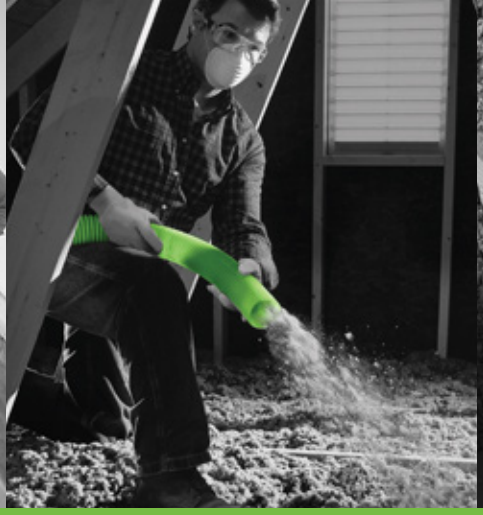


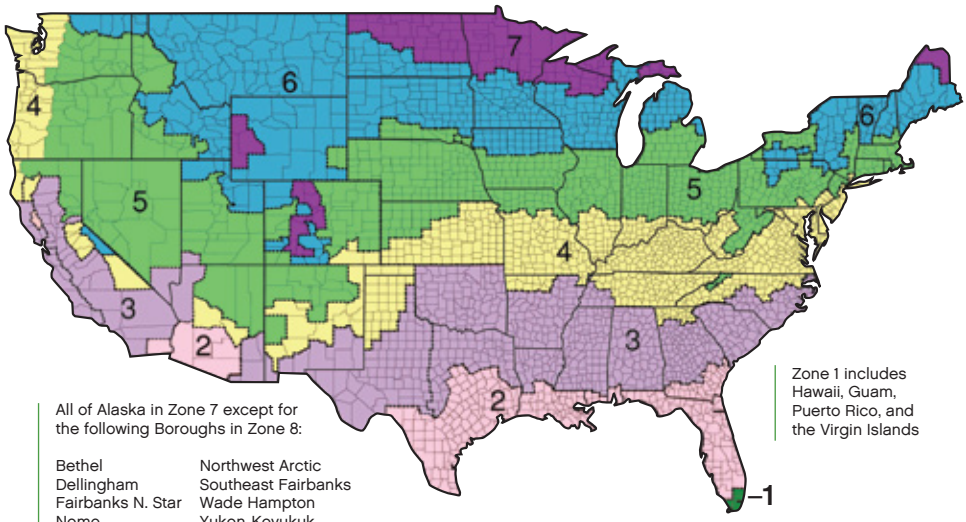
Do-it Yourself Attic Installation Instructions

1 Calculate How Much Greenfiber® Insulation You Need

Determine the Target R-Value

First, determine the R-Value recommended for your region. R-Value indicates insulating power or thermal resistance (adjacent chart). Once you know your target R-Value, refer to the Greenfiber® Insulation coverage chart (on Greenfiber® Insulation product bag or see the charts on the next page). These charts will indicate, for a 1,000-square-foot area, how many bags of Greenfiber® Insulation you will need to purchase and how many inches of coverage you will need.

To calculate exactly how much Greenfiber® Insulation you need for a specific number of square feet, you can use the following table provided by the U.S. Department of Energy Insulation Recommendations for Existing Houses.*



All of Alaska in Zone 7 except for the following Boroughs in Zone 8:

Bethel
Dellingham
Fairbanks N. Star
Nome
North Slope
Northwest Arctic
Southeast Fairbanks
Wade Hampton
Yukon-Koyukuk

Zone 1 includes Hawaii, Guam, Puerto Rico, and the Virgin Islands

ZONE	ADD INSULATION TO ATTIC Uninsulated Attic	FLOOR
1	R30 to R49	R13
2	R30 to R60	R13 to R19
3	R30 to R60	R19 to R25
4	R38 to R60	R25 to R30
5 to 8	R49 to R60	R25 to R30

Wall Insulation: Whenever exterior siding is removed on an UNINSULATED wood-frame wall:

- Drill holes in the sheathing and blow insulation into the empty wall cavity before installing the new siding, and:
- Zones 3-4: Add R5 insulative wall sheathing beneath the new siding
- Zones 5-8: Add R5 to R6 insulative wall sheathing beneath the new siding

INSULATED wood-frame wall:

- For Zones 4 to 8: Add R5 insulative sheathing before installing the new siding

* These recommendations are cost-effective levels of insulation based on the best available information on local fuel and materials cost and weather conditions. Consequently, the levels may differ from current local building codes. In addition, the apparent fragmentation of the recommendations is an artifact of these data and should not be considered absolute minimum requirements.

