Mitech®
PROFESSIONAL

• TSI • GSI
• KO • KS
• KO-W • KS-W

TECHNICAL HANDBOOK

MITECH TSI BR and KR

SILICONE PLASTER COMPOUND FOR MANUAL APPLICATION

- elastic
- vapour permeable
- hydrophobic
- easy to apply
- weather-resistant
- a wide palette of colours

APPLICATION
It is used for making decorative interior and exterior plaster linings. It forms a permanent hydrophobic and elastic top coating highly resistant to dirt and weather conditions. It is used in thermal insulation systems based both on mineral wool and styrofoam in MITECH M seamless thermal insulation systems for external building walls on even and appropriately prepared mineral substrates, i.e. concrete, cement renders and cement and lime plasters.

PREPARATION OF A SUBSTRATE
Ithe substrate should have good adhesion properties, be even, dry, cleaned out of anti-adhesive coatings, i.e. free of dirt, dust, grease and bitumens as well as chemical and biological aggression. Substrates having poor adhesion, i.e. loose plasters and paint coats should be removed. Uneven surfaces and substrate cavities should be levelled with the MITECH ZW levelling mortar, and then filled with the MITECH KO (KO-W) adhesive mortar. Should the first filling is insufficient and uneven areas have not been eliminated and the layer has not been smoothed out, this operation should be repeated after the first adhesive mortar layer is dried. If required, the substrate in the adhesive mortar layer should be reinforced by embedding a fibreglass mesh.
If the substrate is a reinforced layer of the thermal insulation system, it should be made according to the MITECH thermal insulation instruction. Before applying silicone plaster, each substrate should be primed with the MITECH GSI silicone primer. The drying time of the primer applied onto the substrate is about 6-8 hours in optimal weather conditions (relative humidity of 60% and ambient temperature of +20°C).

PRODUCT PREPARATION
The container contains the product ready for use and needs no other constituents. Immediately before use, the contents of the package should be mixed thoroughly with low speed mixer drill until a homogeneous consistency is obtained. Afterwards, further mixing is not recommended, as the compound may be aerated.
NOTE!
In the summertime it is allowed to dilute the plaster with a small amount of water. Maximum up to 300 ml/30 kg compound, wherein the same amount of water should be added into the package used on the same architectural fragment to ensure colour uniformity for plaster components.

PRODUCT APPLICATION
The prepared plaster compound should be applied in a thin uniform layer on the substrate by using a stainless steel smooth trowel. Then, excess plaster should be removed and reduced to a layer of the thickness equal to aggregate size in the compound (collected material can be reused after mixing).
The required texture should be given by trowelling the applied plaster with a plastic plastering float. Trowelling should be made with circular movement for a stippled texture, or with vertical or horizontal movements for a pitted texture, while applying a slight trowel pressure uniformly over the entire facade surface.

RECOMMENDATIONS REGARDING WORKMANSHIP
- Attention should be paid to properly prepared and even substrate.
- Substrates levelled with the MITECH ZW levelling mortar should be primed with the MITECH GSI primer.
- On newly made mineral substrates such as concrete, cement renders and cement and lime plasters the preliminary work and acrylic compound application can be started after at least 3-4 weeks.
- Before plaster application, each substrate should be primed.
- Priming can be done only on dried surfaces after substrate specific setting and hardening time.
- When using coloured silicone plasters it is recommended to prime the substrate with the MITECH GSI silicone primer in colours compatible with those of plaster.
- After priming the substrate it is necessary to wait until the primer dries (6-8 hours in optimal conditions), and afterwards plaster compounds can be applied. Optimal conditions mean relative humidity of 60% and ambient temperature of +20°C.
- It is necessary to adjust your performance capability to a surface area to be made once time, while considering the number of workers, their skills, equipment provided, the existing condition of the substrate and current weather conditions.
- The process of application and setting should run in rainless weather at temperature from +5°C to +25°C, and under a stable humidity level.
- Plastering should be done on surfaces not exposed to direct sunlight, wind and rain.
- The substrate temperature should be +5°C to +25°C.

RECOMMENDATIONS REGARDING WORKMANSHIP
- The newly applied layers should be protected against atmospheric precipitation and temperatures below +5°C and above 25°C until setting. Low temperature and high humidity extend plaster drying.
- When performing plastering works it is recommended to protect scaffolding with safety nets to minimise an adverse effect of external factors.
- After finishing the plastering works, opened plaster packages should be thoroughly sealed and their contents should be used as soon as possible.
- Silicone plaster compounds are manufactured from natural constituents. To gain optimal aesthetic values, a facade fragment being a separate unit should be plastered in one process cycle by using an ordered material from the same manufacturing batch.
- It is not advised to use dark colours on facade fragments highly exposed to sunlight due to increased sunlight absorption and an increased risk of aesthetics and performance deterioration of plaster linings.

