

TRIMO



INSTRUCTIONS FOR THE TREATMENT OF TRIMO'S PRODUCTS
WASTE AND PACKING MATERIALS

1. INTRODUCTION

Trimoterm panels, Qbiss and Qbiss Screen Mw elements consists of a laminated core which is made of mineral wool, and for Qbiss Screen H and H+ with Al. (Aluminium) honeycomb. All elements consist of two galvanised and prefinished steel sheets. Mineral wool or Al. honeycomb and steel sheet are glued together with polyurethane glue (see fig. 1 - 3).

Qbiss One is distinguished by the unique rounded corner of the element. A solution, it is the result of world-class engineering and the highest automated technology and patented manufacturing systems.

1.1. Composition of the product with packing (protective) foil

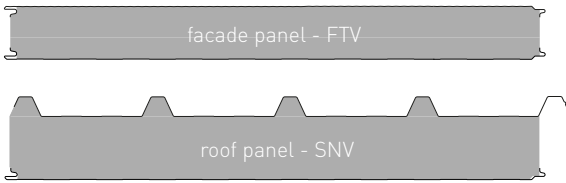


Fig. 1: Trimoterm panels (facade panel FTV and roof panel SNV with mineral wool core)

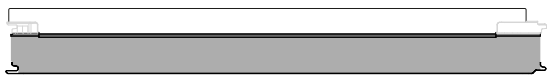


Fig. 2: Qbiss and Qbiss Screen Mw element (with mineral wool core)



Fig. 3: Qbiss Screen element H and H+ (with Al. honeycomb core)

- Panel composition:
- protective PE foil
 - thin sheet metal
 - polyurethane adhesive
 - mineral wool or Al. honeycomb
 - polyurethane adhesive
 - thin sheet metal
 - protective PE foil (optional)

