



Application Guidelines for

ECOSEAL™

WATER-BASED ELASTOMERIC SEALANT



*A Component of the Knauf Insulation & Sealing System**

*To be used with Knauf EcoBatt® Insulation or Premium Blowing Insulation

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What you need to know before you start.

Knauf Insulation EcoSeal™, the latest technology in home energy solutions, is a fast drying, water-based elastomeric spray that seals penetrations and joints in the building envelope, including exterior walls, attics and floors. EcoSeal is installed with a simple airless sprayer. When it is installed, it dries to a flexible tough film with great bond strength, low odor and is extremely low in V.O.C.'s. EcoSeal should be used with Knauf Insulation EcoBatts® or Knauf Premium Blowing Insulation. Together, they are known as the KISS™ System (Knauf Insulation & Sealing System). The KISS System forms an effective, continuous and affordable air and thermal barrier for the building envelope. For training, go to www.knaufinsulation.us.

- EcoSeal should be protected from freezing. It can be applied from 20° to 115° F as long as the sealant is fluid in the bucket. It should be stored in a dry location with a temperature between 35° and 120° F.
- If EcoSeal does freeze, it must be allowed to thaw completely and be above freezing when sprayed. Do not attempt thawing by mixing, stirring, blending or agitating.
- EcoSeal is safe to spray and dries quickly. It does not involve mixing hazardous chemicals at the jobsite nor does it generate hazardous off-gassing during cure. Other trades may stay on site.
- EcoSeal cleans up with water, no chemical solvents are necessary.
- EcoSeal should be installed after framing inspection. It should be done in conjunction with window/door sealing and installation of fire caulking, prior to insulating.
- EcoSeal should be applied to clean, dry surfaces, free from oils, dirt and foreign matter that would interfere with good adhesion.



What you need to EcoSeal

Knauf Insulation has collected all the equipment that contractors will need to start sealing immediately in a convenient kit. The kit includes:

- A GRACO Ultra Max 795 Airless Sprayer with 50 feet of hose
- A 6 foot whip hose
- Spray gun
- Two nozzle extensions (20" and 30")
- Tip guard and two application tips
- Hose reel
- Digital display
- Spray adapter for 2 hoses

Replacement parts and other accessories can be purchased at many paint supply stores. In addition, an adapter is available to enable the sprayer to utilize two hoses. You will also need wrenches, bottle brushes, extra empty buckets and water for clean up.



Sprayer components: A. Extenders and spray gun, B. Digital display, C. Nozzle and tip, D. Sprayer with hose reel and 50 feet of hose, E. 6 foot whip hose.



Before spraying EcoSeal

1. Centrally locate the airless sprayer.
2. Check spray hose for proper length.
3. Arrange all necessary hand tools, equipment and accessory items (wrenches, brushes, drywall knife, paper towels, utility knife, etc..)
4. Bring in 2 five gallon pails of fresh water for cleanup.
5. Bring in an empty five gallon bucket for cleanout of nozzles and hose.
6. Connect required extensions/nozzles. A size .013 tip is recommended for most applications. Colder temperatures may require changing to a larger size. Try them sequentially (.013, .015, .017 and .019) until the desired bead is attained.
7. Connect to power source.
8. Lower intake into the EcoSeal bucket.
9. Flush machine and hose of water remaining in lines from previous cleanup.
10. Set PSI lever to $\frac{3}{4}$ of maximum pressure. Recommended pressure: 1800-2400 PSI.

Applying EcoSeal (See Knauf EcoSeal Scope of Work)

Place the wings of the tip guard directly against the framing members with the nozzle opening pointing directly into the gap or seam to be filled with the wings of the tip guard parallel to the direction you will be moving.

1. Apply EcoSeal to all vertical seams/joints in framing moving sequentially around each individual room.
2. Adjust air pressure level to lower or higher level depending on flow of material through nozzle. A small stream of product indicates not enough pressure. Splattering of the material indicates that the pressure is too high.
3. Apply EcoSeal to all horizontal seams/joints in framing.
4. Apply EcoSeal at the seam between the double plates at the top plate line.
5. Apply EcoSeal at the junction between the bottom plate and the subfloor/slab. This application should always be done last.

