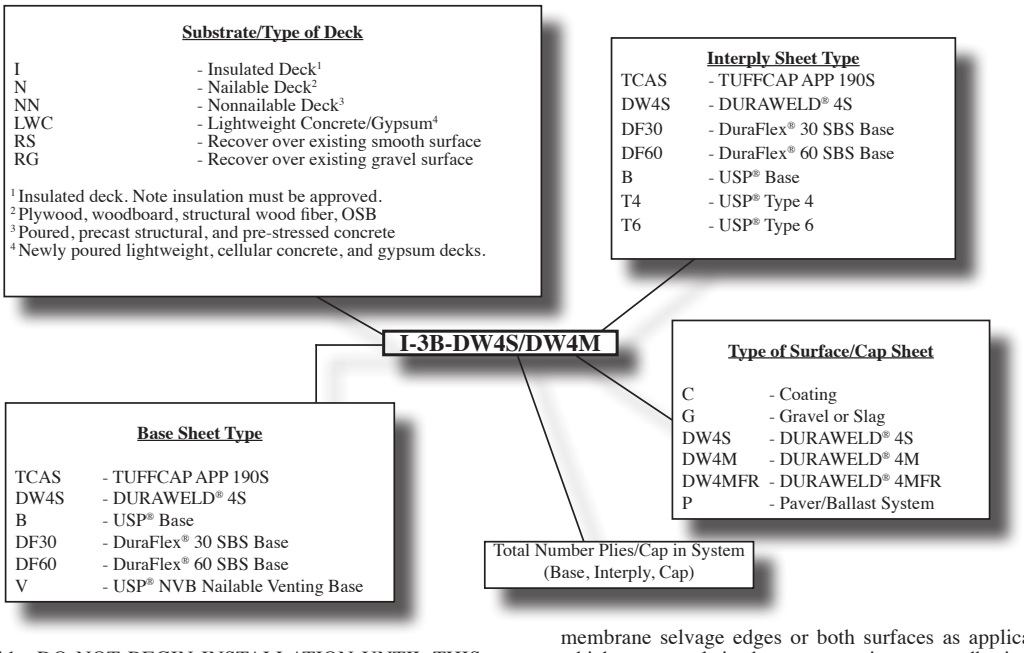
DURAWELD® APP
PREMIUM MODIFIED BITUMEN MEMBRANE

Application Specifications



GENERAL

Torch Safety: See reverse side. DO NOT BEGIN INSTALLATION UNTIL THIS INFORMATION IS READ, UNDERSTOOD AND IMPLEMENTED.

INSTALLATION

1. Do not install DURAWELD® APP torch grade membranes without careful review and implementation of all relevant safety and fire watch requirements including materials / combustible substrates review, LP-Gas equipment storage and handling guidelines, worker safety precautions and training. Refer to Part 5, "Safety Considerations and Warnings" for additional recommendations and safety precautions.
2. The surface over which the membrane is to be installed must be clean, smooth, and dry and prepared in accordance with this specification manual. Do not apply DURAWELD® APP membranes directly to a fresh asphalt glaze or flood coat or over base plies with excessive asphalt mopping bleed out at laps.
3. Do not install DURAWELD® APP torch grade membranes over base plies or materials installed with solvent based cold adhesives or mastics.
4. For slopes ¾" per foot (6.2 cm per meter) and over, DURAWELD®APP torch grade membranes must be run vertically, parallel to roof slope and back nailed in accordance with Part 10, "Steep Slope Requirements". For slopes less than 3/4" per foot (6.2 cm per meter), install cap sheet perpendicular to slope.
5. Cap sheet application: Install full width cap sheets, lapping 3" (7.6 cm) on the sides and 6" (15.2 cm) on ends. Stagger adjacent end laps a minimum of 18" (45.7 cm) apart. All side and end laps must be staggered from underlying plies.
6. Never apply DURAWELD® APP membranes by any method except welding with a propane torch or other equipment specifically designed for application of APP modified bitumen.
7. The coiled membrane must be unrolled approximately 10 ft. (3 meters), aligned, then the propane torch flame applied uniformly across the exposed back surface of the membrane and lap areas until the compound reaches the proper application temperature and exhibits a slight sheen. Be sure that there is complete burnoff of release films where present on the underside of the rolls, membrane selvage edges or both surfaces as applicable. Avoid over heating which may result in damage to or improper adhesion of the membrane. (The flame should be moved from side to side in the shape of an "L", applying about 75% of the heat to the membrane and 25% to the substrate or underlying plies including the lap area of the previously installed courses.) The membrane is slowly unrolled as heat is applied to ensure proper adhesion. When complete, re-roll the opposite end of the membrane and install in the same manner.
8. A minimum 3/8" (10 mm) asphalt flow-out must be obtained at all seam areas. Dry laps are not acceptable. To ensure the proper 3/8" (10 mm) flow of bitumen at the seam areas, a weighted roller may be used. Roller application should follow behind the torch no more than 4 ft. (1.2 m) nor less than 3 ft. (0.91 m) to be sure that the membrane will be at the proper temperature to produce proper flow. Hand rollers or "walking-in the seam" methods are also acceptable. Check all seams for full and uniform adhesion. Un-adhered seams must be lifted with a heated trowel and resealed by lightly torching the seam area.
9. Matching granules may be broadcast into the modified bitumen bleed out at seams while hot to enhance the finished appearance of the membrane. It is not required for issuance of a U.S. Ply Guarantee.
10. All end laps must be staggered a minimum of 18" (45.7 cm) so that no adjacent end laps coincide. If end laps fall in line or are not staggered the proper distance, a full width of DURAWELD® APP membrane must be installed over the end laps. End laps, flashing sheets and other seams formed over granule surfaces require pre-heating of the top surface of the underlying granule surface membrane to a point where the granules just begin to sink into, and the modified bitumen compound comes up through the granules to ensure proper seam construction and adhesion.
11. All laps must be parallel or perpendicular to the slope of the roof so that water is never flowing against the lap.
12. APP membranes must not be applied during adverse weather or without precautionary measures in temperatures below 45ºF (7.2ºC). Refer to Part 15 for additional information on Cold Weather Precautions.

