

Torch on membrane system

COMPLETE ROOF SYSTEM with excellent guarantee conditions



IKO Primer AD

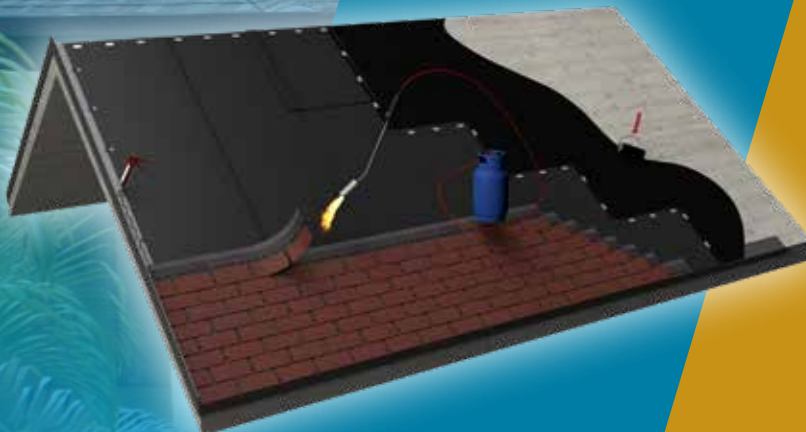


IKO Armourbase Thermo AD



IKO Shingles

NEW
aesthetical
roof concept
for **concrete**
and low slope
OSB roof decks



IKO Armourbase Thermo AD

is an aesthetical solution for low sloped OSB roofs (min. 4° – max. 15°) or concrete roofs (min. 4° – max. 45°) with a secure concept system, finished with IKO shingles.

The concept consists of a primer for the roof deck and a thermo-adhesive and heat activated waterproofing membrane, where all residential IKO shingles can be adhered to the membrane (no nailing required).

Next to this mechanical fixing the membrane is available to install and secure on the OSB or concrete deck.



IKO Primer AD



IKO Armourbase Thermo AD



IKO Shingles

Ideal solution for...

Low slope wooden decks:

Slopes between min. 4° and max. 15° need to be applied horizontally without the **Armourbase Thermo AD** being affixed mechanically on overlaps.

Concrete decks:

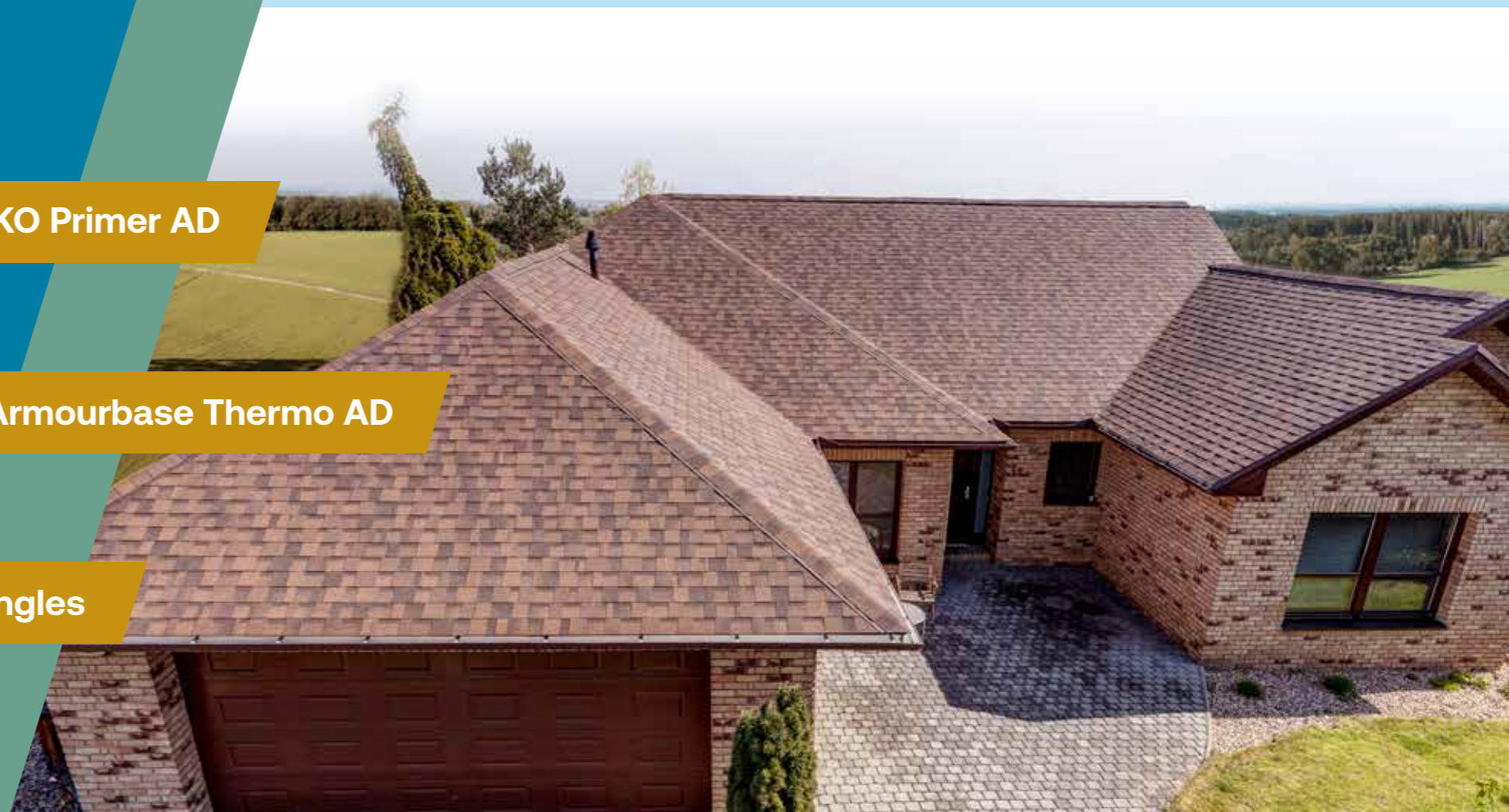
Horizontal application without mechanical fixing on slopes between min. 4° and max. 15°. For steeper slopes (max. 45°), vertical application with mechanical fixing of the membrane with screws (+ metal pressure plate) on the overlaps is mandatory.