6. Excess EcoSeal material should be removed from the surface of the top plate, wall tee and all multiple studs using the rubber squeegee so as to not interfere with drywall. Excess material can be used for touch-up. Do not return EcoSeal to the bucket.
7. Each room should be completed prior to moving to the next
8. Make sure no EcoSeal remains on any finished surface. Wipe any uncured EcoSeal off with a damp rag prior to material drying.
9. If you are installing the EcoSeal from the attic to all ceiling penetrations, drywall joints and junctions of drywall to the top plates, start from the outside edge of the attic area and work towards the center. An angled nozzle extension will make this application much easier. Segment the attic into sections and complete each section prior to moving to the next.
10. Certain applications may require the angled nozzle extension in order to achieve the correct nozzle angle.

Check your work

1. Walk the entire structure checking for missed applications or areas needing touchup.
2. Complete/repair as necessary

Clean up

Jobsite

1. Clean up before curing. Uncured material can be removed with water and cloth. Cured materials need to be mechanically removed. EcoSeal disposal should be treated in the same manner as the disposal of latex paint.
2. Make sure no gobs of EcoSeal remain on the floor surface. Use drywall knife to remove.
3. Check all areas that receive drywall to make sure no excess EcoSeal will interfere with the installation of the wallboard.
4. Remove any EcoSeal from finished surfaces such as windows, etc.

Machine and equipment

It is not necessary to clean the machine, hoses etc. between consecutive jobs to be installed within 48 hours. When the machine will not be used within 48 hours, take the following steps for proper clean up. Cleanup is most easily accomplished back at your shop where there is a source of running water.

1. Remove EcoSeal bucket from under the airless sprayer and replace with a bucket of clean water.
2. Turn on machine and purge lines until all EcoSeal is evacuated and water flows freely.





3. Turn off machine and bleed pressure from hose.
4. Unscrew suction intake and remove the screw on filter from the bottom of the intake and clean. Thoroughly clean the outside and interior of the intake pipe being careful not to lose the 3 part (ball bearing, flat disc and ball bearing holder) assembly that sits in the top portion of the intake. Additionally, do not lose the nylon washer that sits beneath the assembly. When cleaned thoroughly, reattach intake to the sprayer.
5. Remove, clean and reinstall main sprayer filter.
6. Clean EcoSeal from the exterior surface of all nozzles, tips and extensions.
7. Lower the clean intake into a bucket of clean water.
8. Turn machine back on and flip the lever on the airless sprayer to the recirculation mode and flush the machine until clear.
9. At least weekly, it is a good idea to flush the lines and machine with mineral spirits as final precaution.
10. Clean residue from exterior surface of sprayer and hose as necessary.

NOTE: Knauf Insulation recommends the used of filtered mechanical ventilation for fresh air makeup.

EcoSeal Scope of Work Checklist

Section 1 - Basic exterior and knee wall coverage

Junction of bottom plate and subfloor/slab
Junction of bottom plate and exterior sheathing or kneewall backing
Seam between double 2 x 4's at top plate
Junction of top plate and exterior sheathing or kneewall backing
Corner tees and intersecting wall tees
Seams in exterior sheathing or kneewall backing
Seams in jack and king studs or any multiple stud seams
Seams around headers
Seams at band joists in areas between main floors
Seams in subfloor above non-conditioned spaces (overhangs, room above garage)
Openings in electrical boxes where wires enter
Vertical junction of all wall studs and sheathing (picture framing)

Section 2 - Ceiling applications - from attic side after drywall

Around any penetration through drywall
Seams in drywall field
Seams where drywall intersects all top plates
Junction of drywall and ceiling joists (both sides)
For roofside sloped ceilings picture frame each cavity or install foam tape to face of rafters
Seams around dropped soffits after covering the soffit with appropriate materials
Seams at top of chases penetrating the ceiling

Section 3 - Floors

Seams at band joists between crawl/basement and main living area
Junction of sill plate and crawl/basement wall
Band joists/joist ends under cold floors
Penetrations through subfloor (ie. HVAC ducts)



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LEED Eligible Product

Use of this product may help building projects meet green building standards as set by the Leadership in Energy and Environmental Design (LEED) Green Building Rating System.
 Credit 4.1 - 4.2 Recycled Content
 Credit 5.1 - 5.2 Regional Materials



Knauf Insulation EcoSeal Sealant is certified for indoor air quality as a low emitting product by The GREENGUARD Environmental Institute™ to both the GREENGUARD Certification Program™ and the more stringent GREENGUARD For Children and Schools™ standard. www.greenguard.org