PRECAUTIONS
The product has a slightly alkaline pH, thus the eyes and skin should be protected. In direct contact with the eyes, rinse immediately with plenty of water and contact a doctor.

NECESSARY TOOLS
- low speed mixer drill (with stirrer basket)
- long stainless steel trowel to apply the compound onto work surfaces
- short stainless steel trowel to remove excess compound
- short plastic plastering float to make a texture

TECHNICAL DATA:

temperature of application	from +5°C to +25°C
substrate temperature	from +5°C to +25°C
pH	ca. 9 h
bulk density	ca. 1.96 kg/dm^3
workable consistency (defined by a measuring cone)	10 - 10.5 cm

All figures listed above refer to relative humidity of 60% and ambient temperature of +20°C.

CONSUMPTION
BR 1.0 mm (dashed texture) - 1.6-2.0 kg/m^2 (product on special order)
BR 1.5 mm (dashed texture) - 2.0-2.5 kg/m^2
BR 2.0 mm (dashed texture) - 2.8-3.2 kg/m^2
KR 1.5 mm (pitted texture) - 1.8-2.2 kg/m^2
KR 2.0 mm (pitted texture) - 2.3-2.5 kg/m^2
To determine the coverage rate on a specified substrate more precisely it is necessary to perform appropriate tests.

STORAGE AND TRANSPORTATION
Keep in undamaged originally sealed containers at temperature of +5°C to +25°C. Protect from freezing and overheating,
Suitability for use - 24 months from the date of manufacture specified on the container. Keep away from children's reach.

FORMAL AND LEGAL DOCUMENTS
European Technical Approval ETA-10/0078.
European Technical Approval ETA-10/0079.
Declaration of Performance No. SI/7679/16 of 21.03.2016.
Certificate of Conformity No. 1020-CPR-070042018.
Certificate of Conformity No. 1020-CPR-070042019.

PACKAGES
Plastic pails 25 kg, pallet 800 kg

COMPOSITION
MITECH TSI BR and KR silicone plasters are compounds of plastic consistency, containing silicone binder, hydrophobic additives, natural aggregate and modifiers and pigments.

COLOURS
MITECH 300 palette of colours

PRIMER FOR SILICONE PLASTERS

‹ reduces substrate absorbency
‹ increases adhesion
‹ available in colours

APPLICATION
Silicone primer for priming substrates prior to application of silicone primers, as well as acrylic paints, indoors and outdoors. Used for priming a reinforced layer in MITECH insulation systems and various types of substrate, such as: concrete substrates, cement and cement-lime plasters, gypsum boards, plasterboards and chipboard. MITECH GSI primer reduces the absorbency and makes it homogeneous as well as it reduces the dustiness of substrate and increases adhesion. The preparation is an inseparable element of MITECH building insulation systems. It is offered in colours consistent with plaster colours.

PREPARATION OF A SUBSTRATE
If a substrate is a reinforced layer of the insulation system, it should be prepared in accordance with MITECH Insulation Instructions. A substrate should be sound, levelled, dry, with any adhesive residues such as dirt, grease, dust and bitumens removed, and free from biological or chemical contamination. Substrates with poor adhesion (such as flaked plasters and paint coats) should be removed. On new mineral substrates, such as concrete, cement and cement-lime plasters, preparation works and priming may be started no sooner than after 3 - 4 weeks of stabilizing.

PRODUCT PREPARATION
The container includes a ready-to-use product and other components cannot be added. Directly before use, mix the whole content of a container thoroughly with a slow-speed drill with a paddle mixer, until the consistency is homogeneous. After achieving the homogenous consistency, it is not recommended to continue mixing, as the compound may get aerated.

PRODUCT APPLICATION
After such preparation, spread the primer with a thin, homogenous layer over the substrate; use a brush or a paint roller.

