

TREMCO BARRIER SOLUTIONS



FREQUENTLY ASKED QUESTIONS

Q. WHAT ARE THE MAIN BENEFITS OF THE ENVIRO-DRI WEATHER-RESISTANT BARRIER SYSTEM?

- A. THERE ARE THREE MAIN BENEFITS OF THE SYSTEM. 1) TO PROTECT THE SHEATHING SYSTEM, WALL CAVITY AND INTERIOR FROM LIQUID MOISTURE; 2) RESIST THE PASSAGE OF UNCONDITIONED AIR INTO THE HOME AND CONDITIONED AIR OUT OF THE HOME, THROUGH THE SHEATHING SYSTEM; 3) ALLOW FOR THE PASSAGE OF MOISTURE VAPOR FROM WALL CAVITIES, PREVENTING THE BUILD-UP OF MOISTURE WITHIN THE WALLS

Q. HOW IS IT A BETTER PERFORMING SYSTEM THAN HOUSEWRAPS?

- A. THE FIRST AND MOST IMPORTANT DIFFERENCE BETWEEN THE ENVIRO-DRI SYSTEM AND HOUSEWRAPS IS THAT, AS A LIQUID-APPLIED MEMBRANE, THE ENVIRO-DRI SYSTEM PROVIDES A UNIFORM, UNINTERRUPTED BARRIER AGAINST LIQUID MOISTURE AND THE UNCONTROLLED PASSAGE OF AIR, WHILE ALLOWING MOISTURE VAPOR TO ESCAPE FROM THE SHEATHING SYSTEM AND WALL CAVITIES. THERE ARE NO STAPLES OR NAILS THAT PUNCTURE THE SYSTEM, AS ARE REQUIRED WITH HOUSEWRAPS. EVERY STAPLE PUNCTURE, EVERY NAIL HOLE IN HOUSEWRAP CREATES A PATH FOR WATER AND AIR ENTRY...WATER AND AIR THAT COULD REACH THE INTERIOR OF YOUR HOME, POTENTIALLY INCREASING YOUR ENERGY COSTS AND DECREASING YOUR HOME'S VALUE IN ADDITION, HOUSEWRAPS TEAR AND RIP, WHICH RENDER THE SYSTEM INEFFECTIVE. ENVIRO-DRI, ON THE OTHER HAND, IS PERMANENTLY AND COMPLETELY ADHERED TO THE SHEATHING SYSTEM. WATER SIMPLY CANNOT FLOW OR SEEP BETWEEN THE MEMBRANE AND THE SHEATHING, UNLIKE TRADITIONAL MECHANICALLY-FASTENED HOUSEWRAPS.

Q. WHAT'S THE DIFFERENCE BETWEEN AN AIR BARRIER, A WATER-RESISTIVE BARRIER AND A VAPOR BARRIER?

A. LET'S START WITH WHAT WE ARE...TECHNICALLY, A WEATHER-RESISTANT BARRIER SYSTEM.

BY DEFINITION, ACCORDING TO THE AIR BARRIER ASSOCIATION OF AMERICA (ABAA) (www.airbarrier.org), WATER-RESISTIVE BARRIERS "ARE MATERIALS THAT ARE USED TO KEEP LIQUID WATER FROM ENTERING THE BUILDING ENCLOSURE." A WEATHER-RESISTANT BARRIER SYSTEM, ON THE OTHER HAND, IS COMPOSED OF MULTIPLE MATERIALS (IN A BROAD SENSE, INCLUDING SIDING MATERIALS, WINDOW AND DOOR FLASHING MATERIALS, AND SHEATHING) WITH THE OVERALL OBJECTIVE OF SHEDDING AND DIVERTING LIQUID MOISTURE FROM ENTERING THE INTERIOR OF THE BUILDING. WE PREFER THE USE OF THE PHRASE 'WEATHER-RESISTANT BARRIER' TO 'WATER-RESISTIVE BARRIER' SINCE WE COMBINE FLASHING AND COUNTERFLASHING WITH A FIELD MEMBRANE AND JOINT SEALER TO EFFECTIVELY SERVE AS A MORE COMPLETE *SYSTEM* THAN THAT OF A SIMPLE WATER-RESISTIVE BARRIER.