SAFETY PRECAUTIONS

Installation of a roof system is a construction process. As with any construction process safety is a key element; therefore, U.S. Ply recommends that all applicable safety standards and good roofing practices be followed. Fire prevention is the applicator's responsibility.

WARNING

APPLICATION/USE OF THESE PRODUCTS MAY RESULT IN BURNS, AND/OR OTHER PHYSICAL INJURY. SURFACES WHICH COME IN CONTACT WITH THE MOLTEN PRODUCT MAY BECOME INFLAMED. CONTACT WITH MOLTEN ASPHALT MAY CAUSE BURNS.

STATEMENT OF PRACTICAL TREATMENT

In case of skin contact with molten bitumen, apply ice or other cold liquid compatible with skin. Get medical attention immediately.

GENERAL PRECAUTIONS

Read and understand U.S. Ply's specification manual before starting application. Follow all precautions and directions. Thoroughly train all personnel in the recommended safety procedures for use of kettles, asphalt mopping, propane torches, and for application of product. Fire prevention inspections should be conducted periodically during installation, with a final inspection being conducted upon completion of that day's work. Wear personal protective gear. Always use approved safety hard hat, goggles, heavy duty gloves, snug fitting clothing (long pants and long sleeved shirt) and boots. Thoroughly train all personnel on preventing and extinguishing fires. Thoroughly train all personnel in first aid procedures. Never allow contact between the heated surface of the product, hot asphalt, or open flame with hair, skin or clothing. Always comply with all applicable OSHA safety standards and fire codes. Avoid physical contact with product for at least one hour after application to surface. Never apply built-up or modified bitumen products directly over exposed conduits or pipes laying on the roof deck. Use extreme caution when working around equipment, such as gas lines or HVAC units, which have electrical and/or gas connections. Provide in the immediate work area at least one (1) ABC-rated FIRE EXTINGUISHER for each torching device.

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ABOUT U.S. PLY, INC.

U.S. PLY, INC. entered the commercial roofing industry in 1985, utilizing the company's 30 years as a pioneering leader in the development of APP modified bitumen technology. We offer high quality components and roofing systems that are designed to be "Dura-ble" and the right choice to help your roof stand up to the most extreme environmental elements for years to come.

Our roofing products are produced using 100% AMERICAN MADE raw materials. This means we use only the highest quality and standard of raw materials and manufacturing processes to ensure long term performance. U.S. PLY, INC. offers only high quality membranes and components and the systems are designed and tested for weathering, durability, and compatibility. They can be specified, installed, and maintained with confidence.

