

NEWS from CPSC

U.S. Consumer Product Safety Commission

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Tips For Consumers Insulating Their Homes

WASHINGTON, D.C. (Sept. 30) -- With energy costs high and another frigid winter expected, many consumers are insulating or re-insulating their homes. To shed light on the unfamiliar and frequently confusing insulation market, the Consumer Product Safety Commission (CPSC) and Federal Trade Commission (FTC) have set forth the following information in hopes of better informing consumers before they purchase an insulation product or enlist a contractor's services.

Available in a variety of forms, home insulation can be purchased in blankets, in batts, in a form which is bagged and ready to pour, and in a form which must be blown in place by a contractor using specially designed equipment.

Three basic types of products are most commonly used. All have high insulating value if properly manufactured and installed. They are:

--mineral wool, which includes rock wool and fibrous glass. Both of these products can be blown in place, or purchased in blankets or batts with a foil or paper vapor barrier. Rock wool can also be purchased in bagged form.

--Plastic foam/resin, which is made of polystyrene, polyurethane, or urea formaldehyde, can be purchased in pre-formed sheets or bolts, or foamed in place by a contractor. Foam insulation can vary considerably in its final properties depending on the operator's skill, how various reactants are mixed, and the time allowed for "curing."

--Cellulosic insulation, made of any finely ground cellulose product such as recycled newspaper, can be poured or blown in place.

Because insulation can vary widely in quality, it can present several hazards to consumers.

An important performance characteristic to evaluate is flammability. Test methods for flammability in insulation, established through the American Society of Testing and Materials (ASTM), check flare spread, fuel contribution, and smoke development rates. Although each manufacturer's insulation products should meet acceptable criteria, an "acceptable" product may still be flammable and should not be installed near heat.

While mineral wools themselves pose no flammability problem, some of their paper vapor barriers are flammables.

Since cellulose is inherently flammable, flame-retardant chemicals are usually added to cellulosic insulation to reduce flammability to acceptable levels. Negative side effects from addition of such chemicals include a possible reduction in the insulation's thermal resistance and, if too many sulfate chemicals have been added, a potential for corroding pipes and other metal items.

If properly manufactured and installed, urea formaldehyde products can meet accepted levels for flammability safety, but they are not "fire proof" as distributors sometimes claim. Polyurethane and polystyrene are offered both in "flame-resistant" and nontreated rigid forms. Nonflame-retardant products are obviously a fire hazard, but flame-retardant products may also pose a risk. Once the relatively high ignition temperature is reached, these products emit high levels of smoke and toxic gases which can be just as lethal as fire.

Consumers who choose a polyurethane or polystyrene product should know they cannot be used safely unless enclosed in a flame- and heat-retardant structure, such as gypsum board. This is true to a lesser degree for mineral wool, cellulose, and urea formaldehyde insulation products.

Another possible hazard linked with urea formaldehyde insulation is emission of toxic fumes after the product has been installed. Improper mixing and curing of this product can contribute to production of such toxic fumes.

Recently, question have been raised about the cancer-causing potential of fibers inhaled from fibrous glass insulation. While CPSC currently has no evidence supporting any pathological effects in humans, it is continuing to review ongoing studies to determine if some type of regulatory action may be needed.

FTC warns that deception of consumers is most likely to occur in: (1) claims about a product's flammability -- either by misrepresentation or by no reference to its unacceptable flammability; and (2) claims about the product's thermal resistance - either through generalizations without providing 'R' values or exaggerations of the 'R' values.

An "R" value is a number indicating how much resistance insulation presents to heat flowing through it. Generally, the higher the 'R' value, the more effective the insulation. Consumers should pay more only for a higher "R" value.

To help the consumer guard against dishonest contractors or salespeople who overstate the "R" value of an insulation product, outlined following are the current generally accepted maximum-design-standard "R" values for the most commonly used insulating materials:

PRODUCT	MAXIMUM "R" VALUE PER SQUARE INCH OF INSULATION (THICKNESS)
Mineral wool batts and blankets	3.1
Cellulose loose fill	3.1-3.7
Urea formaldehyde	4.1
Polystyrene (expanded)	6.25
Polyurethane	6.25
Perlite	2.7
Aluminum foil	2.0

Any claim of an "R" value above the maximum design standard should be highly suspect.

