

**hertalan**<sup>®</sup>  
the Waterproof Solution

INSTALLATION GUIDELINE



# Hertalan EPDM roofing and DPC systems

***hertalan***<sup>®</sup>  
*the Waterproof Solution*



## FOREWORD

In the market for sealed roofing systems, EPDM continues to be regarded as an innovative product. That is fairly surprising considering that EPDM membranes have been used all over the world since the end of the 60's as a roof covering. That makes it one of the most reliable products to choose.

As Europe's first producer of EPDM membranes, Hertalan has been offering cutting-edge quality in durable roof and wall systems for almost five decades. Hertalan supplies an ecological material that is resistant to UV, ozone and other meteorological effects and which features an exceptionally long life cycle.

Despite the undisputed quality of its roof and wall systems, Hertalan continues to focus on improvements. With our own R&D facilities we are able

to innovate and to produce market-compliant systems. As an experienced project supervision partner we have all the knowledge required to provide a complete service, from concept to completion. As the central point of contact Hertalan offers a full-service package, not only at implementing level but also in areas including cost control for clients or the creation of aesthetic added value for the architect.

It therefore is and remains important to us to get into contact with you. To convince you of our knowledge and added value and to build up an ongoing relationship.

*Hertalan updates the installation guidelines online. The English amendments and additions can be downloaded from our website [www.hertalan.co.uk](http://www.hertalan.co.uk).*

October 2013

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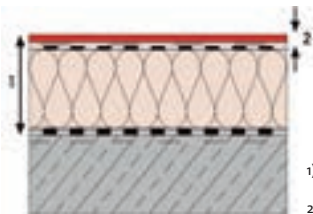
# 1. HERTALAN EPDM ROOFING SYSTEMS

## 1.1.1 Flat roof solutions with Hertalan

Hertalan has an extensive product portfolio of EPDM roofing systems and accessories which are suited for all types of roof surface and waterproofing systems, varying from traditional roofs to special roofing constructions.

With *hertalan easy cover* and *hertalan easy weld* Hertalan offers you a comprehensive advanced range of roof covering systems, products and accessories.

These systems are suitable for every type of roof: fully and partial bonded, ballasted, mechanically fixed.



**Depending on the roofing system, there are following options:**

### 1. *hertalan easy cover*

Unreinforced vulcanised EPDM roofing sheet or prefabricated membrane.

### 2. *hertalan easy weld*

Fire retardant unreinforced vulcanised EPDM roofing sheet provided with alternating top and bottom side EW Welding band.

### 3. *hertalan easy weld MF*

Fire retardant unreinforced vulcanised EPDM roofing sheet provided with alternating top and bottom side EW Welding band. Special for mechanically fixing.

## 1.1.2 Universal application instructions

For the application of Hertalan EPDM roofing systems product specific guidelines exists. These must be followed to achieve a result that is perfectly waterproof and airtight.

- / Irrespective of which Hertalan roofing system is applied a secure fixation onto the roof eaves and upstands must be ensured. Roof eaves, details and upstands must be finished airtight.
- / Gutters and connected gutters (to the roof) have to be fully adhered with the EPDM.
- / If a roof surface is to be covered with more than one roof sheet or membrane, an overlap of the Hertalan materials must be made.
- / Hertalan EPDM roofing products are applied without naked flame and at a minimum surrounding and material temperature of 5°C.
- / All components of the Hertalan systems are adapted to each other and form a complete system. Only Hertalan approved adhesives and sealants are to be applied.
- / Every substrate on which the Hertalan EPDM roofing systems are applied, must be smooth, dry, clean and free of oil, grease and sharp objects.
- / Hertalan advises to apply a vapour control layer and thermal insulation.
- / Hertalan EPDM roll ideally should be unrolled at least 15 minutes before commencing application to the roof and stay like that to achieve a tension free product. The product must be applied tension free.
- / When ordering the correct size of membranes take into account that joints, upstands, gutters and such need extra material into relation with the roof surface. This means that the flattened roof surface must be measured and ordered.

