



# SAFEWELD™ APP Modified Adhesive

With insurance regulations becoming more stringent concerning torch use, U.S. Ply, Inc. has developed SAFEWELD™ APP Modified Adhesive, a high performance, high solids, asphalt based polymer modified adhesive that contains a unique blend of specially formulated components that enhance elasticity, adhesion and waterproofing characteristics of the adhesive.

**Superior Elasticity, Adhesion and Waterproofing Characteristics** SAFEWELD™ APP Modified Adhesive exhibits a key “viscoelastic” characteristic during the curing phase. This means the viscosity varies as temperature and shear rates vary. Different levels of shear force are present between the substrate and the roofing membrane during different thermal expansion and contraction. Because of the specially formulated “viscoelastic” features, SAFEWELD™ APP Modified Adhesive exhibits a slower viscosity drop as shear increases. The result is the adhesive remains highly elastic while exhibiting a very low creep rate, using its fuller body to provide maximum contact area to both surfaces for superior adhesion and even greater waterproofing characteristics. SAFEWELD™ APP Modified Adhesive is specially formulated to bond SAFEWELD™ APP Cold Applied membranes to a variety of surfaces and base sheets. By combining the superior durability and heat aging characteristics of SAFEWELD™ with the highly elastic performance of SAFEWELD™ APP Modified Adhesive, U.S. Ply has produced one of the best and safest roofing systems available for your roofing needs.

## Safe and Easy to Install

SAFEWELD™ APP Modified Adhesive contains no “red label” ingredients, and can be applied safely and cleanly with either a notched squeegee or mechanical spray apparatus. • Using a mitered edge squeegee with notched blades allows application of the correct amount of adhesive every time • The squeegee saves you time, material and money by easily applying the correct amount of material in just one pass.

## “Fast-Tack” Feature

SAFEWELD™ APP Modified Adhesive contains a select blend of ingredients that enhances the tack time of the compound even before gelling. Some

adhesives tend to become “runny” and migrate to low spots leaving thin spots before membrane application. SAFEWELD™ APP Modified Adhesive “Fast-Tack” features ensures the adhesive will stay in place during application yet remain elastic during the life of your roof.



## Applicable Standards

SAFEWELD™ APP Modified Adhesive is listed and approved by the following agencies or code bodies: Underwriters Laboratories (UL), Factory Mutual (FM). Meets or exceeds the requirements of ASTM D-3019 Lap Adhesive used with Asphalt Roll Roofing, Type III.

## Application Instructions:

SAFEWELD™ APP Modified Adhesive shall be applied by spray, squeegee in a uniform layer at an approximate rate of 1.5 - 2 gallons per 100 sq. ft. (0.6 - 0.8 L/m<sup>2</sup>) when applied to base sheet. Do not apply excess amount of adhesive.

**Surface Preparation:** All surfaces to be adhered must be clean, dry and free from any foreign matter, such as oil, grease, dirt or any debris that could inhibit the bonding capabilities of the adhesive. On existing roofs, inspect roof deck condition – moisture in old roof may require complete removal of existing roof. Check local building codes – local building codes may require complete removal of existing roof. Check with manufacturer for details on cutting out and repairing blisters, buckles and raised edges for a smooth surface. Check all flashings, edges, drains, valleys and vents and repair as needed.

**Application:** Mechanically mix before application. Apply adhesive by sprayer, brush/roller or notched squeegee at a rate of 1.5 - 2 gallons per 100 ft<sup>2</sup> (0.6 - 0.8 L/m<sup>2</sup>) to structural concrete, Type G2 base sheet or APP modified asphalt membrane.

**Installation Method: Spray:** A Graco 45.1 pump, 120H AM Roof Pump or equivalent is recommended. Consult equipment manufacturer for optimum Psi, spray tip size, length of hose, number of spray guns, etc., to achieve uniform application. The adhesive sets by the evaporation of the solvent. **Squeegee:** When using a squeegee, it should have a ¼” (6 mm) serrations to apply a uniform, smooth, even coat without gaps, dry areas or bubbles.

**Brush/Roll:** Apply in a uniform, smooth, even coat without gaps, dry areas or bubbles.

**Attachment:** After applying adhesive unroll the membrane into the tacky adhesive, making sure that it is laying flat and making full contact with the adhesive. Set the U.S. Ply SAFEWELD™ APP (cold-applied) membrane immediately into the adhesive while avoiding adhesive application/contamination into the lap/seam areas. Side and end laps shall be heat welded using APP modified bitumen hot air welding techniques or torch welding techniques. Roll membrane to ensure full contact with adhesive, with a minimum 20 lb. (9 kg) steel roller. Heat welding technique should obtain a continuous 3/8" bead of molten modified bitumen visible at all laps/seams after application.