Thermal insulation on concrete / OSB shingle roof (min. 4°, max. 15°):

The thermal insulation must be applied and mechanically fixed on the concrete deck or on the OSB deck only for slopes between 4° and 15°. In these cases, **Armourbase Thermo AD** must also be fixed on overlaps because of the underlayment's adherence to insulating elements.

Renovation existing flat roofs (> 4°): (only if the roof is dry, clean and watertight) **Primer AD +** mechanical fixation needed to install this concept.



Aesthetical solution
for visible low slope roof:
opportunities for
high city building roofs,
where the roof is visible



Prefab
concrete
housing



“Pimp”
your membrane:
renovation solution
for low sloped roofs
(4° to 15°)

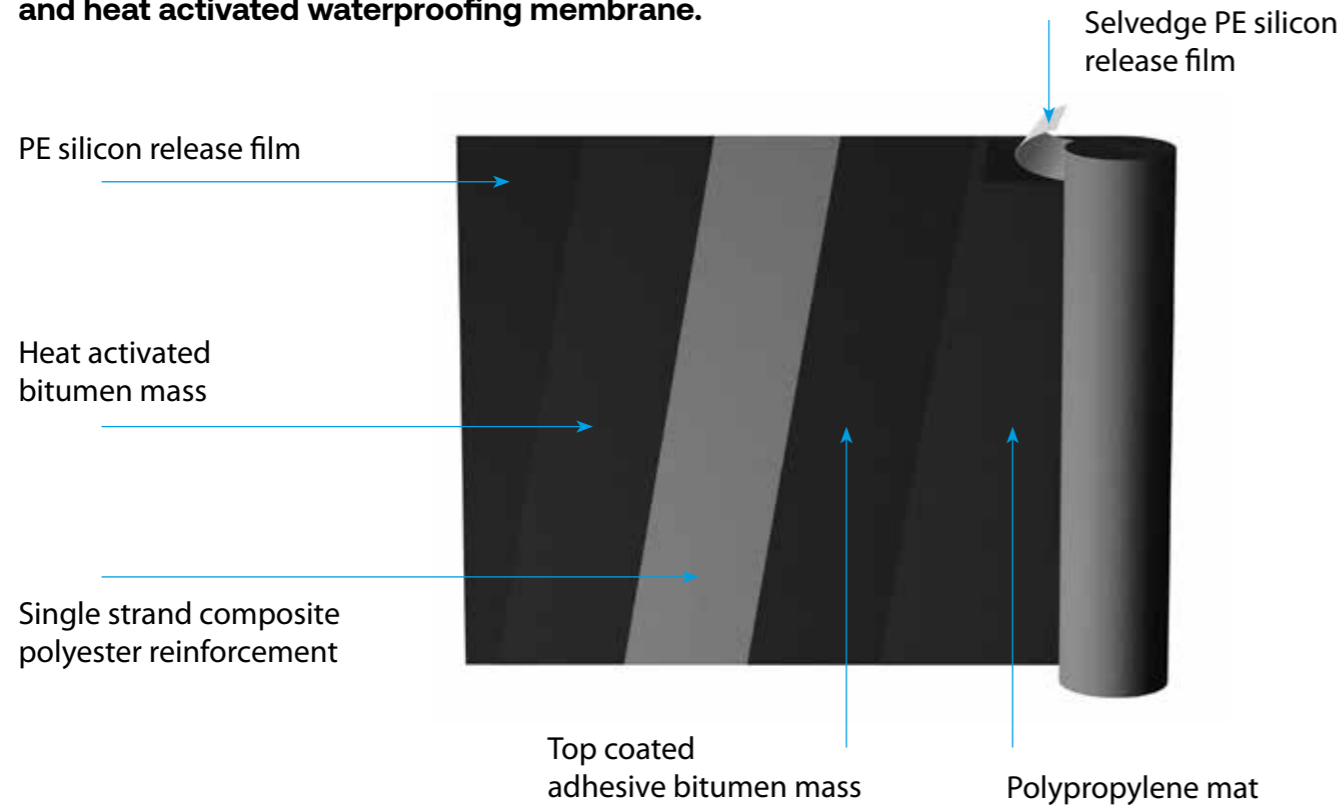


- For **new roofs** and **renovation projects**
- **Closed** and **fire resistant** roof system
- **Waterproof** and **weather resistant**
- Exceptional **wind resistance**
- Strong and **secure adherence** to the construction thanks to APP thermo-adhesiveness
- Easy to install: **peel, stick, heat, stuck** and done
- Less noise during application – **silent application**
- Application **time reduced** by approx. 50% (wooden application)
- The **non-slip surface** guarantees a totally safe work environment, especially on steeper slopes
- There are **no lines** on the membrane surface, only a bituminous strip positioned lengthwise highlighting the overlapping area
- **High dimensional stability** thanks to Armourbase Thermo AD membrane



IKO Armourbase Thermo AD

IKO Armourbase Thermo AD is a thermo-adhesive and heat activated waterproofing membrane.



Technical characteristics	Unit	Reference norm	Product description/Performance	Tolerance
Type of reinforcement			Reinforced polyester	
Upper face finish			Polypropylene mat / Selvedge PE silicon release film	
Lower face finish			PE silicon release film	
Length	m	EN 1848-1	7,5	± 1 %
Width	m	EN 1848-1	1,0	± 1 %
Thickness	mm	EN 1849-1	2,5	± 5 %
Flexibility at low temperature	°C	EN 1109	NPD	
Tensile strength L/T	N/50 mm	EN 12311-1	400/300	± 20 %
