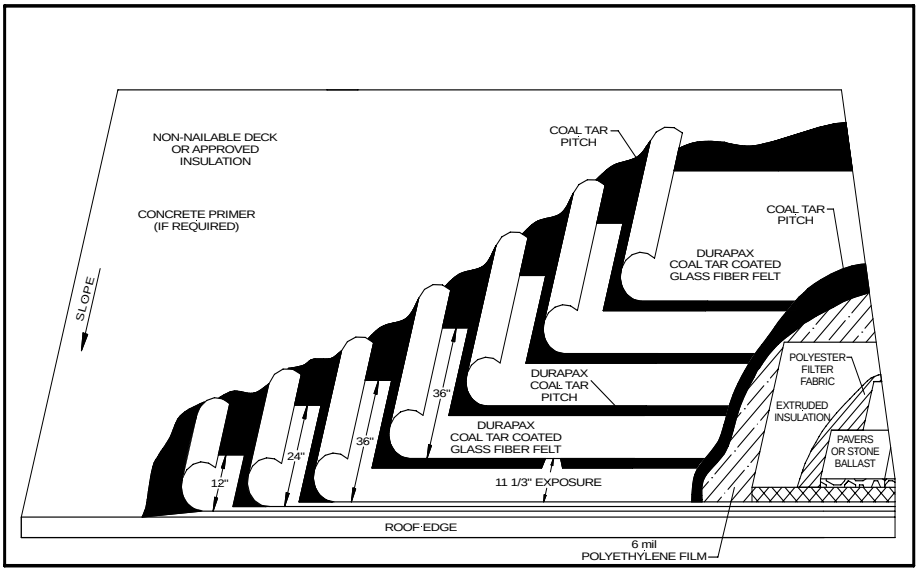
DURAPAX
COAL TAR
COMMERCIAL ROOFING SYSTEMS

400 Old Reading Pike, Suite 304
Pottstown, PA 19464
Tel: 610-579-9075
Fax: 610-323-0115
www.durapax.com

Coal Tar Membrane System Specification No. RP-51-3-PRMA
(Protected Roof Membrane Assembly)



Temperature Guidelines Coal Tar Pitch ASTM D-450, Type I	
Point of Application Range (EVT)	Kettle Temperature Maximum
360 ± 25 degrees	400 degrees

NON-NAILABLE DECKS

Poured Structural Concrete

INSULATIONS (optional)

One layer only – direct to deck

Perlite Recover Board

Wood Fiber

Dens Deck® Roof Board

SLOPE

0” - 1/4” per foot (MAXIMUM)

MEMBRANE MATERIALS

Durapax Coal Tar Coated Glass Fiber Felt

(3 plies)

Durapax Coal Tar Pitch (Type I)

SURFACING MATERIALS

6 Mil Polyethylene Film

Polyester Filter Fabric

Extruded Polystyrene Insulation

Stone Ballast and/or Roof Pavers

GENERAL REQUIREMENTS

The following recommendations and application procedures are a brief summary. They are intended to be used only as a general description of this particular assembly and do not represent all information or requirements necessary to bid or install a roof project. Additional information is available in the Durapax Coal Tar Commercial Roofing Systems Application & Design Considerations publication. Follow the National Roofing Contractors Association guidelines, applicable building codes, insurance requirements and good roofing practice.

If UL or FM approval is required, consult UL, FM and Durapax for specific requirements.

SURFACE PREPARATION

All substrate materials must be solid, clean, dry, meet applicable code requirements, be properly installed and suitable for use with the membrane system.

If a layer of roof board insulation is needed to provide a suitable substrate for the membrane system, it is to be set in steep asphalt or coal tar pitch. (If coal tar pitch is used, provide pitch dams where necessary.) If asphalt is being used to install the roof board insulation, prime deck with asphalt primer prior to installation. The primer should be allowed to dry before proceeding with the work. Priming is generally not necessary on poured concrete decks, when coal tar pitch is used to attach the roof board insulation.

Consult Durapax’s Commercial Roofing System’s Manual for specific deck preparation requirements.

ATTACHMENT OF ROOF BOARD INSULATION

(If Required)

Over the prepared deck, install one layer of the specified roof insulation board in a solid mopping of hot bitumen (coal tar or asphalt). Insulation board size is not to exceed 48”x48”.

No more roof board insulation should be installed than can be made weather-tight with the complete membrane system in the same day.