**Roof Slope:** The roof must have positive drainage. Use adhesive on roof slopes up to 3" per foot.

**Compatibility & Limitations:** Do not use on wet or damp surfaces, directly over wood or on surfaces previously covered with coal tar products. Do not use with modified bitumen membranes that have a plastic release film backing or foil facer. Do not use over solvent sensitive insulation.

**Temperature Range:** Apply only when temperatures are 45°F (7.2° C) and rising. Cold weather will cause product to stiffen, making application difficult. Store 24 hours at room temperature prior to application. Do not heat container or attempt to thin this product. Not recommended for application on substrates that exceed 140°F (76° C).

**Storage/Handling & FIRE WARNING:** SAFEWELD™ APP Modified Adhesive is COMBUSTIBLE and should always be kept away from heat, open flame and any source of ignition. Observe normal safeguards for storing and handling of this product prior to and during application. Do not allow adhesive to freeze. **Clean Up:** Keep containers covered when not in use. Clean equipment and over spray with kerosene, mineral spirits or petroleum naphtha. Clean hands with waterless hand cleaner.

**Caution** SAFEWELD™ APP Modified Adhesive contains petroleum distillates. **Ventilation** – use with adequate ventilation and close containers when not in use. If TLV (Total Level of Vapor) is exceeded, respirators are required (NIOSH/MSHA). Inhalation of high vapor concentration may result in headaches and/or dizziness.

Remove individual to fresh air and administer oxygen if breathing is difficult. If breathing has stopped, administer artificial respiration, keep victim warm and order emergency medical attention immediately.

**Eye Contact** - Rinse immediately with water for 15 minutes and seek medical advice. **Personal Protection** - Irritation may result from prolonged or repeated contact with skin. Wear chemical resistant gloves, protective goggles and protective clothing, if needed. **Fire Protection** – SAFEWELD™ APP Modified Adhesive is **COMBUSTIBLE** and should always be kept away from heat, open flame and any source of ignition. **Waste Disposal** – Empty containers must be disposed of in an approved landfill in accordance with local, state and federal regulations.

**Limited Warranty** U.S. PLY, INC. ("SELLER") WARRANTS THAT, AT THE TIME OF DELIVERY, THE MATERIAL DELIVERED SHALL CONFORM TO SELLER'S SPECIFICATIONS THEREFOR FREE AND CLEAR OF ALL LIENS AND ENCUMBRANCES. SELLER DOES NOT MAKE, AND IS NOT TO BE HELD LIABLE FOR, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE OR FOR ANY OTHER WARRANTY OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, EXCEPT AS SET FORTH IN THE PRECEDING SENTENCE. IF ANY MATERIAL FAILS TO CONFORM TO THE FOREGOING WARRANTY, SELLER SHALL REPLACE SUCH NON-CONFORMING MATERIAL, PROVIDED THAT SUCH MATERIAL HAS BEEN HANDLED AND INSTALLED IN ACCORDANCE WITH SELLER'S PUBLISHED HANDLING PROCEDURES AND INSTALLATION SPECIFICATIONS. THIS WARRANTY DOES NOT APPLY TO, AND SELLER SHALL NOT BE LIABLE FOR, LABOR COSTS OR ANY OTHER DAMAGES RESULTING FROM IMPROPER OR FAULTY INSTALLATION OF MATERIAL OR RESULTING FROM FAILURE OF THE MATERIAL ITSELF. REGARDLESS OF THE THEORY ON WHICH A CLAIM MAY BE MADE INCLUDING, WITHOUT LIMITATION, NEGLIGENCE, CONTRACT, BREACH OF WARRANTY, STRICT LIABILITY IN TORT, MISREPRESENTATION, OR OTHERWISE, WITH RESPECT TO MATERIAL DELIVERED OR FOR FAILURE TO DELIVER ANY MATERIAL, NO CLAIMS OF ANY KIND WHATSOEVER SHALL BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE MATERIAL IN RESPECT OF WHICH DAMAGES ARE CLAIMED. **IN NO EVENT SHALL SELLER BE LIABLE FOR: INCIDENTAL, CONSEQUENTIAL, SPECIAL, INDIRECT, OR PUNITIVE DAMAGES.** FAILURE OF BUYER TO GIVE WRITTEN NOTICE OF CLAIM WITHIN SIXTY (60) DAYS AFTER DELIVERY OF MATERIAL SHALL CONSTITUTE A WAIVER BY BUYER OF ALL CLAIMS WITH RESPECT TO SUCH MATERIAL.

**PRODUCT DATA: SAFEWELD™ APP Modified Adhesive**

Weight: 9.5 lbs. per gallon  
VOC (max): < 200 grams/liter  
Non-volatile content: 80% minimum  
SETA Flash Point: >105°F (40.5°C)  
Sizes: 5 gal/18.9 L or 350 gallon Totes/1,324.9 L

**U.S. PLY, INC.**

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