RECOMMENDATIONS REGARDING WORKMANSHIP
- On new mineral substrates, such as concrete, cement and cement-lime plasters, preparation works and application of a primer may be started no sooner than 3-4 weeks after finishing the substrate. after 3-4 weeks after preparation of a substrate.
- Only a dry surface may be primed, no sooner than after a lapse of a binding time and hardening time adequate for a given substrate.
- With application of coloured silicone plasters, it is recommended to prime a substrate with MITECH GSI primer, in colours that match the colours of a plaster.
- After priming a substrate, wait until the primer dries, that is 4-6 h, when drying in optimal conditions. Optimal conditions include relative air humidity 60% and air temperature +20°C.
- The process of application and bonding should take place with rainless weather, at a temperature from +5°C do +25°C and with stable air humidity.
- Paint works should be carried out on surfaces not exposed to direct sunlight, wind and rain.
- Substrate temperature should be +5°C do +25°C.
- Fresh layers should be secured against precipitation, low and high temperatures (below +5°C and above 25°C)
- Low temperature and high humidity prolong the plaster drying process
- Before priming, cover and secure properly all the elements in the working area that are not to be primed

PRECAUTIONS
The product is strongly alkaline, protect eyes and skin. In case of direct contact with eyes, rinse with copious amounts of water and consult a doctor.

NECESSARY TOOLS
ow-speed paddle mixer/ drill
depending on a painting technique applied: a brush or a paint roller

TECHNICAL DATA

temperature of application	from +5°C to +25°C
substrate temperature	from +5°C to +25°C
pH	ca. 8 h
specific gravity	ca. 1.49 kg/dm^3
drying time	ca. 4-6 h
consistency	dense liquid

CONSUMPTION
Average consumption of a primer on an adequately prepared substrate falls within the range from 0,25 – 0,28 kg/m^2.
To estimate exact consumption of the product, perform a test on a particular substrate.

STORAGE AND TRANSPORTATION
Store in an originally sealed container, free of damage, at a temp. from +5°C to +25°C.
Shelf life is 12 months from the date of manufacture indicated on the container.
A product should be stored in a place out of the rich of children

FORMAL AND LEGAL DOCUMENTS
European Technical Approval ETA-10/0078.
European Technical Approval ETA-10/0079.
Declaration of Performance No. AS/7679/16 of 21.03.2016.
Certificate of Conformity No. 1020-CPR-070042018.
Certificate of Conformity No. 1020-CPR-070042019.

PACKAGES
Plastic pails 5 kg, pallet 360 kg; 10 kg, pallet 480 kg; 20 kg, 660 kg.

COMPOSITION
MITECH GSI is a dense liquid consisting of a silicone bond, fillers, modifiers and pigments.

COLOURS
MITECH 300 colour scheme – selected colours marked with G.

MITECH KO

UNIVERSAL ADHESIVE FOR THERMAL INSULATION SYSTEMS

‹ for attaching polystyrene and mesh embedding

‹ includes microfibres

‹ high adherence to polystyrene and substrate

APPLICATION

Intended for construction of layers reinforced with a fiberglass mesh and to attach polystyrene boards to typical mineral substrates. Used for interior thermal insulation in buildings with MITECH seamless thermal insulation system (composite). Used also to level irregularities (up to 5 mm) and to smooth mineral substrates prior to application of thin-layer plasters and paints.

PREPARATION OF A SUBSTRATE

A substrate for a reinforced layer should be made in accordance with a MITECH seamless insulation technology (thermal insulation composite system). Polystyrene surface should be sanded, dedusted and dry. Prior to installation of polystyrene boards, a substrate should be sound, levelled, dry, with any adhesive residues such as dirt, grease, dust and bitumens removed, and free from biological or chemical contamination. Substrate layers with poor adhesion, e.g. weak plasters, flaked paint coats, unbound brick wall particles should be removed and the irregularities primed with MITECH MG deep penetration primer. Level any 5 – 15 mm irregularities and/or cavities with MITECH ZW levelling primer. Before attaching polystyrene foam boards to a weak substrate, perform an adhesion test. To perform a test, attach several 10 x 10 samples of polystyrene in various places of a façade and tear them off after 3 days of drying. Soundness (load bearing) is sufficient when a tear occurs in the polystyrene foam layer. If the whole sample comes off, including the adhesive and the substrate, it is necessary to clean the facade of the poorly bound layer. Afterwards, prime the substrate with a MITECH MG deep penetration primer and perform another test after it dries up. If the result of another test is negative, consider additional mechanical fixtures or adequate preparation of the substrate.

PRODUCT PREPARATION

Pour the content of a bag to a container with 6,25 – 6,5 l of water and mix thoroughly with a slow-speed drill with a paddle mixer, until a homogeneous consistency is achieved. After 5-10 min. and repeated mixing, the compound is ready to use. Depending on a temperature and air humidity, a ready-made compound is fit for use for ca. 2 hours.