1.2. Consumption of packaging materials

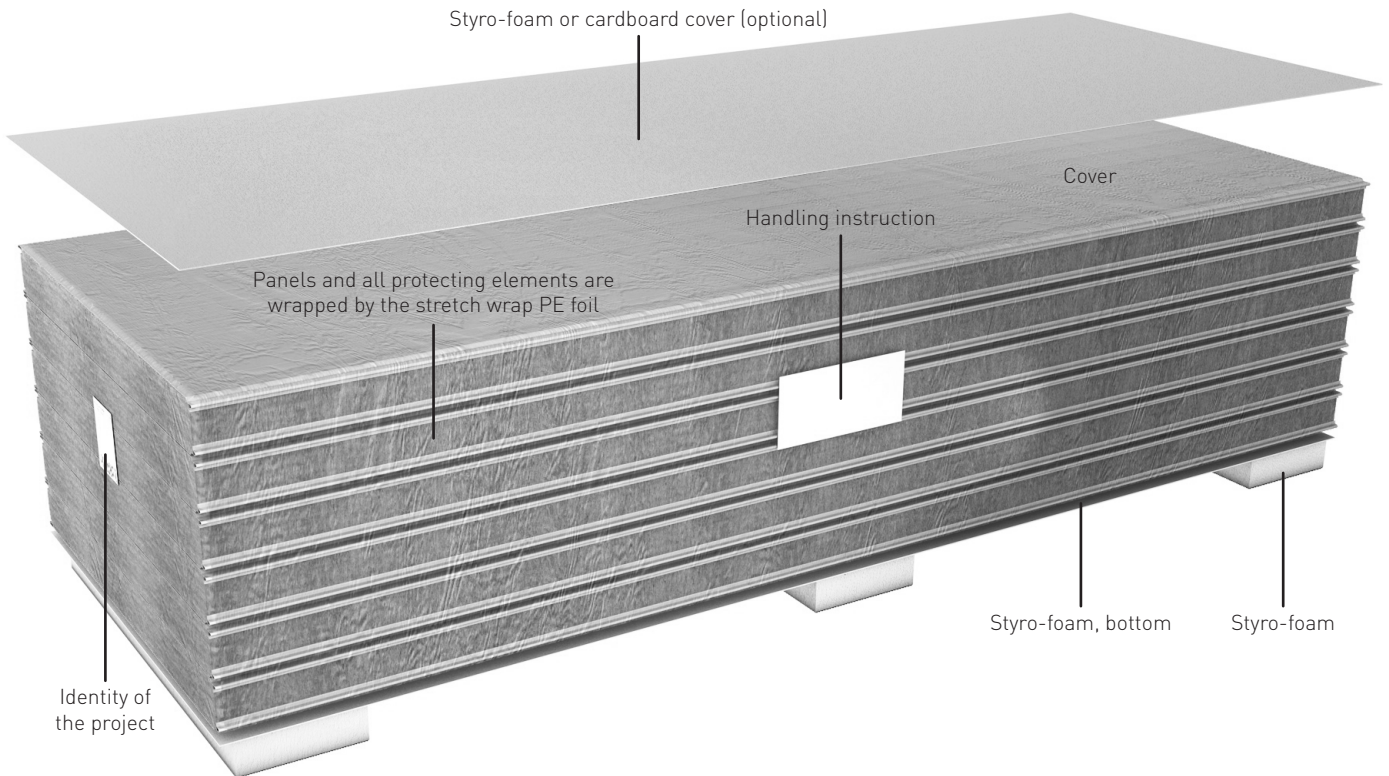


Fig. 4: Trimoterm panels packaging elements.

2. MANAGING OF WASTE PANELS AND PACKAGING MATERIALS

2.1. Process of separation

Waste panels can exist as many different forms. The waste could be the result of panel cutting, remains, panels damaged as a result of improper site handling, or the constructing or deconstructing of the building. Panel remains should be separated into plies and the individual materials separated.

Once the panels have been separated into layers, the thin metal sheet should be mechanically separated from the mineral wool or Al. honeycomb. Usually, after the mechanical separation (at panels with mineral wool), some mineral wool remains, this may have to be removed mechanically.

After panels are separated to layers, you are left with next waste materials:

- waste metal sheet,
- waste mineral wool (in case of Trimoterm, Qbiss in Qbiss Screen Mw),
- waste rubber,
- waste Al. corner (in case of Qbiss Screen H and H+),
- waste Al. profile (in case of Qbiss and Qbiss Screen),
- waste Al. honeycomb (in case of Qbiss Screen H and H+).

2.2. Process of separate collection

While using panels, the separate collection of raw materials at the place of origin should be considered. Therefore, packaging materials are separated on-site. For ordinary packaging systems, the following types of packaging materials are present (see fig. 4):

- PE foil, which protects sheet surfaces from mechanical damage at mounting stage,
- PE foil, a weather-protection panel packaging,
- Styro-foam bottoms and covers, that enable load manipulation during loading and unloading,
- cardboard, which protects the package during handling,
- wooden cases (for flashing elements, screws and panels).

For smaller quantities, the panel remains are mechanically separated on-site, however, for larger quantities, the separation processes are performed by authorised waste handling organisations.

2.3. Handling over secondary raw materials and waste to authorised organisations

Coated galvanised metal sheets

Thin coated and galvanised sheet metal should be handed over to the authorised organisations equipped for collecting secondary raw materials. Partial quantities of PUR adhesive, remaining on the sheet metal after separation, should be considered as well.

According to the rules and ecological processes for remelting different metal wastes, the smoke gases should be cleaned by the purifying plants. Thus, the remelting of thin coated metal sheets, compounded into panels, is allowed.

Mineral wool

Mineral wool, as waste should be collected separately and:

- handed over to organisations as a raw material, in order to be recycled or,
- handed over to organisations, in order to be installed as a building material or,
- handed over to a landfill (according to the European Directive analysis, it should be considered as non-hazardous waste - Directive 1999/31/ES).

Rubber

The installed rubber serves as a longitudinally seal between two panels and as a corner element on the panel. The longitudinally seal should be removed mechanically. Rubber corner after the separation remains on sheet metal and should be mechanically separated from the sheet metal. The rubber as waste should be disposed as special waste and to make to organisations as raw material for energy. The waste rubber is so used for burning in incinerators (eg. in the cement industry, ...), where smoke gases are cleaned by purifying plants.