- / If on a roof surface more than one membrane is used, the hot bonding joints (the head seam) must be placed with at least 3 cm gap.
- / In case of a cross overlap a bevelled edge must be created in the top corner.
- / It is important to apply Hertalan EPDM roofing systems exclusively with clean materials and appropriate tools.
- / Existing roof surfaces must be checked to ensure there is a proper connection with roof construction.
- / In case of a bitumen surface all loose parts of bitumen, blisters and folds must be removed to achieve a smooth and sound surface.
- / Hertalan EPDM roofing systems may not be applied directly onto a surface of low melting bitumen or tar containing products. Preferably these kind of surfaces should be removed. If that isn't possible, a separation layer must be applied.
- / For green roof systems, all the seams have to be undertaken with *hertalan* easy weld products
- / In green roof systems we recommend to make compartments in the roof
- / In the case of a bitumen surface with green mineral, a primer must be applied.
- / To prevent any mechanical damages on an installed Hertalan EPDM roofing system, foot traffic should be limited.
- / For maintaining installations on the roof a designated pathway, to prevent mechanical damages, must be installed.
- / Hertalan EPDM sheet cannot be adhered onto non-faced polystyrene. This also applies to PVC, PIB, VEA, TPO, FPO and PE.

### 1.1.3 Connections with strange materials

Object orientated connections with our EPDM products are recommended to check on own responsibility, whether they are functioning for their intended purposes.

These are the following connections/adhesions:

- / PVC, PIB, VEA, TPO, FPO and PE.
- / Liquid polymers
- / Bituminous roofing sheets
- / Bituminous surfaces

### 1.1.4 Specific *hertalan* easy weld application instructions

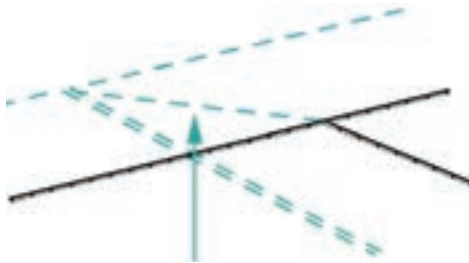
- / For further processing of our *hertalan* easy weld products, e.g. preparing seams with EW welding strips (green-on-black connection), *hertalan* cover strip, etc. after approx. 1-2 days of outdoor exposure. Roughening of the welded EPDM surfaces by means of a suitable Powerfile is required.
- / The existing surface area must first be cleaned with white spirit.
- / Then carefully roughen the surface area with a Powerfile and remove the dust with a hot air hand tool.
- / A green-on-black connection is only possible on a Hertalan EPDM which is produced after 1997.
- / *hertalan* easy weld seams must not be sealed off with any material. It is not allowed to use adhesive or sealant in combination with the EW welding bead.
- / Never use *hertalan* easy weld onto or over a joint that is created with *hertalan* ks137 or *hertalan* ksg6.

/ Before checking the seams, the *hertalan* easy weld must have cooled down. Inspection can be carried out with a special test pin or with a blunt awl.

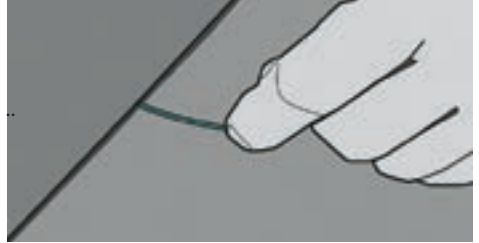
### 1.1.5 T-joints *hertalan* easy weld

On the front side of a *hertalan* easy weld, there is no EW welding strip applied. For example at the T-joints; an overlap at the end is formed by two sheets, which in turn are overlapped by a continuous (smaller) sheet

/ In order to avoid capillary action, the thickness between the two membranes/sheets should be reduced. This can be done by using a Powerfile. However, first the areas should be cleaned with (preferably) with spirit.

