

HYLOAD™ WS

TECH DATASHEET WELDED SEAM

PRODUCT DESCRIPTION

Hyload WS is a self-adhering, elastomeric sheet membrane, manufactured in a process that blends coal tar pitch with DuPont's Elvaloy® KEE, and is reinforced with dispersed polyester fibers. The membrane is compounded, calendered to thickness, and in a separate manufacturing process, the adhesive, release paper, and lay lines are added, completing the finished product. Two thickness are available: standard (75-mil) 60/15/75 and optional (90 mil) 75/15/90 product, (membrane thickness/adhesive thickness/total thickness).

Strength and redundancy are provided in the lap area. Placement of the lay line at 3" provides both an adhered and a welded portion within the 3" overlap of the membranes when they are installed. Hyload WS has a single 1 1/2" inch selvedge running along the entire 50' length of the membrane.

Hyload WS membranes are manufactured with trained personnel in a quality controlled environment. Both adhesive quality (SBS modified) and thickness are controlled and checked before material is shipped, ensuring correct application rates and thickness when installed.

The quality-controlled environment in the Hyload plant is in sharp contrast to traditional job site quality control where materials are heated and applied with unsophisticated equipment at the site. In the traditional methods, critical temperature considerations, as well as application rates, are controlled by workers performing multiple tasks in a difficult work environment.

Hyload WS combines the strength and integrity of traditional Hyload membranes with the convenience and flexibility of self-adhered and welded seam concepts to provide added environmental and application advantages.

Hyload WS is designed to be the surface weathering membrane in a self-adhered built-up assembly installed over insulation or other substrates, and is normally left in a smooth surface configuration. Coatings and other surface finishes are permitted for reflective and energy saving reasons.

Hyload WS is a product widely selected for hospitals, schools, nursing homes, offices, high rise buildings, and other environmentally sensitive projects. Applications on these facilities require specifiers to meet more stringent code and environmental requirements. Customer and designer sensitivity to job site conditions are directly addressed when self adhered membranes are used. Selecting Hyload WS and utilizing the self-adhered concept will eliminate the need for roofing kettles producing offensive odors, dangerous open flame, and continuously noisy equipment.

Hyload also offers additional products, enabling specifiers to design various multiple ply, self-adhered roof assemblies. Products include a base sheet/interply membrane and a vapor retarder/barrier. Refer to the individual Tech Data sheets for specifics.

Placing all equipment and materials in the work area is a concern of both designers and contractors, and can pose many difficulties for handling materials and equipment. Self-adhered products, including insulation adhesives, eliminate the necessity for much of the noisy, odorous, and dangerous equipment necessary in traditional applications, simplifying both the set-up and the application processes.

On industrial and commercial facilities where toughness and resistance to chemical attack are more of an issue than environmental concerns, the Hyload WS membrane offers an excellent performance history. In these applications, specifiers often select conventional BUR methods and apply one or two plies of Type IV or Type VI glass felts in hot asphalt followed with the Hyload WS self-adhered membrane as the finish ply. The number of inter-plies, the thickness of the finish ply, and other considerations, determine the warranties that are available from Hyload, Inc.

Once all hot applied materials are in place, the only equipment needed are a method of applying primer, a roller to exert 70 lbs. of pressure, knives, and a hot air welding mechanism with a hand held roller.

When seams on the membrane are welded, they provide a virtually impervious surface to protect against seam degradation by ultraviolet rays, moisture, environmental, chemical and fungal attack.

LIMITATIONS

Hyload WS can be applied over existing coal tar systems. A variety of attachment and installation options are available. Contact Hyload to discuss specific applications. Phased construction is only approved if HyBase SAM is used as the base/interply and the "T" Joints are caulked; or the two ply BUR installed as the base/interply has been glaze coated and squeegeed.

Vertical flashing must extend up to an approved mechanical termination point with the membrane installed in a strapped method. Hyload WS should only be applied when temperatures are 45°F and rising. Chemical welding is not approved. Chemicals may only be used for priming the membrane to facilitate the hot air welding when conditions require.

MATERIALS & COMPOSITION

Hyload WS is a coal tar elastomeric membrane.

COLOR: Black

SIZE: Rolls of 38" x 50' (158.3 sq. ft.)

EFFECTIVE COVERAGE: (145.1 sq. ft) Special sizes available on request.

WEIGHT: 85 lbs. Per roll. 75 mil 60/15/75 (standard size), packaged 20 rolls per pallet. 104 lbs. per roll and 90 mil 75/15/90 (optional size), packaged 12 rolls per pallet.

APPLICABLE STANDARDS

Hyload WS meets the requirements of Underwriters Laboratories for a Class A fire rating in various system configurations. Hyload WS has Factory Mutual Class 1-90 approval with various insulations. Other code approvals include the Southern Building Code Congress International and other regional codes. (For specifics, consult the Hyload Technical Department).

PHYSICAL PROPERTIES

Refer to the Physical Properties Chart within this Tech Data Sheet or in the Hyload Technical Manual.

CHEMICAL RESISTANCE

Hyload WS has been proven resistant to over 200 various types of chemicals used in manufacturing environments. For specific chemical resistance charts and data, contact the Hyload Technical Department.

TECHNICAL DATA

Hyload provides technical data as well as installation instructions, details and specification information to enable roofing contractors, engineers, architects, and specifiers to prepare project specifications. This information can be provided in various formats. Applicators may receive field training, as well as in-house training to become registered. Field inspections of the Hyload membrane may be performed by independent Sales Specialists and/or the Hyload Technical Department staff as part of the Hyload warranty program.