PRODUCT APPLICATION

Preparation of a reinforced layer. Over the surface of polystyrene boards, dedusted after sanding, make (no sooner than after 48 h from attaching the boards) a layer reinforced with a fiber glass mesh. Apply the adhesive mortar over the polystyrene boards, with a continuous ca. 3-4 mm layer, with vertical or horizontal strips, to the width of the reinforce mesh. Immediately after application of the mortar, embed fibreglass so that it is evenly stretched and fully embedded in the mortar. Apply adjoining stripes of the mesh with an overlap not less than 10 cm. If you fail to achieve a smooth surface, apply another thin layer of a mortar over a dry reinforced layer, in order to level and smooth the surface properly. The reinforced level should be from 3 to 5 mm thick. **Attaching polystyrene foam.** Put 10 – 12 cm of ready-made adhesive compound on polystyrene boards, in the amount of 8 - 10, and a thin, ca. 4 cm layer around the circumference. A properly attached adhesive compound should cover min. 40% of the surface of the board. The compound should not flow out on the surface of the boards, to avoid gaps between the boards. After putting a compound, attach a board to its place on a wall immediately, and press it with a trowel. Attach polystyrene foam boards in a staggered system. After initial bonding of the mortar (not less than 48 hours), sand the whole front surface of the boards with a grater or a trowel with a coarse sandpaper. The attached boards should be fitted with extra mechanical dowels, in accordance with a technical design (not less than 4 dowels per a square meter).

RECOMMENDATION REGARDING WORKMANSHIP

- On fresh mineral substrates, such as concrete, cement plasters and cement-lime plasters, preparation works and application of an adhesive compound may be started no sooner than after 3 - 4 weeks of stabilizing.
- Before polystyrene is attached to an absorbent mineral substrate, prime such substrate in advance with MITECH MG primer.
- Make sure your potential is enough for one - run application, consider the equipment, an existing condition of a substrate and weather
- The process of preparation and bonding of an adhesive compound should take place with rainless weather, at an air temperature and substrate temperature of +5°C do 25°C. A reinforced layer should not be prepared when it's raining or on surfaces exposed to direct and intense sunlight and wind. When installing insulation, it is recommended to secure the scaffolding with protection nets, to reduce exposure to adverse effect of external factors. If a reinforced layer is not constructed on a polystyrene attached to the substrate within 2 weeks, the condition of the external layer of the polystyrene must be reassessed. Boards with yellowed and dusty surface should be sanded before application of an adhesive compound.
- Fresh adhesive compound layers should be protected against precipitation and effects of temperatures below +5°C and over +25°C until bound, not less than 24 hours. Low temperature, increased humidity, lack of proper air circulation prolong the drying time of an adhesive.
- Make sure substrate joints are properly constructed and finished.
- After finished work, clean the tools, wash your hands with running water and bear in mind that it is difficult to remove dry hardened paint. To remove fresh contaminations from the surface, use a moistened cloth.
- MITECH KO adhesive is a part of MITECH insulation system. The material is fully reliable and its effectiveness guaranteed when it is used with other elements of the system, in accordance with a technology of workmanship.

PRECAUTIONS

Adhesive compound, combined with water, is alkaline, protect eyes and skin. In case of direct contact with eyes, rinse with copious amounts of water and consult a doctor.

NECESSARY TOOLS

- a building bucket; low-speed paddle mixer/ drill; pallet knife and stainless steel trowel; stainless steel trowel; trowel with coarse sandpaper

TECHNICAL DATA

temperature of application	from +5°C to +25°C
substrate temperature	from +5°C to +25°C
mixing proportions for a reinforced layer	6,25 – 6,5 l/m² per 25 kg of adhesive mortar
use up within	ca. 2 h
adhesion to polystyrene	0.082 MPa
consistency	dry powder
colour	grey

CONSUMPTION

Average consumption for reinforced layer is ca. 3,5 – 4,0 kg/m². Average consumption for attaching polystyrene boards to an adequately prepared substrate is ca. 4-5 kg/m². To establish precise consumption on a particular substrate, perform adequate testing. Consumption depends on how well the insulation layer and a substrate are prepared.

STORAGE AND TRANSPOTRATION

Originally closed bag should be secured against dampness
Shelf life is12 months from the date of manufacture indicated on the bag.
A product should be stored in a place out of the rich of children

PACKING

25 kg palette 1250 kg

FORMAL AND LEGAL DOCUMENTS

European Technical Approval ETA-10/0078.
Declaration of Performance No. KM/7566/16 of 21.03.2016.

COMPOSITION

MITECH KO adhesive mortar is a dry compound of quality mineral bonds, quartz fillers, polymers and modifiers.

MITECH KS

ADHESIVE FOR POLYSTYRENE FOAM

‹ for polystyrene foam
‹ high adhesion to polystyrene and substrate
‹ initial strength gain

APPLICATION
Intended for polystyrene foam boards for typical mineral substrates. Used for interior thermal insulation in buildings with MITECH seamless thermal insulation system (insulation composite system).