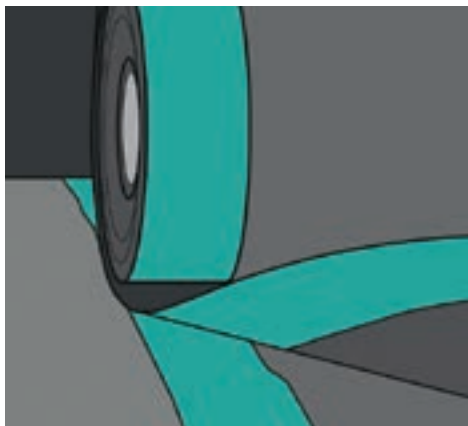
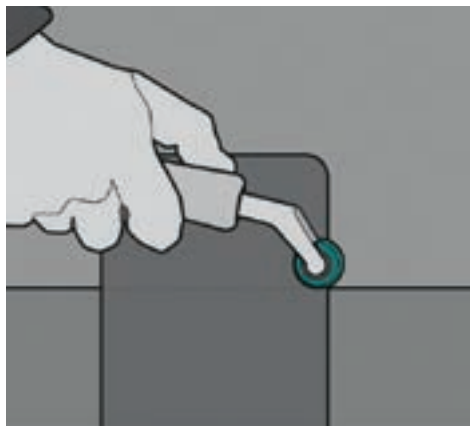


/ When the T-joints are connected with hot-air, always use a EW rope as extra padding in the seam.

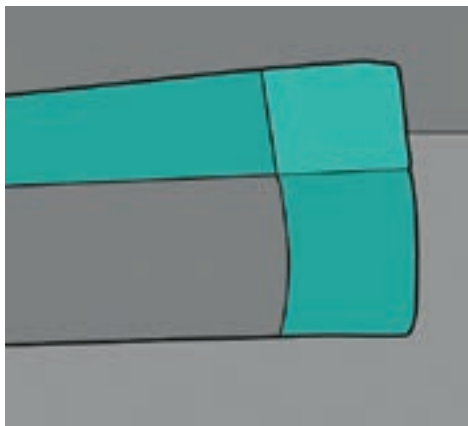


/ It is important that at the location of the T-joint, the welding seam is compressed with a brass roller. This operation is activated until warmed EW again solidified.



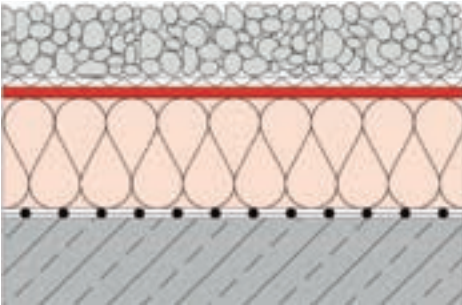


/ Transverse or T-joint connection between two *hertalan* easy weld roofing sheets can also be realized with a *hertalan* cover strip.



## 1.2 Loose and ballasted roofing systems

Application instructions for *hertalan* easy cover roofing membranes, loose applied and ballasted (gravel and/or tiles).



- / See universal and specific application instructions.
- / It is recommended to apply a membrane that fits as tight as possible. Apply the supplied membrane according to the enclosed instructions and be aware of good positioning of the membrane.
- / Following the sealing of the seams, all perimeters, edges and upstands must be adhered and installation of necessary details and rainwater outlets undertaken.
- / It is essential that the choice for the type and amount of ballast is determined according to a wind uplift load calculation. Hertalan technical department can provide this information.
- / At the end of the day all the work must be finished for protection against the elements.

### 1.2.1 Seams

Depending on the type of *hertalan* EPDM roofing system a seam can be achieved with adhesive or hot air.

---

Instructions for preparing a seam with *hertalan* easy cover membranes, by adhering with *hertalan* ks137 and sealing with *hertalan* ks96.