Polyurethane foam

The installed polyurethane foamed seal will be removed mechanically. The seal as waste should be disposed as special waste and to make to organisations as raw material for energy. The waste seal is therefore used for burning in incinerators (e.g. in the cement industry ...), where smoke gases are cleaned by purifying plants.

Al. profile (in case of Qbiss and Qbiss Screen), Al. corner and Al. honeycomb (Qbiss Screen)

Aluminium profiles, corner and honeycomb should be handed over to the authorised organisations equipped for collecting secondary raw materials.

Packaging material

Packaging collected separately should be handed over as a secondary raw material:

- PE foil is recycled for use in PE foil production (recyclable),
- styro-foam is recycled for use in Styro-foam production (recyclable),
- cardboard – recycled by the paper industry,
- wood (cases for flashing elements, screws and panels) as fuel, or recycled by the cellulose industry.

2.4. Responsibility of waste separation and handling over to the authorized organisations

By buying the product, the ordering party or the end user are responsible for its proper use and its sorting and handing over to the authorised organisations. The same responsibility exists for product waste and packaging in accordance with the regulations in the country of the ordering party or end user.

These guidelines are designed to help with waste management and conform to the directives on the management of waste and waste packaging, applicable in EU.

Note: Polyurethane foam, serving as an adhesive, after the separation partly remains on sheet metal and partly on mineral wool or Al. honeycomb. Due to the small residual quantities involved per product unit and the technologically demanding processes required to remove it, the polyurethane foam is treated as an integral part of remains, burning up during primary process of metal remelting, and the smoke gasses cleaned by purifying plants within the melting furnaces.

MANUFACTURER'S DECLARATION

Manufacturer: Trimo d.o.o., Prijateljjeva cesta 12, 8210 Trebnje

Declares,

that the product Trimoterm panels, Qbiss and Qbiss Screen elements are made in accordance with the following Directives, regulating waste and packaging waste managing:

- Council directive 1999/31/EC on landfill of waste,
- Council directive 94/62/EC on packaging and packaging waste,
- Council directive 2008/98/EC on waste.

Trimo products are sustainable, renewable and environmentally friendly. A significant portion of the product can be recycled. In practice, the recyclability of Trimo products is determined by composition and design, and the way they are collected and presented for reprocessing, following guidelines in the »Instruction for the treatment of the Trimoterm panels, Qbiss and Qbiss Screen elements waste and packaging materials«. Such instructions are intended for the user, respectively the customer. Information about appropriate disposal of remainders of panels and packaging material must be in compliance with the applicable legislation, respectively about separation, sorting and handover of such remainders and waste to authorized collection sites and entities. Upon expiration of their life cycle they should be treated to recover its constituent materials as much as possible to minimize the overall environmental impact of this life cycle phase.

The recycling rate of individual material which is integrated into the final product is based on the mass balance. Summing the recycling rate of the components, the total recyclability rate (Rcyc) for the end-of-life product is calculated by the following equation:

$$R_{cyc} = \frac{\sum (m_i \times r_i^{cyc} \times t_i^{rcr})}{M} \times 100$$

M total weight of the product
 m_i weight of product's i th component
 r_i^{cyc} recycling rate of product's i th component
Coefficients about final treatment of i th object and the values:
 $t_i^{rcr} = 0$ recovering and landfill
 $t_i^{rcr} = 1$ reusing or recycling

The calculation of recycling rate is based on current market conditions. For metal steel sheet and mineral wool the highest recycling rate was determined and $t_i^{rcr} = 1$. The recycling rate of 0% was calculated for all other materials incorporated into the product (e.g. glue, sealing, fire tape) and $t_i^{rcr} = 0$.

Trimoterm (FTV and SNV)
Qbiss One
Qbiss Screen

Recyclability rate for end-of-life product

95 - 99%
93 - 99%
92 - 97%

Note: Recycling rate depends on the thickness, length and width of the panel and recycling rate of product's components. Precise information can be provided when dimensions of product are identified. For any additional information request, please contact Trimo_sustainability@trimo-group.com.

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For information about the delivery of panels see Trimo's General conditions (<https://trimo-group.com/en/trimo/general-conditions-of-sales>).