PREPARATION OF A SUBSTRATE
A substrate should be sound, levelled, dry, with any adhesive residues such as dirt, grease, dust and bitumens removed, and free from biological or chemical contamination. Substrate layers with poor adhesion, e.g. weak plasters, flaked paint coats, unbound brick wall particles should be removed and the irregularities primed with MITECH MG deep penetration primer. Level any 5 – 15 mm irregularities and/or cavities with MITECH ZW levelling primer. Before attaching polystyrene foam boards to a weak substrate, perform an adhesion test. To perform a test, attach several 10 x 10 polystyrene foam samples to a facade in various places and tear them off manually no sooner than after 3 days. Load bearing is sufficient when a tear occurs in the polystyrene foam layer. If the whole sample comes off, including the adhesive and the substrate, it is necessary to clean the facade of poorly bound layer. Afterwards, prime the substrate with a MITECH MG deep penetration primer and after it dries (ca. 4 - 6 h), perform another adhesion test. If the result of another test is negative, consider additional mechanical fixtures or adequate preparation of the substrate.

PRODUCT PREPARATION
Pour the content of a bag to a container with 6,25 – 6,5 l of water and mix thoroughly with a slow-speed drill with a paddle mixer, until a homogeneous consistency is achieved. After 5 -10 min. and repeated mixing, the compound is ready to use. Depending on a temperature and air humidity, a ready-made compound is fit for use for ca. 2 hours.

PRODUCT APPLICATION
Attaching polystyrene foam
Put 10 – 12 cm of ready-made adhesive compound on polystyrene boards, in the amount of 8 -10, and a thin, ca. 4 cm layer around the circumference. A properly spread adhesive compound should cover min. 40% of the surface of the board. The compound should not flow out onto the surface of the boards, so that any gaps between the boards are avoided. After putting a compound, attach a board to its place on a wall immediately, and press it with a trowel.
Attach polystyrene foam boards in a staggered system. After initial bonding of a compound (min. after 48 h), grind the whole front surface of the attached boards with a polystyrene rasp or a trowel with a thick sandpaper. The boards attached should be additionally secured with mechanical fastening in accordance with a technical design (not less than 4 dowels per a square meter).

RECOMMENDATIONS REGARDING WORKMANSHIP
- On new mineral substrates, such as concrete, cement and cement-lime plasters, preparation works and application of an adhesive compound may be started no sooner than 3-4 weeks.
- Before polystyrene is attached to an absorbent mineral substrate, prime such substrate in advance with MITECH MG primer.
- Adjust workmanship options to a surface to be covered with a single layer, consider the number of staff, their skills, equipment, the condition of a substrate, weather conditions.
- The process of preparation and bonding of an adhesive compound should take place in rainless weather, at an air temperature and substrate temperature of +5°C do +25°C.
- When installing insulation, it is recommended to secure the scaffolding with protection nets, to reduce exposure to adverse effect of external factors.
- Fresh adhesive compound layers should be protected against precipitation and effects of temperatures below +5°C and over +25°C until bound.
- Low temperature, increased humidity, lack of proper air circulation prolong a drying time of an adhesive.
- Make sure substrate joints are properly constructed and finished.
- After finished work, clean the tools, wash your hands with running water and bear in mind that it is difficult to remove dry hardened paint. To remove fresh contaminations from the surface, use a moistened cloth.
- MITECH KS adhesive is a part of MITECH insulation system. The material is fully reliable and its effectiveness is guaranteed, when it is used along with other elements of the system, in accordance with a technology of workmanship.

PRECAUTIONS
Adhesive compound, combined with water, is alkaline, protect eyes and skin. In case of direct contact with eyes, rinse with copious amounts of water and consult a doctor.

NECESSARY TOOLS
- a building bucket
- low-speed paddle mixer/ drill.
- pallet knife and stainless steel trowel

TECHNICAL DATA

temperature of application	from +5°C to +25°C
substrate temperature	from +5°C to +25°C
mixing proportions	6.25 – 6.5 l water for 25 kg of adhesive compound
use up within	ca. 2 h
adhesion to concrete	0.25 MPa
adhesion to polystyrene foam	0.08 MPa
consistency	dry powder
colour	grey

CONSUMPTION
Average consumption for attaching polystyrene boards to an adequately prepared substrate is ca. 4-5 kg/m^2. To establish consumption on a particular substrate precisely, perform adequate testing. The consumption depends largely on how well the substrate has been prepared.