For further installation instructions visit
https://www.greenfiber.com/install

Determine How Much Insulation You Need

Determine the thickness and R-Value of the insulation that you already have so you can figure out the additional Greenfiber® insulation needed. Insulation R-Values vary by thickness and are different depending on insulation type. Visit http://energy.gov/energysaver/articles/types-insulation for a table showing common insulation R-Values.

Example:

If you have approximately six inches of fiberglass batt insulation in your attic, the **R-Value is R-19**.

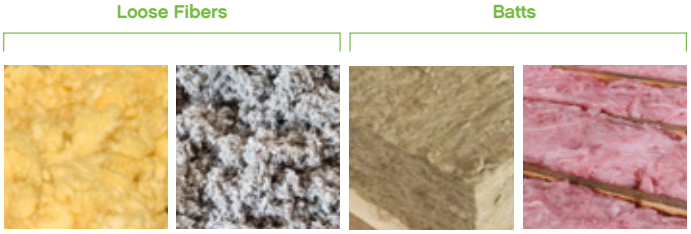
If you want to increase your **R-Value to R-38** using Greenfiber® insulation you will need to add 6.2 inches (R-19) over the top of the existing insulation.

Greenfiber® Insulation Coverage Chart (INS541LD)

R-Value* at 75° F Mean Temp. To Obtain a Thermal Resistance (R) of:	Minimum Thickness (inches)	
	Installed Insulation Should Not Be Less Than	Thickness After Settling
R 13	4.29	3.86
R 19	6.19	5.57
R 22	7.12	6.41
R 25	8.05	7.25
R 30	9.57	8.62
R 38	11.97	10.77
R 49	15.20	13.68
R 60	18.37	16.53

Not Sure What Type of Insulation You Have?

What You See		What it Probably is
Loose Fibers	light-weight yellow, pink, or white	fiberglass
	small gray flat pieces or fibers (from newsprint)	cellulose
Batts and Rolls	light-weight yellow, pink, white, or gray	fiberglass mineral (rock or slag) wool plastic fibers natural fibers

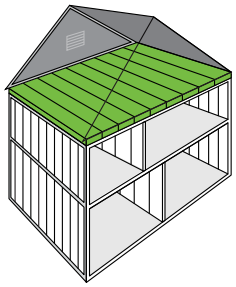


For further installation instructions visit **https://www.greenfiber.com/install**

Determine How Many Bags You Need

Once you know how thick the insulation is that you need to add, you need to figure out how many bags you'll need to apply in order to achieve your (desired R-Value) goal. Calculate the size of the area to be covered by multiplying the length of the attic by the width to get the square footage.

Refer to the example below, then check the application coverage chart on the back of the bag or on our Greenfiber® website at **www.greenfiber.com**.



Greenfiber® Cellulose Loose-fill Insulation (19 lb. bag)

	Example:
R-Value you want to attain	38
Subtract the R-Value you have	19
Difference	19
Maximum sq.ft. per bag of Greenfiber® insulation	36.7
Next, divide your total square footage by the coverage per bag and you will have an estimate of the number of bags you'll need to apply.	1200 Sq.Ft. ÷ 36.7 = 33 bags

