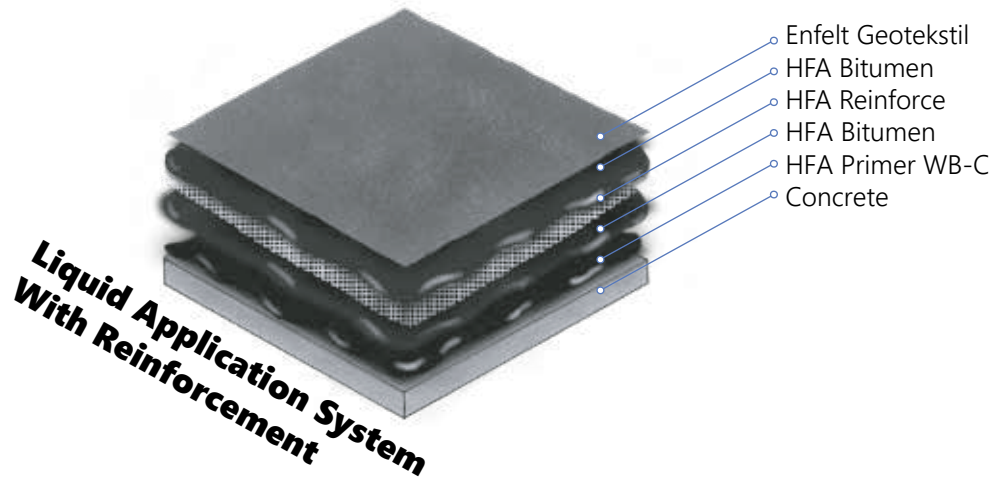


CONSUMPTION

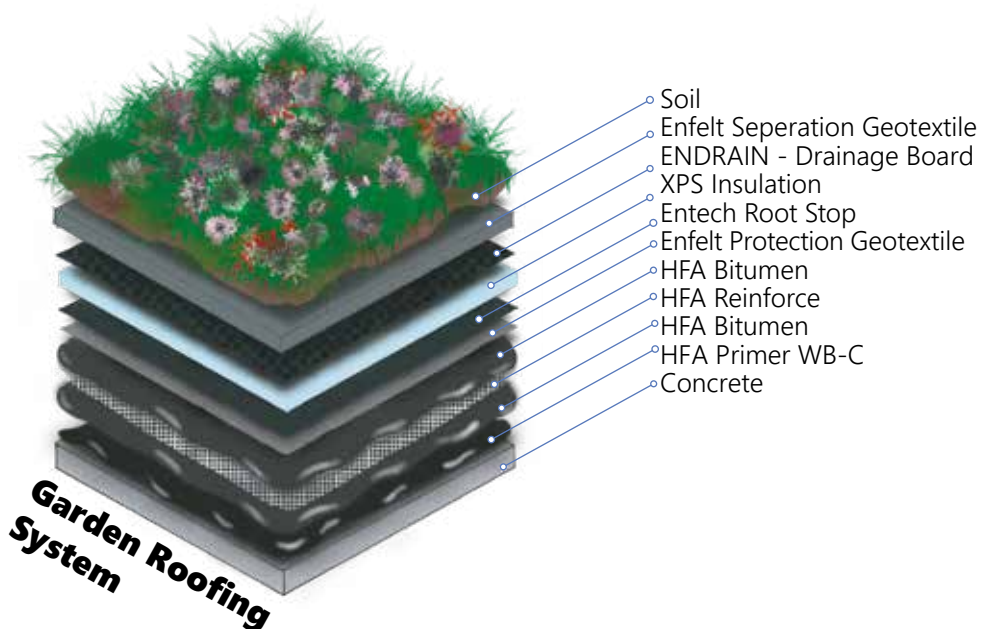
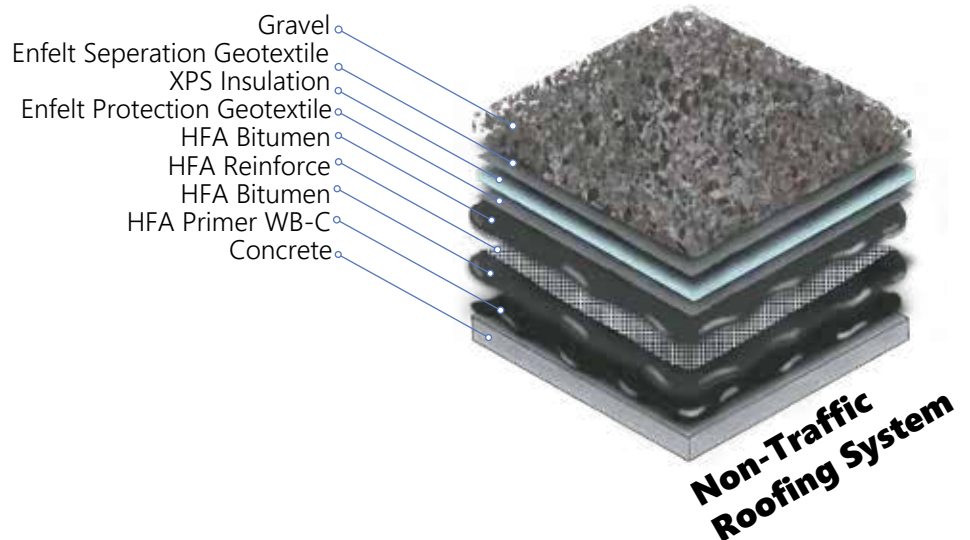
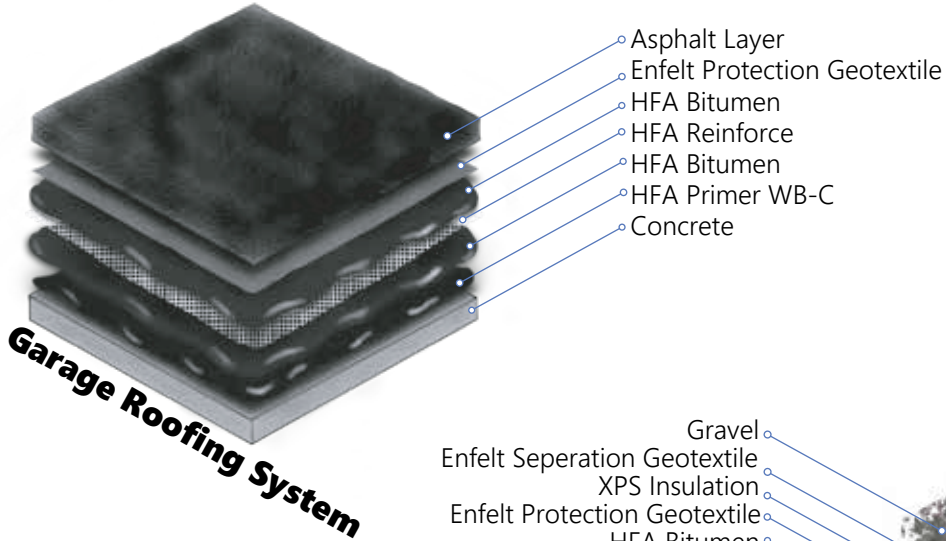