Elongation at break L/T	%	EN 12311-1	35/35	± 15
Nail shank tear resistance L/T	N	EN 12310-1	120/120	± 30 %
Dimensional stability	%	EN 1107-1	0,3	≤
External fire performance		EN 13501-5	Class F _{ROOF}	
Reaction to fire		EN 13501-1	Class F	
Watertightness	kPa	EN 1928	60	≥
Water vapour transmission	μ	EN 1931	100.000	≥
Peel resistance at 180° on APP shingle	N	EN 12316-1	50	-20 N
Peel resistance at 90° on wood support	N	EN 12316-1	70	-20 N

Roof preparation

Climate conditions for an application

Only apply when the temperature is above + 5 °C. Below + 5 °C there may be a risk of ice on the deck. This can result in moisture being trapped between the underlayment and the deck, which can result in the formation of blisters. In summer, in hot countries it is advisable to apply the underlayment in the coolest part of the day, avoiding hours in the middle of the day when the sun is at its hottest.

Roof deck

The roof deck can be made out of OSB or concrete. The OSB wooden deck must be smooth, firm, dry and securely fastened. The deck should be made out of OSB with a tooth and groove locking system. That is to say without gaps between the boards. All wooden products must be properly conditioned to be at moisture equilibrium. Decking should be installed in a staggered manner and sufficiently supported.

Failure to use proper decking material, which can provide a rigid deck surface, may result in deck movement which can damage the shingles. In case of concrete, it must be smooth, flat and free from any cracks. The surface must be smoothed with a trowel and any cracks or dips must be filled with mortar.

With new concrete or hollow-core substrates, it is advisable to allow a curing period of 8 days to 3 weeks, depending on the season, before installing layers. After carrying out the operations specified above, use a roller or a brush to spread the **IKO Primer AD** (bituminous primer) in the areas where the membrane will be placed. The primer has the important function of increasing the underlayment's adhesion. The primer has to dry for a least 1 hour.