Application Coverage Chart	19.05 lbs (8.64 kg)						INS541LD
R-Value* at 75° F Mean Temp. To Obtain a Thermal Resistance (R) of:	Minimum Thickness (inches)		Maximum Net Coverage (no adjustment for framing)			Gross Coverage (based on 2" x 6" framing on 16" centers)	
	Installed Insulation Should Not Be Less Than	Thickness After Settling	Maximum Sq. Ft. per Bag	Minimum Bags per 1,000 Sq. Ft.	Minimum Weight per Sq. Ft. (lbs/ft^2)	Maximum Sq. Ft. per Bag	Minimum Bags per 1,000 Sq. Ft.
R 13	4.29	3.86	56.0	17.9	0.340	61.8	16.2
R 19	6.19	5.57	36.7	27.2	0.519	40.0	25.0
R 22	7.12	6.41	31.1	32.2	0.613	33.5	29.8
R 25	8.05	7.25	26.8	37.2	0.710	28.7	34.9
R 30	9.57	8.62	21.7	46.1	0.878	22.9	43.6
R 38	11.97	10.77	16.4	61.1	1.164	17.1	58.5
R 49	15.20	13.68	12.0	83.5	1.591	12.4	80.7
R 60	18.37	16.53	9.3	108.1	2.059	9.5	105.0

The coverage chart is based on settled thickness, a nominal bag weight of 22.55 lbs and coverage based on the Greenfiber® Monarch blowing machine. Settings are non-adjustable. Use this chart for estimating purposes only. Job conditions, application techniques and settings on other equipment will influence actual coverage. Do not add water to this product.

It takes 2-3 minutes to blow one bag of Greenfiber® Insulation into your attic.

***R-Values are based on settled thickness which is 90% of the installed thickness.**

Greenfiber® Cellulose Loose-fill Insulation (30 lb. bag)

	Example:
R-Value you want to attain	38
Subtract the R-Value you have	19
Difference	19
Maximum sq.ft. per bag of Greenfiber® insulation	55.2
Next, divide your total square footage by the coverage per bag and you will have an estimate of the number of bags you'll need to apply.	1200 Sq.Ft. ÷ 55.2 = 22 bags

Application Coverage Chart	30 lbs (13.6 kg)						INS515LD
R-Value at 75° F Mean Temp.	Minimum Thickness (inches)		Net Coverage (no adjustment for framing)			Net Coverage (based on 2" x 6" framing on 16" centers)	
	Initial Installed Thickness	Settled Thickness	Maximum Sq. Ft. per Bag	Minimum Bags per 1,000 Sq. Ft.	Minimum Weight per Sq. Ft.	Maximum Sq. Ft. per Bag	Minimum Bags per 1,000 Sq. Ft.
11	3.38	3.04	102.5	9.8	0.293	113.1	8.8
13	4.01	3.61	84.9	11.8	0.353	93.7	10.7
19	5.88	5.29	55.2	18.1	0.544	60.5	16.5
22	6.80	6.12	46.6	21.5	0.644	50.4	19.8
26	8.02	7.22	38.4	26.1	0.782	41.0	24.4
30	9.22	8.30	32.4	30.8	0.925	34.3	29.1
32	9.82	8.84	30.0	33.3	0.999	31.7	31.5
38	11.60	10.44	24.4	40.9	1.23	25.6	39.1
40	12.19	10.97	22.9	43.6	1.31	24.0	41.7
44	13.36	12.03	20.4	49.0	1.47	21.2	47.1
48	14.53	13.07	18.3	54.6	1.64	19.0	52.6
49	14.82	13.34	17.9	56.0	1.68	18.5	54.1
50	15.11	13.60	17.4	57.4	1.72	18.0	55.5
60	17.99	16.19	13.8	72.4	2.17	14.2	70.4

The above coverage chart is based on a nominal bag weight of 30 lbs using a volumatic III, 3rd gear and 8" gate. The chart is based on settled thickness and is for estimating purposes only. Job conditions, application techniques, equipment, and settings can influence actual coverage. Actual coverage may vary based on conditions and is not guaranteed by the manufacturer. Do not exceed maximum square feet coverage per bag. the applicator must install both the minimum number of bags per 1000 sq. ft. and the minimum installed thickness to insure the stated R-Value has been reached. Failure to meet both these requirements may prevent the achievement of the specified R-Value. This product is intended for dry application only. Do not add water to this product minimum. Net weight is 28.5 lbs.

For further installation instructions visit
https://www.greenfiber.com/install

2 Gather Installation Materials

The items listed below may be found around your house or can be purchased at your retailer.