APPLICATION OF MEMBRANE

(Direct to Deck or Insulation)

Over the deck/insulation, immediately install three (3) plies of Durapax Coal Tar Coated Glass Fiber Felt, shingle fashion, lapping each sheet 24 2/3” over the preceding sheet. Each ply shall be set in a solid mopping of hot coal tar pitch and broomed into place.

End laps shall be no less than 10" and staggered between plies.

The total membrane system must be completed at one time.

All plies must be pressed (broomed) into the coal tar pitch while it is still hot to insure total adhesion. At no place shall ply touch ply.

Install 45º cant strips at the intersection of all vertical and horizontal surfaces, such as walls, equipment curbs, expansion joints, etc. All plies must extend to the top of the cant strip but no further than two (2) inches above its top edge. Care must be taken to assure that all plies conform tightly to the cant.

At all horizontal edge details, such as at gravel stops, raised edge perimeters, vent pipes, pitch pockets, etc., an organic envelope or some other type of pitch dam must be provided to avoid pitch migrating from between the plies. *Durapax does not accept responsibility for pitch drippage*.

APPLICATION OF PITCH

Interply moppings shall be continuous and not less than an average of 20 lbs. per 100 square feet.

Whether applied by mop or mechanical spreader, the coal tar pitch must be sufficiently hot to adhere the system. It must not, however, be heated to temperatures greater than recommended. (See Temperature Guidelines)

It is extremely important that all interply moppings be as thin as practical, but continuous without interruptions or voids. Heavy moppings can contribute to roof slippage on sloped roof designs. *Durapax will not be responsible for membrane slippage.*

Recommended bitumen application rates are offered only as a guide and can vary depending upon many factors. Actual experience by the contractor must be considered when estimating project requirements.

FLASHING INSTALLATION

Prior to installing the aggregate surface, all flashings must be complete.

Install composition base Flashing in accordance with the applicable specifications. Appropriate Flashing specifications and details can be found at www.durapax.com or by contacting Durapax directly at 610-579-9075.

Over the entire membrane surface, apply a uniform coating of hot coal tar pitch at an average rate of not less than 70 lbs. per 100 sq. ft. Allow the pour coat to cool.

The application of the top pour and surfacing must be installed within 14 days after the felts are applied. If the weather is hot and dry and there will not be any morning dew, then the felts may be left overnight ONLY. Should they be left overnight, the surface of the membrane must be glaze coated with hot coal tar pitch. The glaze coat must be without skips or pinholes.

Before top pouring the membrane with pitch, the roof membrane must be inspected to determine that all plies are lying smooth and foreign materials have been removed.

To obtain the desired top coating of pitch, it shall be applied either by pouring or through a mechanical applicator designed and regulated for this purpose. *Durapax will not be responsible for migration of the top pour and aggregate surfacing*.

MEMBRANE SURFACING

Preparation

Before proceeding with the placement of the overlay system, the roof membrane, flashings, penetrations, etc, must be completed.

It is recommended that the insulation overlay system be installed as soon as possible after the membrane is completed.

Application of Separator Sheet

Over the entire surface of the completed membrane, install a continuous layer of polyethylene (6 mil. minimum), lapping each sheet not less than twelve (12) inches over the preceding sheet.

Application of Board Insulation

Over the entire roof area, loose lay a 2 inch layer (min.) of Extruded Polystyrene Roof Board according to manufacturer's recommendation.

Fit all boards tightly, allowing no more than 3/8 inch between boards. Insulation should be cut and placed as necessary, to be not more than 3/4 inch from all cant strips and projections through the roof.

Filter Fabric Installation

Once the insulation boards have been placed, over the entire area, install a single ply of the specified filter fabric, lapping each sheet not less than twelve (12) inches over the preceding sheet.

Extend the fabric two (2) to three (3) inches above the top surface of the insulation at penetrations and the perimeter.

Installation of Pavers or Aggregate Surfacing

If stone ballast is used, immediately following the application of the fabric, install the stone ballast surfacing (ASTM D-448, Sizes No. 5 or No. 4) in amounts which completely cover the fabric. Typical coverage using No. 4 aggregate will yield approximately 12 lbs. per sq. ft. Under no conditions should less than 10 lbs. per sq. ft. be used.

Within four (4) feet of the roof's perimeter, penetrations, drains, or whenever the overlay insulation stops, install aggregate at a rate of approximately twenty (20) lbs. per sq. ft. In lieu of this heavier application of aggregate, concrete pavers, weighing not less than seventeen (17) lbs. per sq. ft. may be substituted.

MATERIAL PROTECTION

All materials shall be kept clean and dry prior to their installation. When stored outside or on a job site, materials shall be kept off the ground and adequately covered with tarpaulins.