Roof slope

The minimum slope for torch-on applications is 4°. Below this slope there is the risk of ponding water and this system is not recommended. The maximum slope

for wooden decks is recommended for 15° as shingles can be applied regularly from this slope. For concrete decks, the maximum slope is set for 45°. For concrete decks and slopes between 15° and 45°, the mechanical fixing of **Armourbase Thermo AD** is mandatory.

Types of shingles

All types of **IKO shingles** can be used and combined with the torch-on method.

Application of the underlayment



Wooden deck (OSB)
slope from 4° to 15° – horizontal application of **Armourbase Thermo AD** without fixing



Concrete deck
slope from 4° to 15° – horizontal application of **Armourbase Thermo AD** without fixing



Concrete deck
slope from 15° to 45° – vertical application of **Armourbase Thermo AD** with fixing

Apply the membrane parallel with the eaves – vertical and horizontal overlaps should be min. 10 cm. The position of **Armourbase Thermo AD** on the concrete deck with slopes higher than 15° should be perpendicular to the eaves. The concrete deck must be primed with the **Primer AD** (bituminous primer) before the application.

Set the **Armourbase Thermo AD** roll and remove the release film from the back. In warm, sunny weather the underlayment will stick with the wooden or primed concrete deck in a short time. In cold weather you can help to set the **Armourbase Thermo AD** underlayment with a hot air gun or a torch..

For slopes between 4° and 15°, it is not necessary to fix the underlayment on overlaps. For concrete decks with slopes between 15° and 45°, fixation is mandatory. This can be ensured with screws and metal pressure plates for concrete. There is a need to pre-drill holes every 30 cm on overlaps. It is advisable to go with proper metal flashings at the

eaves and rakes. Provide horizontal and vertical overlaps 10 cm between the sheets and make sure to remove the side selvedge release foil. After application, use a suitable roller and apply pressure over all overlaps. The **Armourbase Thermo AD** adhesion will start with the application of bituminous shingles by torch-on.

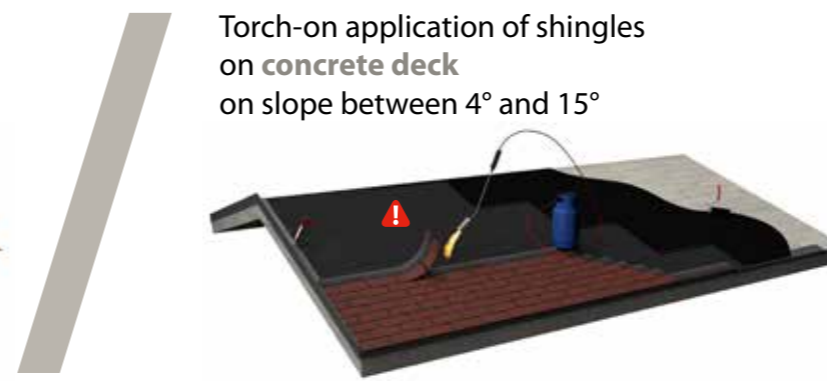
Concrete screw with metal pressure plate for fixation of **Armourbase Thermo AD** for slopes between 15° and 45°



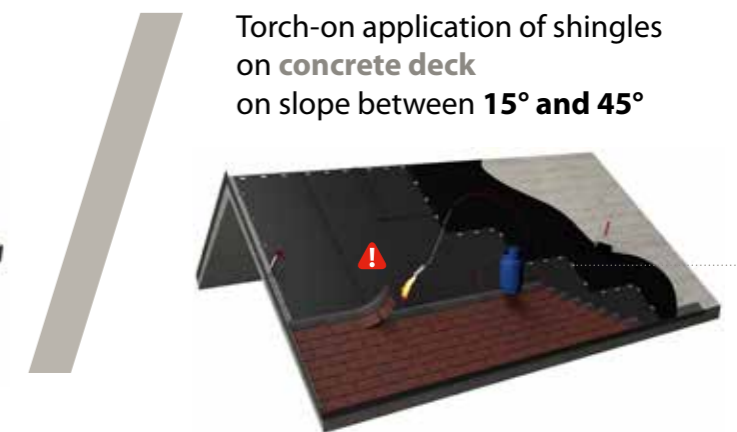
Application of bituminous roof shingles



Torch-on application of shingles on **OSB wooden deck** on slope between 4° and 15°



Torch-on application of shingles on **concrete deck** on slope between 4° and 15°




Torch-on application of shingles on **concrete deck** on slope between 15° and 45°

This shingle application is similar to the regular shingle application concept which starts with a starter strip (a shingle with tabs cut off). Apply by heating/flaming the top layer of **Armourbase Thermo AD** until the polypropylene mat fabric disappears and the top bitumen coating is melted.