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// Product: *hertalan* ks137

// Usage: approx. 500 gr/m<sup>2</sup> two-sided

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// Product: *hertalan* ks96 cartridge

// Usage: approx. 7 m<sup>1</sup> pro cartridge one-sided

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- / On a dry and clean surface pull back the sheet for the seam by 150 mm. Keep clear the outer 20 mm and apply to both sides *ks137* in an 80 mm wide band.
- / When the *ks137* is touch dry, carefully close the seam without air pockets and compress the seam with a silicone roller.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- / Apply sealant *ks96* into the outer 20 mm directly against the bonded section. Apply the roller onto the seam in both length and width so the sealant will be at least 1 mm thick.
- / Make a clean seam by removing the excess sealant.

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## Green roofs

Instructions for preparing a seam with *hertalan* easy cover membranes, by hot air welding the EW cover strip onto Black EPDM (green-on-black).

---

// **Tool:** hot air welding machine.

// **Temperature and welding speed:**  
Depending on surrounding temperature

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- / For determining the correct welding speed and temperature, first make a few metres of test welding.
- / Before checking the seams, the seam must be cooled down. Inspection can be carried out with a special test pin or with a blunt awl.
- / During welding the speed must be correct, this is checked visually by looking at the EW. A small bead of EW must appear from the seam. When the amount of EW is too high the speed must be increased. When there is no EW the speed must be decreased.
- / Before making large seams, fixate the EW cover strip onto the surface with some spot welds, created with the hot air hand tool.
- / Place the special welding nozzle between the sheets, creating a seam of at least 30 mm.
- / During welding with the machine put adequate pressure onto the cover strip with a silicone roller. During welding it is important that seam is pressed together.

## 1.2.2 Edge fixation

It is necessary to apply edge fixation to resist the peel off in case of significant wind uplift. Therefore we split the area in a horizontal part and the vertical area (edge or upstand).

---

// **Product:** *hertalan ks137*

// **Usage:** approx. 500 gr/m<sup>2</sup> two-sided

---

- / Two sided adhesion with a minimum width of 270 mm. Provided that at least 120 mm against the upstand (vertical) and at least 150 mm at the surface (horizontal) must be applied. Preferably adhere the complete upstand (vertical area).
  - / Pull back total required width of sheet, apply on both the EPDM and the surface *ks137* with a brush (rotating movements) or a roller.
  - / After drying, *ks137* must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the sheet) and compress the adhered area with a silicone roller.
  - / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- 

// **Product:** *hertalan ks205*

// **Usage:** approx. 300 gr/m<sup>2</sup> two-sided

---



- / Two sided adhesion with a minimum width of 270 mm. Provided that at least 120 mm against the upstand (vertical) and at least 150 mm at the surface (horizontal) must be applied. Preferably adhere the complete upstand (vertical area).
- / When working with a compressor, the condensation has to be drained first. At the end of the day the compressor has to be “blown off”
- / Pull back total required width of the sheet, apply on both the EPDM and the surface *ks205*. At normal conditions do not apply *ks205* on a larger area then can be covered in 20 minutes.
- / After drying, *ks205* must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the membrane) and compress the adhered area with a silicone roller.time will shorten.

---

// **Product:** *hertalan ks205*

// **Usage:** approx. 275 gr/m<sup>2</sup> two-sided application (incl. propellant)

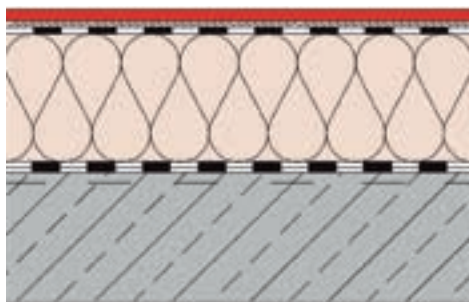
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- / Application is same as the refillable system. For the instructions of the pressurised cannister spray system, there is a specially formatted Instruction Manual.

### 1.3 Adhered roofing system

#### Application instructions for *hertalan easy cover* membranes in an adhered roofing system.

- / See universal and specific application instructions.
- / Hertalan EPDM roofing sheets and membranes can be both partial and fully adhered with *hertalan ks143*. The maximum size of the membrane depends on the local situation.



