

Waste Handling of Mineral Wool Insulation

Following some requests regarding the waste handling of mineral wool insulation, Eurima (the European Insulation Manufacturers Association) decided to provide this information-sheet in order to guide you.



► How to recognize mineral wool?

Mineral wool insulation is a group of insulation products made from inorganic fibres. It has the form of batts, boards, rolls, loose fill, pipe section and suspended ceilings.

Some mineral wool products are brought to market with a facing layer (for functions such as vapour-barrier, water-tightness, look & feel) like Kraft-paper, aluminium and bonded mat.

Mineral wool insulation can be divided into two main product categories: glass wool and stone wool.

Glass wool products can be yellow, white, brown, black, pink or green.

Stone wool is green-grey. Glass wool is usually lighter in weight and stone wool is usually denser.

Glass wool is mainly made from sand, recycled glass and other minerals, the same ingredients used in objects such as glass bottles.

Stone wool is made from volcanic rock, typically basalt and dolomite, and an increasing share of recycled material.

Glass wool and stone wool are sometimes confused with asbestos because both have been used for insulation purposes.

Whereas mineral wool is safe to use under normal working conditions respecting the recommendations as provided by the producers on their packaging, asbestos has been classified as proven carcinogenic to humans¹ and has been forbidden for many years.

¹Information can be found for instance on: <http://www.hse.gov.uk/asbestos/common-materials.htm>

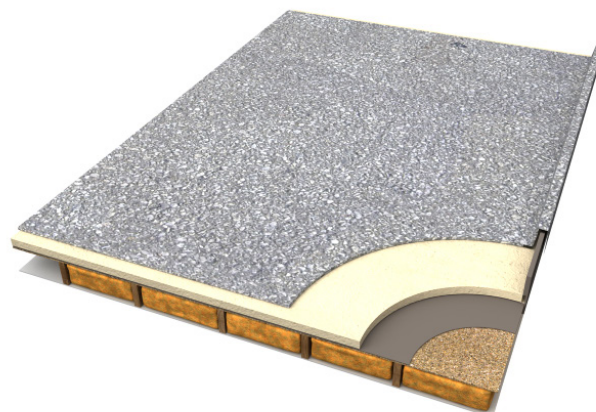
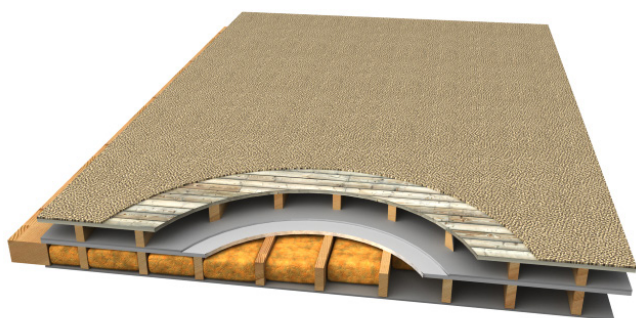
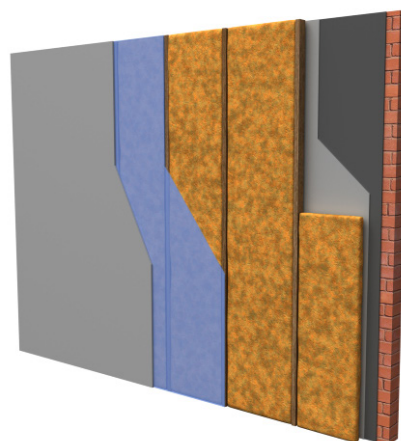
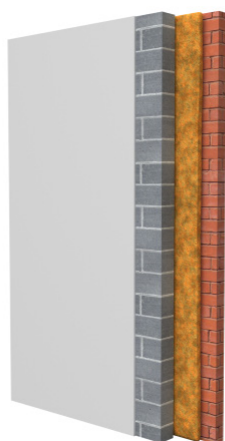
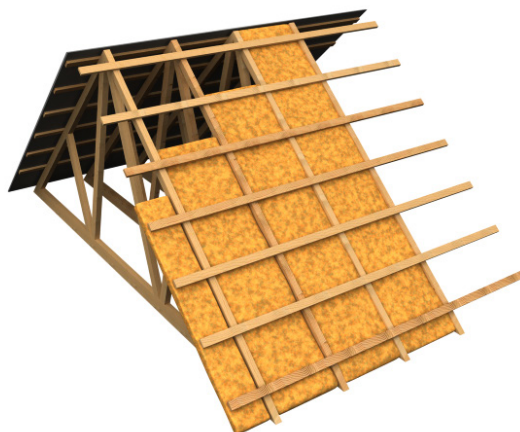
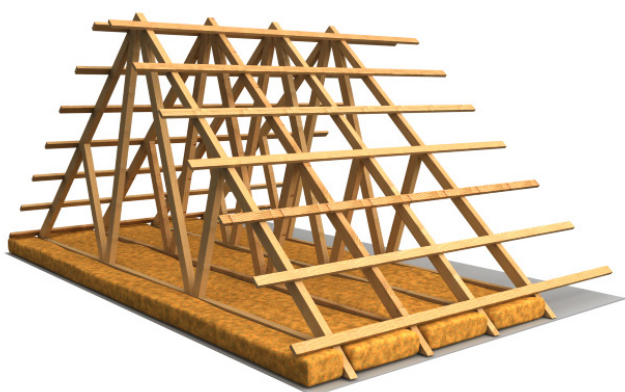
This site shows the very specific places where asbestos could be located, most often faced or painted or embedded in other materials. If used as loose-fill, it appears blue-grey or whitish. <http://echa.europa.eu/web/guest/addressing-chemicals-of-concern/restrictions/substances-restricted-under-reach>