Preparation of Substrate

Substrates should be smooth, level, clean, and dry. Surfaces on which Hyload WS is to be adhered may have to be primed

HYLOAD
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with an approved quick drying primer. The exception being, when applying Hyload self adhered membrane to the surface of another Hyload self-adhered membrane. For this application it is not necessary or desirable to prime the Hyload membrane, but it must be clean and dry.

It is imperative that all of the primer be thoroughly dry prior to application of the membrane. Blisters in the applied membrane may occur if primer is not dry. Dead load capabilities of the deck and supporting structure must be sufficient to support the load of the new system. Dead level applications are acceptable when standing water, snow, and ice loads do not exceed the design limits of the structure or substrate.

Insulation

Hyload must approve insulation for use with the system being installed. Insulation manufacturer must designate insulation type as acceptable for use with self-adhered membranes. Fastening of the insulation must be per the insulation manufacturer's specifications, the project specifications, or Hyload specifications, whichever is more stringent. When Factory Mutual or Underwriters Laboratories standards are required, the specifications must reflect those requirements. Refer to the FM and UL published approvals guide or their latest supplement.

Membrane Installation

Hyload vapor retarder and barriers are specified with the Hyload WS product. Final applications can result in vapor protection only or as a component in an inverted roof assembly. Self-adhered or hot applied products offer some of the lowest perm ratings in the industry as vapor retarders or finish plies giving a method of protecting internal or external vapor drive.

Factory Mutual requires wood blocking and cants for both reroof and new construction applications. Hyload warranted assemblies require this detail unless otherwise approved in writing by the Hyload Technical Department. Wood blocking must be installed to the same height as the installed insulation + or - 1/8". Exceptions to this requirement must be approved in writing by the Hyload Technical Department.

InCold Applications

Hyload WS incorporates other Hyload self-adhered products such as HyBase SAM, HyBase SAM VR, or PMVB as a base sheet/interply or vapor retarder/barrier within the assembly design; refer to the individual Tech Data Sheets for additional information on these products and their use.

InHot Applications

Hyload WS must be installed over a minimum of one ply of Type IV or VI glass ply sheet, installed in Type III or IV hot asphalt as required by ASTM D312. Felts

must be glaze coated and squeegeed if phase construction is being done. When using approved nailed base sheets, they must have a minimum of one ply of Type IV glass ply mopped over the base when no insulation is specified in the assembly.

Hyload WS may be approved for installation directly over existing roofs. These applications are approved on a job-by-job basis after the condition of the existing roof assembly has been verified to be an acceptable substrate.

This system is normally finished with a smooth surface, with or without a coating. All seams (both side and end laps) must be hot air welded.

Simply overlapping and aligning the membrane along the painted lay line, while using the recommended installation procedures, attains seam integrity. Lay lines are painted along the adhesive edge of the membrane only and extend along the entire length of the membrane. The selvedge is located along the other side of the membrane and when placed on the lay line of an adjacent membrane, the lap includes both an adhered 1-1/2" wide inner part, and a weldable selvedge, 1-1/2" wide outer part, creating the overall 3" lap area.

Hand held or tractor type hot air welding tools must be used to secure the 1-1/2" welded portion of the seam. When using a hand held welding tool, a hand held roller is also used to apply pressure on the surface while performing the welding process. End Lap Splice Strip or Hyload 150E Cut Roll material must be welded over any and all exposed adhesive edges of the Hyload WS. A roller adequate to exert 70 lbs. of pressure is to be used over the entire membrane, including side laps and end laps. This external pressure permanently sets the adhesive.

Use of an appropriately sized generator for powering the welding equipment is essential. Verify equipment compatibility with the manufacturer of the welding equipment. Power variances during welding can cause false welds that can be costly for a contractor.

PRECAUTIONS

User must read product labels and material safety data sheets for health and safety precautions prior to use. Cold weather installations can be accomplished provided the CTEM, and the the surface it is applied to are kept warm and the temperature is 45° and rising.

AVAILABILITY

Hyload WS is available nationally. Contact the Hyload Corporate Sales Office for the name of the Hyload Sales Specialist in your area.

MAINTENANCE

Your local Hyload Sales Specialist can provide you with effective maintenance procedures which may vary, depending upon specific conditions. Periodic inspections, early repairs and preventive maintenance are all part of a sound roof program.

WARRANTY

Hyload makes several high performance product warranties available to its customers. Contact Hyload's Corporate Office directly for details.

TECHNICAL SERVICES

All questions relating to technical items not covered specifically in the Tech Data Sheet or the Hyload product literature should be referred directly to your local Hyload Sales Specialist.

This Hyload Tech Data Sheet provides general technical data and guidelines regarding the nature and uses of the Hyload WS membrane. This information is not intended, and should not be used, as a design or installation specification for any particular project. Neither the publication of this Tech Data Sheet nor any information contained herein constitutes or implies the acceptance by Hyload of any particular roof design, installation procedure, or roof component. This Tech Data Sheet is provided for general information purposes only. No statement contained herein is intended or shall be construed as an expressed warranty.

PHYSICAL PROPERTIES

Property	Test Method	Results
Elongation	ASTM D412	170%
Tensile Strength	ASTMD412	1600 lbs/in ²
TearStrength	ASTMD624	300 ppi
Density @ 70%		80 lbs/ft ²
Low Temperature Flexibility	37-GP-57M	Pass
WaterAbsorption	37-GP-56M	Lessthan0.1%

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