Professional advice on construction waste

For use during renovation, construction and rehabilitation projects in houses and cabins.

DIREKTORATET FOR BYGGKVALITET

Nasjonal handlingsplan for bygg- og anleggsavfall

Sorting and delivery

This guide is created to help the ones that are going to renovate, demolish, construct or rehabilitate a building, and it tells you how you should to handle hazardous waste in a proper and correct way.

Hazardous construction waste is among Norway's most serious pollution problems. The waste can contain a mixture of different environmental toxins that can harm the human health and the nature. It is therefore very important to be careful when sorting the waste. The waste must be delivered to an approved waste reception.

The materials covered in this guide are not hazardous when they are a part of a building or a house. However, when they are demolished, broken or thrown away, they release substances that can have long lasting destructive and hazardous effect on the soil, water, air and the human health.

It is therefore very important that the one responsible for a building- or renovation- project takes the responsibility of sorting seriously. By doing the job correctly, we are preventing the toxic substances to spread across the environment and cause serious environmental damage.

Our wish is that the sorting process of hazardous construction waste gets easier and becomes a part of every construction project.

- **Sorting is free**
- **To deliver waste is easy**
- **To know that you are doing it correctly is a great feeling**

Please do not hesitate to ask us if you have any questions.

Good luck!
Best regards the NPH-network

www.byggemiljo.no

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Members of the network Nasjonal handlingsplan for bygg- og anleggsavfall:

Norsk forening for farlig avfall
Maskinentreprenørenes forbund
Elektroforeningen
Forum for miljøkartlegging og -sanering
Grønn Byggallianse
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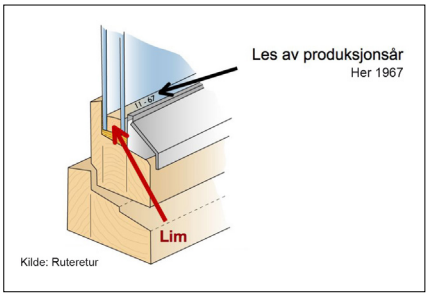
Windows

Old windows often contain environmental toxins such as PCB or chlorinated paraffins. When handling these windows, you should follow these instructions: Find the production year of the window which is stamped in the metal seal located in between the glasses. If the production year is from 1965 to 1990, the window is very likely to contain one or several environmental toxins. Do not break or shatter the window. Deliver the windows to a local waste reception for hazardous waste.



Windows containing PCB: Norwegian-produced 1965-1975, foreign up to and including 1979. Windows containing chlorinated paraffins: Norwegian-produced from 1976 up to an including 1990, foreign from 1980 up and to 1990.

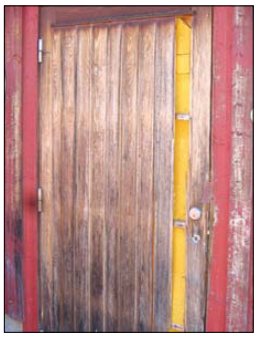
Sealant

You can usually find sealant in between masonry- and concrete-walls and in door- and windows-frames. The sealant can contain es that are harmful to the environment such as PBC and chlorinated paraffins, and it can stay soft for many years. It is usually gray, blue-gray, black or brown. The sealant should be delivered as hazardous waste to an approved reception.

Sealant produced between 1960 and 1978 usually contains PCB. From 1970 to 1990, chlorinated paraffins was used. Both substances are harmful to the environment.

Front doors

Many entrance- and terrace doors are insulated with hard (often yellow) polyurethane foam which is harmful to the environment. If your door is produced prior to 2003, you need to deliver the entire door as hazardous waste. If you are in doubt, also deliver the door as hazardous waste at a waste reception.



Polyurethane insulation produced prior to 2003 contains CFC- and HCFC- gasses. Released gas can harm the ozone layer and impact the greenhouse effect.

Garage door/port

If the garage door is insulated, it often contains polyurethane foam with CFC- and HCFC- gasses. You can check whether or not you have this type of insulation by checking under the metal surface of the door. If the foam is yellow and hard, the entire door must be delivered as hazardous waste. If the gate is insulated with mineral wool insulation (Glava or Rockwool) it is not hazardous waste. Doors made of wood are not hazardous waste and can be delivered as wood.