ONCE LIQUID MOISTURE IS DEFLECTED FROM THE EXTERIOR SURFACE OF THE SHEATHING, AN EFFECTIVE WEATHER-RESISTIVE BARRIER SYSTEM WILL ALSO CONTROL MOISTURE FLOW BY CAPILLARY AND DIFFUSION ACTION, AND WILL MINIMIZE MOISTURE ABSORPTION INTO THE WALL. IN THE ENVIRO-DRI SYSTEM, WE PROVIDE THESE PROTECTIONS THROUGH THE USE OF FLASHINGS AND COUNTERFLASHINGS, JOINT SEALER AND FIELD MEMBRANE.

A VAPOR BARRIER IS DESIGNED TO PREVENT THE FLOW OF WATER VAPOR THROUGH A MATERIAL. VAPOR BARRIERS HAVE VERY LOW PERMEABILITY RATINGS, WHICH CAN BE DETRIMENTAL TO THE ABILITY OF A BUILDING TO DRY TO EITHER THE INSIDE OR OUTSIDE, DEPENDING ON WHERE THE VAPOR BARRIER IS PLACED.

AN AIR BARRIER SYSTEM IS A COMBINATION OF MATERIALS AND INSTALLATION TECHNIQUES DESIGNED TO PREVENT THE PASSAGE OF AIR INTO AND OUT OF A BUILDING ENCLOSURE. THE ENVIRO-DRI SYSTEM CAN BE INCLUDED AS PART OF AN AIR BARRIER SYSTEM, BUT IS NOT AN AIR BARRIER IN AND OF ITSELF. AIR BARRIERS ARE A CRITICAL PART OF THE BUILDING ASSEMBLY IN THAT AIR BARRIER SYSTEMS RESTRICT THE FLOW OF AIR, IN WHICH MOISTURE VAPOR IS PRESENT. BY PREVENTING THE FLOW OF AIR, THE UNRESTRICTED FLOW OF MOISTURE VAPOR IS ALSO MINIMIZED, A KEY FACTOR IN IMPROVING THE COMFORT LEVEL OF THE HOMEOWNER. OTHER BENEFITS OF RESTRICTING AIR FLOW IS IMPROVED INDOOR AIR QUALITY AND INCREASED ENERGY EFFICIENCY OF THE STRUCTURE.

TO GIVE AN EXAMPLE OF THE PERFORMANCE DIFFERENCE BETWEEN EFFECTIVELY BLOCKING AIR EXCHANGES VERSUS VAPOR EXCHANGES (AS MEASURED IN PERMS) IN AN AVERAGE HOME, CONSIDER THIS:

IN A 2800 SQUARE FOOT HOME WITH 8' CEILINGS AND .5 AIR EXCHANGES PER HOUR, THE MOISTURE FLOW FROM WATER VAPOR IS EQUIVALENT TO LESS THAN 5 GALLONS OF WATER. BY COMPARISON, THE MOISTURE FLOW FROM UNMANAGED AIR EXCHANGES IS 430 GALLONS -- 95 TIMES GREATER!

Q. DOES THE ENVIRO-DRI WEATHER-RESISTANT BARRIER SYSTEM ALLOW THE SHEATHING MATERIAL TO BREATHE? WILL IT CAUSE MY OSB TO ROT? HOW DO I KNOW YOUR SYSTEM WORKS AS DESCRIBED?