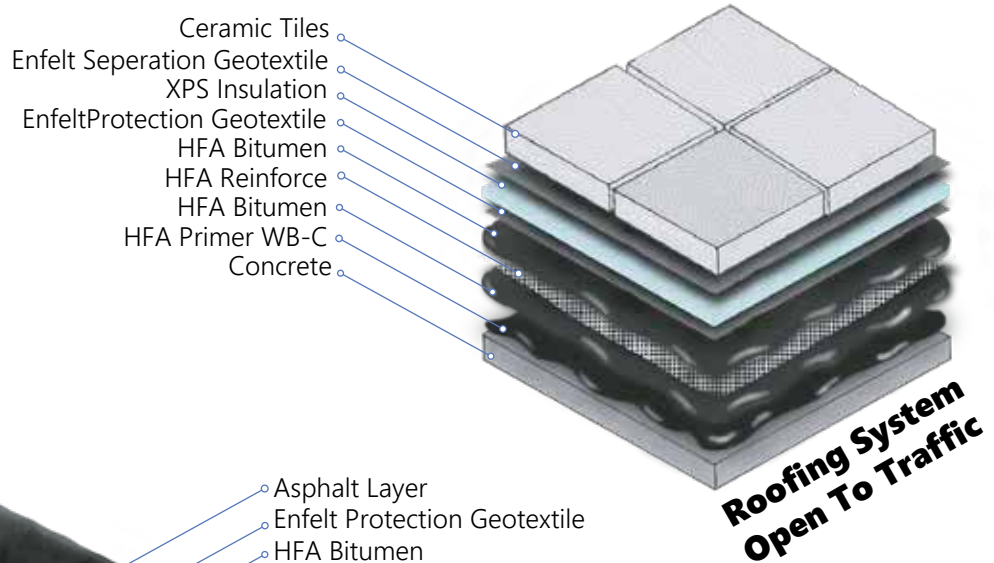
min. 3,00 kg/m² (depending on the surface conditions)



TYPICAL WATERPROOFING DETAILS



TYPICAL WATERPROOFING DETAILS





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