Transporting Greenfiber® Insulation and the machine requires a pickup truck and two people for loading and unloading.

Before you leave the store, test the machine for operation and ensure you have 100' of blowing hose (two 50' sections), one steel tube connector, and three clamps.

Hose Section

Clamps

Tube Connector

The proper number of bags of Greenfiber® Insulation for the desired R-value.

A blowing machine and hose. Place outside your home or in garage.

A heavy-duty 12-gauge extension cord.

A tarp to be placed under the blowing machine to catch excess material.

A ladder to gain access to the attic if needed.

Safety eyewear and N95 NIOSH-approved particulate masks such as a 3M model #8210 or #8511 or equivalent for protection against nuisance dust.

Adequate lighting in the attic for installation.

A ruler or other measuring device to monitor the depth of insulation.

Soffit vent chutes (if needed).

Metal barrier material or recessed light cover for three-inch clearance around recessed lights and other heat sources. Do not use paper, cardboard or other potentially combustible materials as a barrier.

3 Get Ready

Attach two 50' hose pieces with tube connector and clamps.

Be sure to place the blowing machine on a level surface and plug it in to a 20-amp, 110-volt household outlet.

Keep Greenfiber® Insulation away from heat surfaces and recessed light fixtures.

- Identify locations of recessed lights, furnace flues, heating vents, chimneys and other sources of heat or combustion in the attic. Install barriers around heat sources with clearances of at least 3 inches from the heat source. Check local code requirements for barriers. Heat trapped by any type of insulation can be a fire hazard.

- Use baffles or vent chutes to maintain attic ventilation. Insulation should not cover attic soffit vents.

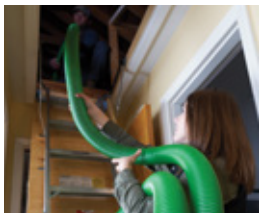
- Prepare a rigid barrier around the attic access hole to prevent insulation from falling out when you open the attic door. The barrier should be as tall as your installed insulation height.

- Install attic rulers and mark the desired thickness as a guideline to be used during application.

- Place the blowing machine on a level surface outside the building or in a garage.

- Plug the machine into a 110-volt electrical outlet (20 amps or greater) using the shortest, heavy-duty extension cord possible (minimum 12-gauge).

- Attach the hose to the outlet.



- Run the hose from the machine through the attic access hole into the attic, avoiding sharp bends or kinks. Consider laying a kneeboard across the ceiling joists to provide a platform for standing or kneeling during installation.

- Locate one person in the attic to hold the application hose and the other near the blower to hand-feed in approximately one half of the insulation bag into the machine hopper outside or in garage.

- Consider laying a kneeboard across the ceiling joists to provide a platform for standing or kneeling during installation.

For further installation instructions visit
https://www.greenfiber.com/install

4 Install

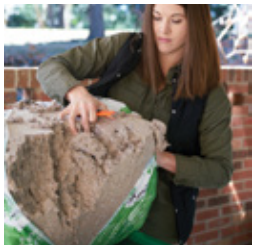
Greenfiber® Insulation installs easily over any existing insulation, filling gaps and voids.

To achieve the desired R-Value it is important to install the correct thickness of Greenfiber® Insulation.

Be sure to keep Greenfiber® Insulation from filling soffits. Use a soffit vent baffle.

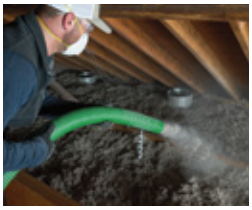
Know the machine.

- Put on safety eyewear and NIOSH-approved dust mask (N95).
- Open a bag of Greenfiber® Insulation and carefully place its contents into the hopper, adding roughly 15 lbs at time and breaking up the material well (the machine will hold up to 30 lbs of insulation).
  Note: It is important to keep your hands, feet and clothing away from moving parts inside the hopper. Any spilled insulation should only be reused if it is free of debris.



- Turn on the blowing machine. The product will begin to flow through the hose. For attic application, adjust material flow by pulling the material slide gate approximately ¾ of the way out and begin application.