A. THE ENVIRO-DRI FIELD MEMBRANE HAS A PERM RATING OF ABOUT 12, WHICH IS COMPARABLE TO MANY HOUSEWRAP PRODUCTS, LIKE TYPAR®. THE ENVIRO-DRI FIELD MEMBRANE HAS A HIGHER PERM THAN GRADE D BUILDING PAPER (5), AND LOWER THAN TYVEK® (58). THE KEY POINT IS THAT THE PERMEABILITY OF THE ENVIRO-DRI FIELD MEMBRANE WILL PERMIT WATER VAPOR THAT MAY GET INTO THE WALL SYSTEM TO BREATHE TO THE INSIDE OR TO THE OUTSIDE, DEPENDING ON WEATHER CONDITIONS.

THE ENVIRO-DRI SYSTEM HAS ALSO BEEN RIGOROUSLY TESTED UNDER THE AC 212 PROTOCOL, WHICH INCORPORATES 8 DIFFERENT PERFORMANCE TESTS FOR WATER-RESISTIVE BARRIERS OVER EXTERIOR SHEATHING. THE SYSTEM PASSED ON ALL EIGHT TESTS, AND HAS RECEIVED ITS CODE EVALUATION REPORT FOR THE ENVIRO-DRI SYSTEM.

Q. DOES THE SYSTEM PROVIDE ANY ENERGY SAVINGS?

A. WE HAVE NOT YET QUANTIFIED THE POTENTIAL ENERGY SAVINGS RANGES FOR HOMES ON WHICH WE HAVE INSTALLED ENVIRO-DRI, BUT WE ANTICIPATE THAT AT ENERGY SAVINGS WILL PRESENT THEMSELVES ON AT LEAST TWO FRONTS: ONE, BY PROVIDING AN EFFECTIVE WEATHER-BARRIER TO THE EXTERIOR SHEATHING SYSTEM, MOISTURE IS RESTRICTED FROM ENTERING INTO THE BUILDING SYSTEM. BY PREVENTING MOISTURE INTRUSION, THE HOME'S ENVIRONMENTAL SYSTEMS (HEATING, VENTILATION AND AIR CONDITIONING) WILL OPERATE MORE EFFICIENTLY; SECOND, BY SEALING THE SHEATHING SYSTEM AT THE VERTICAL AND HORIZONTAL JOINTS, WE ANTICIPATE A REDUCTION IN THE NUMBER OF AIR EXCHANGES FOR THE BUILDING, AGAIN INCREASING THE ENERGY EFFICIENCY OF THE BUILDING.

Q. WHY A LIQUID SYSTEM? WHY ASPHALT? WON'T ASPHALT BE A FIRE HAZARD? DO THE ASPHALT SMELLS SEEP INTO THE HOUSE?

A. TREMCO BARRIER SOLUTIONS HAS OVER A QUARTER CENTURY OF ASPHALT EMULSION TECHNOLOGY EXPERIENCE. OUR EXPERTISE, COMMERCIALIZED IN THE INDUSTRY-LEADING TUFF-N-DRI® AND WATCHDOG WATERPROOFING® BRANDS, IS IN PREVENTING MOISTURE FROM ENTERING THE HOME THROUGH THE FOUNDATION WALLS. WE'VE TAKEN THAT EXPERTISE AND EXTENDED THE CHEMISTRY OF ASPHALT EMULSIONS TO CREATE A SYSTEM THAT COMBINES OUR PRODUCT DEVELOPMENT AND MARKET KNOWLEDGE WITH THE INSTALLATION AND MOISTURE MANAGEMENT EXPERIENCE OF OUR CONTRACTORS TO DELIVER A SYSTEM THAT PROVIDES A SYSTEM THAT PROVIDES IN-PLACE PERFORMANCE THAT IS FAR SUPERIOR TO AVAILABLE ALTERNATIVES, LIKE HOUSEWRAPS.