GREEN STANDARDS INFORMATION:

DuraWeld® APP contains a total of 8.5% recycled materials. The recycled materials are derived from recycled post-consumer and post-industrial plastics which averts disposal of plastics in landfills or commercial dumps. (See individual product data for details).
DuraWeld® APP modified bitumen membranes are FM Approved, FBC Approved, UL Classified and listed with Texas Windstorm (TDI) Insurance. DuraWeld® 4M APP and 4MFR APP are available in ULTRA WHITE reflective granule option. CRRC Rated, initial SRI = 104, initial reflectivity = 0.83, initial emissivity = 0.90.

ROOFING DESIGN

DURAWELD® APP modified bitumen membranes are manufactured from exclusive formulas using the highest quality materials available in the market today and have been the principle waterproofing components in U.S. Ply roof systems for over 30 years.

U.S. Ply has engineered and developed DURAWELD® APP (Atactic Polyproylene), torch applied modified bitumen membranes to meet or exceed the industry standards for high performance membranes.

U.S. Ply begins with prime grades of asphalt which are then modified with thermoplastic (APP) polymers. The result is a modified bitumen compound that demonstrates revolutionary waterproofing characteristics, extreme heat resistance, low temperature flexibility and excellent elongation properties. U.S. Ply then strategically adds reinforcements in the modified bitumen compound to incorporate additional performance characteristics into the membrane.

For information on the installation of modified bitumen membranes, please consult the current U.S. Ply Specification Manual. A copy of this manual is available upon request.

TORCH SAFETY INFORMATION

The manufacturer's safety and operating instructions provided with the torch system must be followed strictly. Inspect all torching equipment, fittings, LP gas cylinders, valve regulators, hoses, and all connections for damage and leaks. Never use a flame to check fittings and other equipment. Use soapy water only to check for leaks. Torches shall be equipped with a shutoff valve, pressure-release trigger and support stand or legs. Equipment shall be compatible with LP gas withdrawal system and shall be maintained in good operating condition. Contractor/user should consult equipment manufacturer for specific recommendation on specifications and usage. Do not allow torching devices to come in contact with flammable materials. The roofing surface, walls, abutments and all surrounding surfaces must be inspected prior to utilization of the torching device so that necessary precautionary measures may be taken. Keep torch flame moving at all times; failure to do so may result in ignition of surface and/or underlying materials. Avoid prolonged contact with heat sensitive metals such as lead, as overheating of these metal surfaces could ignite underlying flammable surfaces. Always use the base sheet as recommended by U.S. Ply specifications manual. Failure to do so is extremely hazardous as the base sheet provides an additional protective covering for underlying combustibles. Cant strips used at the roof/wall abutment must be composed of fire retardant material or protected from direct contract with the torch flame. Follow U.S. Ply's current roofing safety requirements, procedures, and specifications, which are available from Technical Services at 1-866-PUSH-PLY (866-787-4759). Application personnel must remain on the job site for a minimum of one (1) hour after completion of installation to inspect for any possible smoldering combustible material. Since fires can result hours after completion of work, periodical inspection thereafter must be made; the time and nature of which will vary depending on the size of the job; the nature of the application surface and abutments, and local code requirements. Note: U.S. Ply recommends the use of infrared thermometers, and a thorough inspection of areas where torching equipment has been utilized. Prior to leaving the job site the contractor must be certain that all chance of fire, including smoldering fire, has been eliminated. Never place a hot torching device on the roof surface, insulation or any other surface or object other than an acceptable stand or holder or fireproof surface. Never leave a lit torching device unattended. Never use a torching device to apply any material other than APP modified bituminous membranes and/or SBS modified bituminous membranes that are designed to be torch applied. Allow torching devices to cool completely to room temperature before removing from the roof.

Product Specifications

DURAWELD® APP Membrane	4S APP	4M APP	4MFR APP
ASTM Designation	**D6222 Type I, S**	**D6222 Type I, G**	**D6222 Type I, G**
Nominal Size of Roll	One (1) Square	One (1) Square	One (1) Square
Nominal Roll Weight	88 lb (40 kg)	105 lb (48 kg)	105 lb (48 kg)
Dimensions	39-3/8" x 32'9" (1m x 10m)	39-3/8" x 32'9" (1m x 10m)	39-3/8" x 32'9" (1m x 10m)
Membrane Thickness	3.8 mm	4.3 mm	4.3 mm
Application Method	Torch	Torch	Torch
Surfacing	Smooth	Granule	Granule
Function	Base/Interply/Cap	Cap	Fire Rated Cap
Post Consumer Recycled %	3.8 %	3.2 %	3.2 %
Post Industrial Recycled %	4.7 %	3.2 %	3.2 %
The sizes and weights listed are approximate, and are for unapplied rolls.			

U.S. PLY, INC.

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