To guard against careless or incompetent installation, which could result in a major reduction in "R" value, make sure to choose a reputable contractor. Tips for selecting an insulation contractor are outlined following:

-- To find a contractor, ask your gas or electric utility company, consult friends and neighbors, or look in the Yellow Pages under "Insulation Contractors."

-- Obtain cost estimates from at least three different contractors. Make sure you describe the job identically to each. Remember, you are talking about quality as well as price.

- Check a contractor's reliability with your local Better Business Bureau listed in the phone book, or with your state or local consumer affairs office.
- Ask a contractor for references including previous customers. Check them out.
- If your state requires licensing, find out if the contractor is licensed. If the state requires bonding, make certain the contractor is banded.
- Check with your local building-code authorities for guidance in purchasing an insulating material. Consumers would be well advised to purchase insulation at least as good as that required for new homes under local building codes.
- Talk with a contractor in terms of "R" values. If a contractor won't deal with you in 'P' value language, don't deal with him.
- Bags of insulation should be marked with "R" values and figures indicating the area the contents will cover to achieve the desired "R" value. Although these figures may differ for different manufacturers, the coverage figure will give you an idea of how many bags a contractor will need.
- After selecting a contractor, have a specific contract drawn up for the job; sign it only when you are fully satisfied that it details everything you want done. You might also have any completed work examined by a municipal building inspector whose certification of satisfactory work will release your final payment.
- Any warranty for the insulation should be in writing and part of the contract. Seek a warranty giving enough time after installation to judge whether the insulation has, in fact, reduced your home energy costs.

CPSC advises those wishing to do their own insulation work to take the following safety precautions:

- Wear protective clothing, preferably long sleeves, long trousers, gloves, a hard hat to protect your head, and a disposable respirator marked for "dust" to avoid breathing small fibers.
- Avoid direct contact with insulation dust since flame-retardant chemicals may be absorbed through the skin.
- Don't place insulation near electrical light fixtures, a furnace, or similar heat-producing device. Extreme heat, even without a flame, can ignite some insulation.
- Don't place insulation over attic vents.
- Be sure that there is good ventilation when installing insulation to help remove water vapors.
- To avoid locking in moisture and causing wall or ceiling rot, install insulation with any vapor barrier placed toward the living space.
- If adding new insulation over old, either purchase a product that has no vapor barrier, or slash the barrier at frequent intervals to allow moisture to escape.
- Remember, insulation is not intended as a fire wall. Added flame-retardants are intended to retard the burning of the product itself, not of an entire dwelling.

If you suspect deception or fraud or are having a problem with nonfulfillment of a contract or failure by the seller to honor a warranty, contact the Federal Trade Commission regional office nearest you. They are listed in the phone book under "U.S. Government, Federal Trade Commission."

[Send the link for this page to a friend!](#) The U.S. Consumer Product Safety Commission is charged with protecting the public from unreasonable risks of serious injury or death from more than 15,000 types of consumer products under the agency's jurisdiction. Deaths, injuries and property damage from consumer product incidents cost the nation more than \$800 billion annually. The CPSC is committed to protecting consumers and families from products that pose a fire, electrical, chemical, or mechanical hazard. The CPSC's work to ensure the safety of consumer products - such as toys, cribs, power tools, cigarette lighters, and household chemicals - contributed significantly to the decline in the rate of deaths and injuries associated with consumer products over the past 30 years.

To report a dangerous product or a product-related injury, call CPSC's hotline at (800) 638-2772 or CPSC's teletypewriter at (800) 638-8270, or visit CPSC's web site at www.cpsc.gov/talk.html. To join a CPSC email subscription list, please go to <https://www.cpsc.gov/cpsclist.aspx>. Consumers can obtain this release and recall information at CPSC's Web site at www.cpsc.gov.