AS A LIQUID-APPLIED INSTALLATION, THE ENVIRO-DRI SYSTEM PROVIDES A PERMANENT, COMPLETELY ADHERED AND EFFECTIVE BARRIER AGAINST MOISTURE INTRUSION. ONCE THE MEMBRANE IS INSTALLED, IT WILL REMAIN ON THE WALL AS LONG AS THE WALL IS IN PLACE. IF THE EXTERIOR CLADDING SYSTEM IS EVER DAMAGED OR REMOVED, THE LIQUID-APPLIED ENVIRO-DRI SYSTEM WILL REMAIN IN PLACE, PROTECTING THE SHEATHING SYSTEM.

IN ADDITION, SINCE IT IS PERMANENTLY ADHERED AS SOON AS IT CURES, DAMAGE BY SUBSEQUENT TRADES (SIDERS, ETC.) IS MINIMAL, AND THERE IS NO NEED TO SCHEDULE REPAIRS TO THE SYSTEM BEFORE THE EXTERIOR CLADDING SYSTEM IS INSTALLED.

ASPHALT HAS BEEN USED EFFECTIVELY IN BUILDING MATERIALS FOR DECADES (SHINGLES, WATERPROOFING, BUILDING PAPER, FELT, ETC.). IT IS A DURABLE, STABLE AND LONG-LASTING MATERIAL THAT HAS BEEN PROVEN TO WORK. AS FOR THE ENVIRO-DRI SYSTEM, BEING ASPHALT-BASED, INCREASING THE SEVERITY IN THE EVENT OF A HOUSE FIRE, KEEP IN MIND THAT BUILDING PAPER AND 15# FELT HAVE A MUCH HIGHER CONCENTRATION OF ASPHALT THAN THE ENVIRO-DRI FIELD MEMBRANE AT ITS RECOMMENDED INSTALLATION THICKNESS. IN ADDITION, SINCE IT IS AN EMULSION, THE LIKELIHOOD THAT THE MEMBRANE WILL EVER BE THE PRIMARY SOURCE OF IGNITION IN A HOUSE FIRE IS EXTREMELY LOW.

FINALLY, ANY ODORS EVIDENT AT THE TIME OF INSTALLATION ARE TEMPORARY, AND WILL DISAPPEAR AS THE MEMBRANE AND JOINT SEALANT CURES.

PRODUCTS WITH SIMILAR CHEMISTRY HAVE BEEN USED FOR YEARS IN THE COMMERCIAL INDUSTRY, ON BUILDINGS AND INSTITUTIONS WHERE HEALTH AND SAFETY ARE OF HIGHEST PRIORITY. FOR EXAMPLE, CHILDREN'S HOSPITAL OF WISCONSIN, THE GULF COAST MEDICAL CENTER IN FT. MYERS, FLORIDA, AND THE NEEDHAM PUBLIC LIBRARY IN NEEDHAM, MASSACHUSETTS, HAVE ALL SELECTED TREMCO COMMERCIAL SEALANT'S EXO-AIR MEMBRANE TO PROVIDE WEATHERIZATION SOLUTIONS FOR THEIR BUILDINGS.

Q. HOW LONG CAN THE SYSTEM REMAIN EXPOSED TO UV RAYS?

A. THE ENVIRO-DRI WRB SYSTEM CAN REMAIN EXPOSED TO UV FOR UP TO 4 MONTHS. YOU MAY SEE SOME FINE LINES ('CRAZING') IN THE FIELD MEMBRANE AFTER THE PRODUCT HAS CURED; THESE FINE LINES ARE NATURAL AND DO NOT AFFECT THE OVERALL PERFORMANCE OF THE SYSTEM.

Q. CAN THE SYSTEM BE USED BEHIND ALL TYPES OF CLADDING SYSTEMS? ON WHAT TYPES OF SHEATHING CAN IT BE APPLIED?

A. AS A MODIFIED ASPHALT EMULSION, ENVIRO-DRI WRB SYSTEM CAN BE USED BEHIND ALL TYPES OF CLADDING SYSTEMS. IN FACT, AS A FULLY-ADHERED LIQUID-APPLIED MEMBRANE, THE ENVIRO-DRI WRB SYSTEM ELIMINATES THE REQUIREMENT OF A SECONDARY WATER-RESISTIVE BARRIER (BUILDING PAPER OR 15# FELT) OVER THE SHEATHING SYSTEM AND BEHIND BRICK, STONE AND STUCCO.