STORAGE AND TRANSPOTRATION
Originally closed bag should be secured against dampness
Shelf life is12 months from the date of manufacture indicated on the bag.
A product should be stored in a place out of the rich of children

PACKING
25 kg palette 1250 kg

FORMAL AND LEGAL DOCUMENTS
European Technical Approval ETA-10/0078.
Declaration of Performance No. KM/7466/16 of 21.03.2016.

COMPOSITION
MITECH KS adhesive mortar is a dry compound of quality mineral bonds, quartz fillers, polymers and modifiers.

MITECH KO-W

GENERAL PURPOSE ADHESIVE FOR MINERAL WOOL BASED THERMAL INSULATION SYSTEMS

‹ for bonding mineral wool and mesh embedding
‹ contains microfibres
‹ high adhesion to mineral wool and substrates

APPLICATION
It is used for making a mineral wool based layer reinforced with a fibreglass mesh and for bonding mineral wool boards to typical mineral substrates. It is used for thermal insulation of external building walls in MITECH M seamless thermal insulation systems. It is also used for levelling (uneven surfaces up to 5 mm) and smoothing mineral substrates before applying paints and thin layer plasters.

PREPARATION OF THE SUBSTRATE
The substrate for making a reinforced layer should be prepared according to the MITECH M seamless thermal insulation systems.
The styrofoam surface should be polished, dry and free of dust. Before applying styrofoam boards, the substrate should have good adhesion properties, be even, dry, cleaned out of anti-adhesive coatings, i.e. free of dirt, dust, grease and bitumens as well as chemical and biological aggression. The substrate layers having poor adhesion, e.g. poor plastering finish, loose paint coats or unbound masonry portions should be removed and then primed with the MITECH MG deep-penetration primer. Uneven surfaces and substrate cavities up to 5-15 mm deep should be levelled with the MITECH ZW levelling mortar.
Before bonding mineral wool boards to poor substrates, it is necessary to perform the adhesion test. The adhesion test consists in bonding several mineral wool samples of 10 x 10 cm in size to various points on the facade and and manual tearing off after at least 3 day drying. The substrate adhesion properties are sufficient breaking off occur within the wool layer. If the entire sample with adhesive and substrate layer is broken off, it is necessary to clean the facade of the poorly bound layer. Then, the substrate should be primed with the MITECH MG deep penetration primer, and after drying out, another adhesion test should be carried out. If this test also fails, additional mechanical fixings or adequate preparation of the substrate should be considered.

PRODUCT PREPARATION
Pour the contents of the package into a container containing the measured amount of water (6.25 - 6.5 l) and mix thoroughly with a low speed mixer drill until a homogeneous consistency is obtained. After 5-10 minutes and after mixing once again, the mortar is ready for use. Depending on ambient temperature and humidity, the ready mortar should be used in around 2 hours.

PRODUCT APPLICATION
Making a reinforced layer
A fibreglass mesh reinforced layer should be made on the surface of pinned mineral wool boards free of dust (not earlier than 48 hours after bonding them).
Apply the prepared adhesive mortar onto mineral wool boards in a continuous layer approx. 3-4 mm thick in vertical or horizontal strips over the width of the reinforcing mesh. After applying the mortar, the fibreglass mesh should be immediately embedded to be uniformly tightened and completely embedded in the mortar. Adjacent mesh strips should be laid with at least 10 cm overlap. Should no smooth surface is obtained, another thin layer of adhesive mortar of 1 mm in depth should be applied onto the dried mesh reinforced layer to obtain a completely levelled and smoothed surface. The thickness of reinforced layer should be from 3 to 5 mm.
Bonding mineral wool boards
Before applying a proper adhesive layer onto a wool board of disturbed arrangement of fibres, it is necessary to spread a thin layer of adhesive where adhesive to be applied to make a “bonding” layer. The ready adhesive mortar should be applied onto mineral wool boards in 8 - 10 cakes of approx. 10-12 cm in diameter and around the circumference in a layer of approx. 4 cm wide. Properly applied adhesive mortar should cover at least 40% of the board surface area. The mortar should not flow on the board surface to avoid gaps between boards. Once the mortar is applied the board should be immediately placed against the wall and pressed with a plastering float.
Mineral wool boards should be bound while keeping a staggered arrangement. Once the mortar initially sets after at least 48 hours, the applied boards require to be secured with additional mechanical fasteners according to the engineering design.
Before applying a proper adhesive layer onto a lamella wool board, it is necessary to spread a thin layer of adhesive where adhesive to be applied to make a “bonding” layer. Ready adhesive mortar should be applied onto mineral wool boards with a toothed trowel with teeth approx. 12 mm long. The mortar should not flow on the board surface to avoid gaps between boards. Once the mortar is applied the board should be immediately placed against the wall and pressed with a plastering float.
Once the mortar initially sets after at least 48 hours, the applied boards require to be secured with additional mechanical fasteners according to the engineering design.