Whereas asbestos is a natural fiber, mineral wools are man-made allowing them to fit the legal and consumer requirement.

➤ Where can you find mineral wool in buildings?

List of potential applications:

- External walls: ventilated façade, contact façade, cavity wall, timber frame construction, and insulation from inside the building,
- Internal partition walls,
- Roofs (flat, pitched, attic),
- Ceilings, floors,
- Air Conditioning and ventilation ducts,
- Noise barriers for fans or other items,
- Piping, ...



➤ For recycling: differentiate between glass wool and stone wool

As glass wool and stone wool are different materials, it is preferable to collect them separately if they are sent to recycling processes. The

differentiation between glass wool and stone wool can be done both by the colour of the product and by the density of the product².



➤ What can you do with mineral wool waste?

In some countries recycling options for mineral wool exist, for example in the brick industry or recycling offered by a mineral wool manufacturer. For local possibilities to recycle mineral

wool it is preferred to contact a local mineral wool supplier or a sorting company. In other cases mineral wool is landfilled.



²Beyond colour and density there are technics to differentiate between GW and SW (chemical analysis), but they have a cost.

Pictograms to work safely with mineral wool

The following pictograms and statement which appear nowadays on mineral wool packaging could be also displayed for operators when removing mineral wool on a demolition site⁴.

“The mechanical effect of fibres in contact with skin may cause temporary itching.”

“When installing insulation in unventilated spaces, wear a suitable disposable face mask. When handling products, cover any exposed skin. Wear goggles when working with products overhead. Dispose of waste in accordance with local regulations. Clean the area using vacuum equipment. If itching occurs, it may be alleviated by rinsing in cold water prior to washing.”

Information on safe deconstruction and demolition of mineral wool

After years of use, some mineral wool, as with other construction products, when removing might generate dust. As for the deconstruction or demolition of any building, it is recommended to reduce exposure and discomfort by applying simple measures such as: spray mist water before removing products, clean with vacuum cleaner and not with a broom, cover the skin with long sleeves and wear a face mask (typically FFP2 type)³.

In order to avoid dust formation during the deconstruction of a building it is better not to rip off the facing of the mineral wool. This sorting step can be managed by sorting companies.

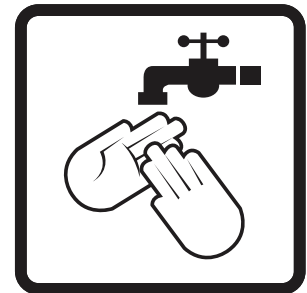
On a more generic level the ILO (International Labor organization) code of practice for safety and health in construction has a dedicated chapter on demolition (chapter 14) and one on personal protective equipment (chapter 18).



Cover exposed skin. When working in unventilated area wear disposable face mask



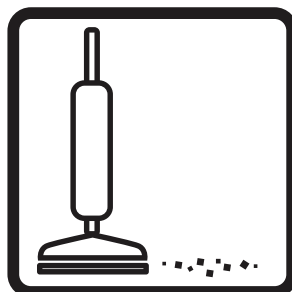
Ventilate working area if possible



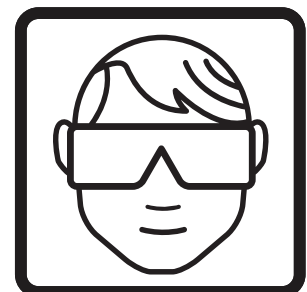
Rinse in cold water before washing



Waste should be disposed of according to local regulations



Clean area using vacuum equipment



Wear goggles when working overhead

³Information on the safe use of mineral wool on www.mineralwool.eu.

⁴This is part of a voluntary commitment with the European Commission by EU producers of mineral wool.