If the garage door is produced prior to 2003, the insulation foam is most likely very damaging for the ozone layer. The port/door needs to be delivered as hazardous waste.

Floor coverings

Moldings and floor coverings in vinyl contain large amounts of the environmentally hazardous substance phthalates and should therefore be delivered as hazardous waste. In addition, Vinyl tiles (often with a quadratic shape) can also contain asbestos. These types of tiles are often used in staircases, hallways and in kitchens. Vinyl is the same as PVC. Also pay attention to the glue used to attach the vinyl. If the glue is black and used between 1950 and 1970, it can contain asbestos.

Linoleum does usually not contain substances that are harmful to the environment. To determine whether you have vinyl or linoleum, you need to check on the back side. Linoleum is usually not very flexible and has jute under, while vinyl usually does not have jute on the backside.

Asbestos can cause lung cancer. Private individuals are allowed to demolish asbestos on their own on their own property, but they should wear protective clothing and a P3-mask that covers the mouth and nose.

Isolasjon på rør

Prior to 1980, water- and radiator- pipes were often insulated with hazardous asbestos-containing material or cellular rubbers.

Layered insulation with asbestos cardboard inside/Asbestos pipe insulation
It is often insulated by three layers: white painted gauze on the outside, then brown insulation, and lastly white asbestos cardboard as the inner layer.

Carefully cut layer by layer until you reach a white layer (asbestos) or the pipe itself (metal). If you find a white material on the layer closest to the pipe itself, it is most likely asbestos cardboard. The layer usually covers the entire pipe.

A three-layer insulation with asbestos used to be common for water- and radiator- pipes from 1900-1955.

Asbestos material directly on the pipe

The material is attached with gauze and is sometimes painted. The asbestos material may be light pink, light brown, light gray, beige or old pink colored. The material can usually be found on pipe bends, pipe ends and pipe branches. This type of asbestos easily emits hazardous asbestos fibers, so you should be careful. If you want to keep the pipe intact, the remediation of asbestos must be done by an asbestos abatement company.

Asbestos material was often used in the period of 1955 to 1980, on pipe bends, pipe ends and pipe branches.

Cellular rubbers used for insulation

Cellular rubbers contain brominated flame retardants and is therefore classified as hazardous waste. The rubber is usually black or gray colored. Carefully remove it and place it in a carrier bag. Should be delivered to a waste disposal as hazardous waste.

Cellular rubbers containing brominated flame retardants was used as insulation prior to 2003.

Terraces and outdoors stairs made of wood

These are almost always built from pressure treated wood that contains substances that are harmful to the environment. This type of wood must be sorted and treated as hazardous waste. When the wood is newly treated, it has a greenish color. However, this color disappears after a couple of years. If you are not sure whether the wood is impregnated, you should deliver it as hazardous waste.

How to find out if the wood is pressure treated or not:
If the inside color of the wood is green, the wood is pressure treated. A light color on the inside would on the other hand show that the wood it not impregnated.

Railroad ties and telephone poles treated with creosote is often used in stairways, sandboxes og as retaining walls in gardens. The railroad ties and telephone poles should be delivered to an approved waste reception for hazardous waste. When handling and dealing with creosote treated wood, you need to wear gloves.

Exterior cladding

Eternit boards

Many old houses are coved with eternit boards on the outside. Eternit contains asbestos, and the boards are therefore hazardous waste.

Do not burn pressure treated wood. Toxic and harmful gasses will be released

Pressure impregnated wood

Pressure impregnated wood (green planks) is often used on exposed parts of cladding, such as house corners, terraces, garden fences, roof battens, bargeboard, window sill and other places exposed to moisture. This is hazardous waste and must be delivered to an approved waste reception.

Wind stopper boards in the outer wall

Large buildings and detached houses from the 1960s and 1970s with wooden cladding often have wind stopper boards made of internit on the outside wall. The boards are thin (approximately 3 mm.), hard and have a green-yellow or yellow-brown color. These boards contain asbestos and are hazardous waste.