APPLICATION GUIDELINES
- On newly made mineral substrates such as concrete, cement renders and cement and lime plasters the preliminary work and adhesive application can be started only after conditioning, i.e. after 3-4 weeks.
- Before bonding mineral wool to absorptive mineral substrates it is necessary to prime them with the MITECH MG primer.
- It is necessary to adjust your performance capability to a surface area to be made once time, while considering the number of workers, their skills, equipment provided, the existing condition of the substrate and current weather conditions.
- The process of adhesive mortar preparation and setting should be carried out in rainless weather at air and substrate temperatures from +5°C to +25°C.
- The reinforced layer should not be made when raining or on surfaces exposed to direct sunlight and wind.
- When performing thermal insulation works it is recommended to protect scaffolding with safety nets to minimise an adverse effect of external factors.
- The newly applied layers should be protected against atmospheric precipitation and temperatures below +5°C and above 25°C until setting for at least 24 hours.
- Low temperature, elevated humidity and poor air circulation extend adhesive drying time.
- Do not forget to make and finish expansion joints present in the substrate.
- After finishing work please wash tools and your hands with running water, remembering that cleaning after adhesive drying is difficult. The surface of freshly soiled components should be wiped down with a damp cloth.
- MITECH KO-W general purpose adhesive is an element of the MITECH M thermal insulation system. Reliable and guaranteed efficiency of this materials is achieved only if it is used together with other system elements in accordance with manufacturing technology.

PRECAUTIONS
Adhesive mortar when bound with water has an alkaline pH, thus the eyes and skin should be protected. In direct contact with the eyes, rinse immediately with plenty of water and contact a doctor.

NECESSARY TOOLS
- building bucket
- low speed mixer drill (with stirrer basket)
- spatula and stainless steel trowel
- stainless steel trowel

TECHNICAL DATA

temperature of application	from +5°C to +25°C
substrate temperature	from +5°C to +25°C
mixing proportions for a reinforced layer	6.25-6.5 l/m² per 25kg of adhesive mortar
use up within	ca. 2 h
adhesion to mineral wool boards	0.013 MPa
colour	grey
bulk density	ca. 1.40 kg/dm³

CONSUMPTION
Average consumption for reinforced layer is ca. 5 – 6 kg/m². Average consumption for attaching polystyrene boards to an adequately prepared substrate is ca. 5-6 kg/m². To establish precise consumption on a particular substrate, perform adequate testing. Consumption depends on how well the insulation layer and a substrate are prepared.

STORAGE AND TRANSPOTRATION
Originally closed bag should be secured against dampness
Shelf life is12 months from the date of manufacture indicated on the bag.
A product should be stored in a place out of the rich of children

PACKING
25 kg palette 1250 kg

FORMAL AND LEGAL DOCUMENTS
European Technical Approval ETA-10/0079.
Declaration of Performance No. KW/7620/16 of 21.03.2016.

COMPOSITION
MITECH KO-W adhesive mortar is a dry compound of quality mineral bonds, quartz fillers, polymers and modifiers.

MITECH KS-W

ADHESIVE FOR BONDING MINERAL WOOL BOARDS

› for bonding mineral wool
› high adhesion to mineral wool and substrates
› initial strength increase

APPLICATION
It is used for bonding mineral wool boards to typical mineral substrates. It is used for thermal insulation of external building walls in MITECH M seamless thermal insulation systems.

PREPARATION OF THE SUBSTRATE
The substrate should have good adhesion properties, be even, dry, cleaned out of anti-adhesive coatings, i.e. free of dirt, dust, grease and bitumens as well as chemical and biological aggression. The substrate layers having poor adhesion, e.g. poor plastering finish, loose paint coats or unbound masonry portions should be removed and then primed with the MITECH MG deep-penetration primer. Uneven surfaces and substrate cavities up to 5-15 mm deep should be levelled with the MITECH ZW levelling mortar. Before bonding mineral wool boards to poor substrates, it is necessary to check their adhesion. The adhesion test consists in bonding several mineral wool samples of 10 x 10 cm in size to various points on the facade and manual tearing off after at least 3 days. The substrate adhesion properties are sufficient breaking off occur within the wool layer. If the entire sample with adhesive and substrate layer is broken off, it is necessary to clean the facade of the poorly bound layer. Then, the substrate should be primed with the MITECH MG deep penetration primer, and after drying out (approx. 4 - 6 hours), another adhesion test should be carried out. If this test also fails, additional mechanical fixings or adequate preparation of the substrate should be considered.