- Begin to insulate at the corner farthest from the attic access and work back. Be careful to step on top of and not between the ceiling joists.
- Hold the hose horizontal approximately two feet above the attic floor. To ensure even coverage and to meet building code requirements, staple attic rulers to ceiling joists to indicate proper thickness.



- Do not block soffits or cover heat sources with insulation unless they are type IC rated for contact with insulation.
- Fill to the desired depth, using attic markings and rulers as guides.

- Use all the bags required to achieve your desired R-Value. Empty the blowing machine when you are finished and clean up the surrounding area.
- Do not allow foreign material to get in hopper. In the event something other than Greenfiber® insulation gets in the machine, always turn the machine off and unplug it before attempting to extract foreign objects. NEVER USE ANY "PUSHER" DEVICES TO FORCE MATERIAL THROUGH THE HOPPER GRATE.
- Clean machine thoroughly after use and return it to the same store location you rented it from.

Tip

Do not fill soffits with insulation. Use soffit vent baffles to allow the soffit to stay open above the insulation for proper airflow. Insulate the inside of the access hole cover with batt or foam board insulation to complete the job.

CAUTION:

To help avoid fire: Keep insulation at least three inches away from the sides of recessed light fixtures. Do not place insulation over such fixtures so as to trap heat unless they are type IC rated for contact with insulation. Also keep insulation away from exhaust flues of furnaces, water heaters, space heaters or other heat-producing devices. To be sure that insulation is kept away from light fixtures and flues, use a barrier to permanently maintain clearance around these areas. Check with local building or fire officials for guidance on installation and barrier requirements. (US Federal Regulation 16 C.F.R. Part 1404.4).

For further installation instructions visit
https://www.greenfiber.com/install

Do-it Yourself Troubleshooting Guide

Blowing Machine Trouble-Shooting Guide

Please remember to **turn OFF and UNPLUG** the machine before attempting to resolve any problems.

Cause	Solution
The machine will not run	
There is a loose wire in the power cord	Call Greenfiber® for repair and do not attempt to use the machine
Power cord is not properly plugged in	Remove plug, check ends and plug back in
Main power switch on machine is off	Check switch and turn on
Circuit breaker will not stay on	Check for adequate power (20 amps) and overloading. Use minimum, shortest-length, 12-gauge extension cord
Machine runs with no insulation going through hose	
Slide gate is closed (Applicable to 118 Machine only)	Open slide gate to ¾
Clogged, kinked or pinched hose is stopping material flow	Check hose for clog, kinks or pinched hose
Material blockage between blower and agitator arms	Turn off and unplug machine. Check for foreign objects and remove
Hose plugged	Clear flow passage by agitating hose at clog or reversing hose – leave blower on continuously to prevent reoccurrence
Low air flow	
Improper air flow setting	Adjust material slide gate or air valve
Seals in airlock are leaking, making noise or blowing insulation up out of the hopper	Return to store for repair and obtain a different machine seal needs to be replaced prior to further use
Machine is jammed	
Foreign material is in hopper air lock	Turn off and unplug machine. Hand-release the pulley to loosen. Carefully turn the machine over and remove the foreign material.
Blower runs but agitator arms do not	
The agitator motor thermal protector has overheated	Allow the machine to cool and reset the motor
There is an obstruction in the agitator hopper or in the airlock	Turn off and unplug machine then carefully remove any obstructions from inside the hopper
The blower runs slowly and drive motor will not start	
Low voltage to the machine	Use a 20-amp, 110-volt household outlet and at least a 12-gauge extension cord, no more than 50 ft
Grinding or unusual noise	
Worn bearings	Call Greenfiber® for repair and do not attempt to use the machine
Sparks from blower	
Worn brushes	Call Greenfiber® for repair and do not attempt to use the machine
Electrical shocking	
Using Blower in rain or near water	Operate machine in a dry area ONLY
Electrical shorting, loose wire or frayed cord	Call Greenfiber® for repair and do not attempt to use the machine
Non-grounded outlet	Use grounded outlet ONLY

Greenfiber® Corporate Office
5500 77 Center Drive, Suite 100
Charlotte NC 28217
800.228.0024

For further installation instructions visit
https://www.greenfiber.com/install