Outside roof

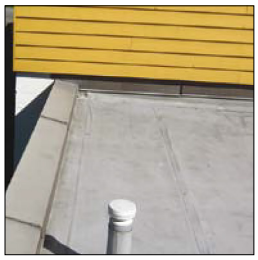
Roof tiles in eternit plates

These roof tiles contain asbestos and are hazardous waste. They were frequently used until approximately 1975. The color of the tiles is gray or brownish red.

Roofing foil are usually only used on flat roofs.

Roofing foil

This is a vinyl product (often gray) that contains substances that are harmful to the environment (phthalates). Roofing foil from before year 2000 I hazardous waste.



Roofing felt

Roofing felt is not hazardous waste. The difference between roofing felt- and foil (which is hazardous waste) is visible as the cardboard normally has a layer of finely crushed stone on the upper side.

Ceiling

Ceiling boards/plates can contain asbestos (this applies to plates both with and without holes). If you are in doubt: sort and deliver as hazardous waste! In some basements, boiler rooms and garages you will find slightly coarse and gray eternit plates. These contains asbestos. The plates are gray colored, hard and typical for buildings from the 1950s, 1960s and 1970s. These plates are hazardous waste.

If the plates have paper on both sides and are made in a white gypsum material, it is gypsum which does not contain asbestos.

Walls inside

Light walls and the inside of exterior walls in buildings from before 1980, can be made of or covered with asbestos boards. In residential buildings, they are most often used behind or around wood stoves or near chimneys. To find out what the wall panels are made of, you can use a knife to cut the paint and remove the putty (0.2 - 2 cm thick layer) that often covers the panels. Be careful; asbestos fibers are harmful breathe in. Asbestos sheets are usually gray-white in color and are hazardous waste. Boards made of gypsum have paper on both sides and white plaster inside. These boards are not hazardous waste.

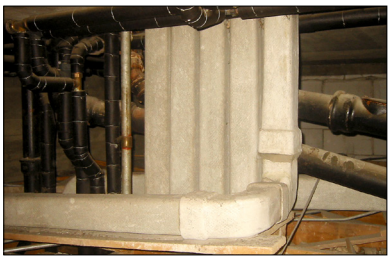
Cold room

If you are going to remove an old cold room, you should look for prefabricated doors and walls. If the prefabricated elements are filled with hard, yellow insulation material (polyurethane foam), then the waste is hazardous waste.

The insulation consists of hard and yellow polyurethane foam. Up till 2003, the foam contained substances that are harmful to the environment.

Ventilation ducts of eternity

Ventilation ducts of eternity are gray or brown-red, hard and squared, and they were often used in the 1950s and 1960s to ventilate kitchens and bathrooms. Such ducts, in contrast to steel ducts, must be treated as hazardous waste since they contain asbestos.



The ducts be torn carefully by “pulling” the duct lengths apart.

Oil tanks

The government has decided to prohibit the use of fossil fuel oil for heating from 2020. Pollution from buried oil tanks or oil tanks located in basements, represents a significant danger to the environment. These old tanks can contain oil residues, and they may be insulated with environmentally hazardous material. Oil tankers should be emptied and cleaned by certified companies before they are excavated and delivered as hazardous waste. When a buried oil tank is taken out of use, the person responsible must notify the municipality in writing.

The government has decided to prohibit the use of fossil fuel oil for heating from 2020. Buried oil tanks that are taken out of operation should be removed.

Heat pumps

Heat pumps contain several substances that are harmful to the environment. When replacing or removing a heat pump, it is crucial to recover the gas safely in order not to damage the climate. You need to hire an F-gas certified technician to remove the heat pump. You can remove the pipe insulation yourself, but as they can contain brominated flame retardants, they are classified as hazardous waste. The heat pump (both the indoor and outdoor part as well as the remote control) are electronic waste. You can also watch a movie on the topic at byggemiljo.no/veiledningsmateriell/.

Electronic devices and components

Lamps, wires, cables, cable ducts, cable conduits, sockets, switches, junction boxes and electrical heaters is classified as electrical waste. Appliances such as refrigerators, freezers and stoves are also classified as electrical waste. They should be delivered to a waste reception.

Paint, glue and varnish, and various renovation waste

Half-empty paint buckets, chemical bottles, sealant- and glue- tubes must be sorted and delivered as hazardous waste.