PRODUCT PREPARATION
Pour the contents of the package into a container containing the measured amount of water (6.25 - 6.5 l) and mix thoroughly with a low speed mixer drill until a homogeneous consistency is obtained. After 5-10 minutes and after mixing once again, the mortar is ready for use. Depending on ambient temperature and humidity, the ready mortar should be used in around 2 hours.

PRODUCT APPLICATION
Bonding mineral wool boards
Before applying a proper adhesive layer onto a wool board of disturbed arrangement of fibres, it is necessary to spread a thin layer of adhesive where adhesive to be applied to make a “bonding” layer. The ready adhesive mortar should be applied onto mineral wool boards in 8 - 10 cakes of approx. 10-12 cm in diameter and around the circumference in a layer of approx. 4 cm wide. Properly applied adhesive mortar should cover at least 40% of the board surface area. The mortar should not flow on the board surface to avoid gaps between boards. Once the mortar is applied the board should be immediately placed against the wall and pressed with a plastering float.
Mineral wool boards should be bound while keeping a staggered arrangement. Once the mortar initially sets after at least 48 hours, the applied boards require to be secured with additional mechanical fasteners according to the engineering design.
Before applying a proper adhesive layer onto a lamella wool board, it is necessary to spread a thin layer of adhesive where adhesive to be applied to make a “bonding” layer. Ready adhesive mortar should be applied onto mineral wool boards with a toothed trowel with teeth approx. 12 mm long. The mortar should not flow on the board surface to avoid gaps between boards. Once the mortar is applied the board should be immediately placed against the wall and pressed with a plastering float.
Once the mortar initially sets after at least 48 hours, the applied boards require to be secured with additional mechanical fasteners according to the engineering design.

APPLICATION GUIDELINES
- On newly made mineral substrates such as concrete, cement renders and cement and lime plasters the preliminary work and adhesive application can be started only after conditioning, i.e. after 3-4 weeks.
- Before bonding mineral wool to absorptive mineral substrates it is necessary to prime them with the MITECH MG primer.
- It is necessary to adjust your performance capability to a surface area to be made once time, while considering the number of workers, their skills, equipment provided, the existing condition of the substrate and current weather conditions.
- The process of adhesive mortar preparation and setting should be carried out in rainless weather at air and substrate temperatures from +5°C to +25°C.
- The newly applied layers should be protected against atmospheric precipitation and temperatures below +5°C and above 25°C until setting.
- When performing thermal insulation works it is recommended to protect scaffolding with safety nets to minimise an adverse effect of external factors.
- Low temperature, elevated humidity and poor air circulation extend adhesive drying time.
- Do not forget to make and finish expansion joints present in the substrate.
- After finishing work please wash tools and your hands with running water, remembering that cleaning after adhesive drying is difficult. The surface of freshly soiled components should be wiped down with a damp cloth.
- MITECH KS-W adhesive is an element of the MITECH M thermal insulation system. Reliable and guaranteed efficiency of this materials is achieved only if it is used together with other system elements in accordance with manufacturing technology.

PRECAUTIONS
Adhesive mortar when bound with water has an alkaline pH, thus the eyes and skin should be protected. In direct contact with the eyes, rinse immediately with plenty of water and contact a doctor.

NECESSARY TOOLS
- a building bucket
- low speed paddle mixer/ drill
- pallet knife and stainless steel trowel

TECHNICAL DATA

temperature of application	from +5°C to +25°C
substrate temperature	from +5°C to +25°C
mixing proportions	6.25 – 6.5 l water for 25 kg of adhesive compound
use up within	ca. 2 h
adhesion to concrete	0.61 MPa
adhesion to mineral wool boards	0.014 MPa
colour	grey
bulk density	ca. 1.40 kg/dm^3

CONSUMPTION
The average spread rate when bonding mineral wool boards to a freshly prepared substrate is around 5- 6 kg/m^2.
To determine the coverage rate on a specified substrate more precisely it is necessary to perform appropriate tests. The spread rate depends to a large extent on preparation of the substrate.

STORAGE AND TRANSPOTRATION
Originally closed bag should be secured against dampness
Shelf life is12 months from the date of manufacture indicated on the bag.
A product should be stored in a place out of the rich of children

PACKING
25 kg palette 1250 kg

FORMAL AND LEGAL DOCUMENTS
European Technical Approval ETA-10/0079.
Declaration of Performance No. KM/7621/16 of 21.03.2016.

COMPOSITION
MITECH KS-W adhesive mortar is a dry compound of quality mineral bonds, quartz fillers, polymers and modifiers.

Mitech®
PROFESSIONAL

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