Lay the shingle on the melted top adhesive layer of the membrane in its proper place. If necessary, lift the upper part of the shingle with a trowel. Heat up the section of the membrane just underneath the lifted shingle. The back of the shingle should be warmed in order to ensure the best possible adhesion. Continue with the

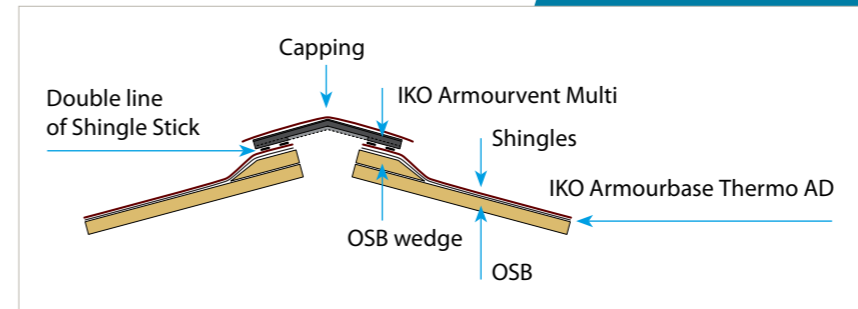
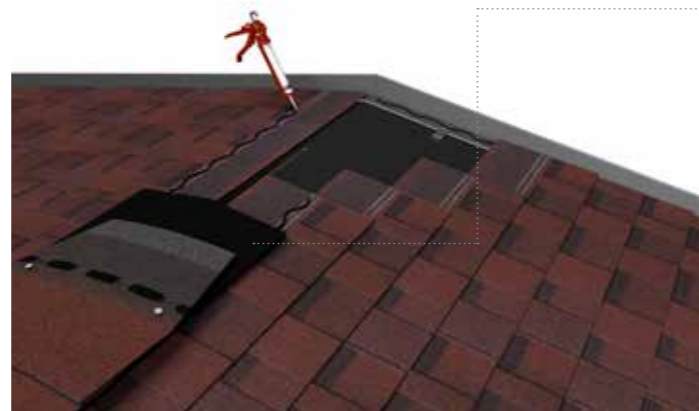
diagonal installation of shingles, without using nails. It is not necessary to torch the shingles from the top. Excessive heat can damage shingles. Essentially shingles are applied for aesthetic reasons only and the waterproofing properties derived from the roofing membrane.

For the torch-on method and slopes up to 45°, the fixation of shingles with nails is not necessary. The **Armourbase Thermo AD** membrane will bring about the total, monolithic adherence between the support and the bituminous shingles.

 **Torch only on the upper face of the membrane and stick the shingles in the activated *Armourbase Thermo AD*. Do not torch the shingles!**

Details with hips and ridges

Hip and ridge on **OSB wooden deck**



For slopes between 4° and 15°, IKO recommends installing an extra **OSB** or **wooden wedge** and raising the ridge with **Armourvent Multi** ventilation.

This avoids water infiltration in case of ponding water close to this ridge.

Hip and ridge on **concrete deck** by torch-on method



With hips and ridges, the underlayment is already covered with shingles. Therefore hips and ridges are installed by gluing the parts. For the hip or ridge, the **Armourvent Multi** ventilation can be applied from a 4° slope. **Armourvent Multi** must be glued on both sides with the **IKO Shingle Stick** and then nailed to the wooden deck. Hereafter the shingle capping will be applied over it the same way as with a roof > 15°.

On a concrete deck, a piece of 30 cm is trimmed from **Armourbase Thermo AD** and torched on the top part of the roof over the last rows of shingles. Then the capping can be torched over this membrane. Given the density and thermal mass of concrete decking, ventilation is not required in the air space beneath the deck.

In special cases, when the insulation is between the wooden deck and shingles (the warm roof) and the pitch of this roof is between 4° and 15°, a mechanical fixing is mandatory. Then the best and most recommended solution will be to torch APP shingles over this structure.

IKO Armourbase Thermo AD

is a modern thermo-adhesive membrane which is capable of solving specific application (concrete roof decks, low slope roofs) and functional requirements.

This membrane presents numerous and important advantages, such as easy application with significant time savings and the possibility to apply the material on surfaces which are not suitable for open flames.



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