ENVIRO-DRI WRB SYSTEM HAS BEEN TESTED AND APPROVED FOR USE ON ORIENTED-STRAND BOARD (OSB), PLYWOOD SHEATHING AND WOOD FIBER BOARD.

Q. WILL THE MEMBRANE STICK TO HAMMERS OR LADDERS WHEN THE EXTERIOR CLADDING SYSTEM IS INSTALLED? WILL THE MEMBRANE CURE AROUND NAIL HEADS?

A. FULL CURE TIME FOR THE ENVIRO-DRI FIELD MEMBRANE IS TYPICALLY LESS THAN AN HOUR. AT THAT POINT, MEMBRANE WILL NOT STICK TO LADDERS OR OTHER TOOLS.

THE MEMBRANE IS NOT SELF-HEALING; IT WILL NOT CONSTRICT AROUND NAIL HEADS AND SEAL, PER SE. HOWEVER, AS THE MEMBRANE IS DIRECTLY APPLIED TO THE SHEATHING, ANY NAIL PENETRATIONS THROUGH THE MEMBRANE WILL CAUSE THE MEMBRANE TO ADHERE TO THE NAIL ITSELF.

Q. WILL THE BLACK COLOR CAUSE THE INSIDE OF MY HOUSE TO HEAT UP IN THE SUMMER?

A. NO. ONCE THE EXTERIOR CLADDING SYSTEM IS INSTALLED, THE ENVIRO-DRI WRB SYSTEM WILL NO LONGER BE ABLE TO ABSORB RADIANT HEAT FROM THE SUN.

Q. IF WATER SHOULD TEMPORARILY GET BEHIND A BRICK OR STUCCO FAÇADE AND POOL AT THE BOTOM OF THE WALL, WILL THAT HYDROSTATIC HEAD PRESSURE CAUSE THE ENVIRO-DRI MEMBRANE TO LEAK? WILL WIND-DRIVEN RAIN CAUSE THE MEMBRANE TO FAIL IF EXPOSED DIRECTLY TO THE ELEMENTS PRIOR TO EXTERIOR CLADDING SYSTEM BEING INSTALLED?

A. NO. FIRST, A PROPERLY CONSTRUCTED MASONRY OR STUCCO WALL SHOULD HAVE WEEPS, DESIGNED TO PROVIDE AN AVENUE FOR MOISTURE TO ESCAPE FROM BEHIND THE WALL. ABSENT OF THOSE WEEPS, HOWEVER, THE ENVIRO-DRI FIELD MEMBRANE HAS A HYDROSTATIC HEAD RESISTANCE IN EXCESS OF 22 COLUMN INCHES OF WATER...EQUIVALENT TO A WIND PRESSURE OF 200 MPH!

Q. IS THIS SYSTEM WARRANTED?

A. THE SYSTEM COMES WITH A PRODUCT WARRANTY TO THE BUILDER FOR A PERIOD OF 10 YEARS FROM THE INSTALL DATE. THE WARRANTY COVERS THE REPLACEMENT OF SYSTEM COMPONENTS, SHOULD FAILURE OF THOSE SYSTEM COMPONENTS BE PROVEN TO BE THE CAUSE OF LEAKS THROUGH THE ENVIRO-DRI WRB SYSTEM.

Q. DOES THE PRODUCT COME IN ANY OTHER COLOR THAN BLACK?

A. AT THIS POINT, NO. IF THE MARKET DEMANDS OR WILL ACCEPT A PRODUCT OF COLOR, AND IS WILLING TO PAY FOR THAT FEATURE, TBS WILL INVESTIGATE ADDING A COLOR TO THE ENVIRO-DRI WRB LINE.