#### 1.3.1 Partial adhering

- // **Product:** *hertalan ks143*
- // **Usage:** approx. 225 gr/m<sup>2</sup> one-sided

- / Apply *ks143* in beads every 80 mm (stripe pattern), the applied beads must have a diameter of approx.  $\varnothing$  8 mm.
- / Depending on temperature, wind and humidity the *hertalan ks143* must be left uncovered for 5 to max. 20 minutes for evaporation of the solvent content.

- / Place the EPDM material, without large air pockets (prevent the forming of folds and tension in the membrane).
- / Continue with closing the overlaps, fixation of upstands, edges and such and install necessary details and rainwater outlets.
- / At the end of the day all the work must be finished for protection against the elements.

#### 1.3.2 Fully adhering

- // **Product:** *hertalan ks143*
- // **Usage:** approx. 300 gr/m<sup>2</sup> one-sided

- / Apply *hertalan ks143* in beads every 80 mm (stripe pattern), the applied beads must have a diameter of appr.  $\varnothing$  10 mm (slightly more than partial adhering).
- / Directly after applying, spread the *hertalan ks143* evenly on the surface with a fleece roller or appropriate tool.
- / Depending on temperature, wind and humidity the *hertalan ks143* must be left uncovered for 5 to max. 20 minutes for evaporation of the solvent content.
- / Place the EPDM material, without large air pockets (prevent the forming of folds and tension in the membrane). A fully adhered system should have at least 90 % adhesion between the EPDM material and the roof surface.
- / Continue with closing the overlaps, fixation of upstands, edges and such and install necessary details and rainwater outlets.
- / At the end of the day all the work must be finished for protection against the elements.

### 1.3.3 Seams

Depending of the type of *hertalan* EPDM roofing system seams can be achieved with adhesive or hot air.

---

Instructions for preparing a seam with *hertalan* easy cover roofing sheets and membranes.

Making a seam by adhering with *hertalan ks137* and sealing with *hertalan ks96*.

---

// **Product:** *hertalan ks137*

// **Usage:** approx. 500 gr/m<sup>2</sup> two-sided

---

// **Product:** *hertalan ks96* cartridge

// **Usage:** approx. 7 m<sup>1</sup> pro cartridge one-sided

---

- / On a dry and clean surface pull back the sheet for the seam by 150 mm. Keep clear the outer 20 mm and apply to both sides *ks137* in 80 mm wide band.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- / When the *ks137* is touch dry, carefully close the seam without air pockets and compress the seam with a silicone roller.
- / Apply sealant *ks96* onto the outer 20 mm directly against the bonded section. Apply the roller onto the seam in both length and width so the sealant will be at least 1mm thick.
- / Make a clean seam by removing the excess sealant.

### 1.3.4 Edge fixation

It is necessary to apply edge fixation to resist the peel off in case of significant windload. Therefore we split the area in a horizontal part and the vertical area (edge or upstand).

---

// **Product:** *hertalan ks137*

// **Usage:** approx. 500 gr/m<sup>2</sup> two-sided

---

- / Two sided adhesion with a minimum width of 150 mm to the horizontal surface and complete adhesion to any vertical upstand areas.
  - / Pull back total required width of the sheet, apply on both the EPDM and the surface *ks205*. At normal conditions do not apply *ks205* on a larger area then can be covered in 20 minutes.
  - / After drying, *ks137* must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the membrane) and compress the adhered area with a silicone roller.
  - / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- 

// **Product:** *hertalan ks205*

// **Usage:** approx. 300 gr/m<sup>2</sup> two-sided

---

- / Two sided adhesion with a minimum width of 150 mm to the horizontal surface and complete adhesion to any vertical upstand areas.
- / When working with a compressor, the condensation has to be drained first. At the end of the day the compressor has to be "blown off"
- / Pull back total required width of the sheet, apply on both the EPDM and the surface *ks205*. At normal conditions do not apply *ks205* on a larger area then can be covered in 20 minutes.
- / After drying, *ks205* must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the membrane) and compress the adhered area with a silicone roller.

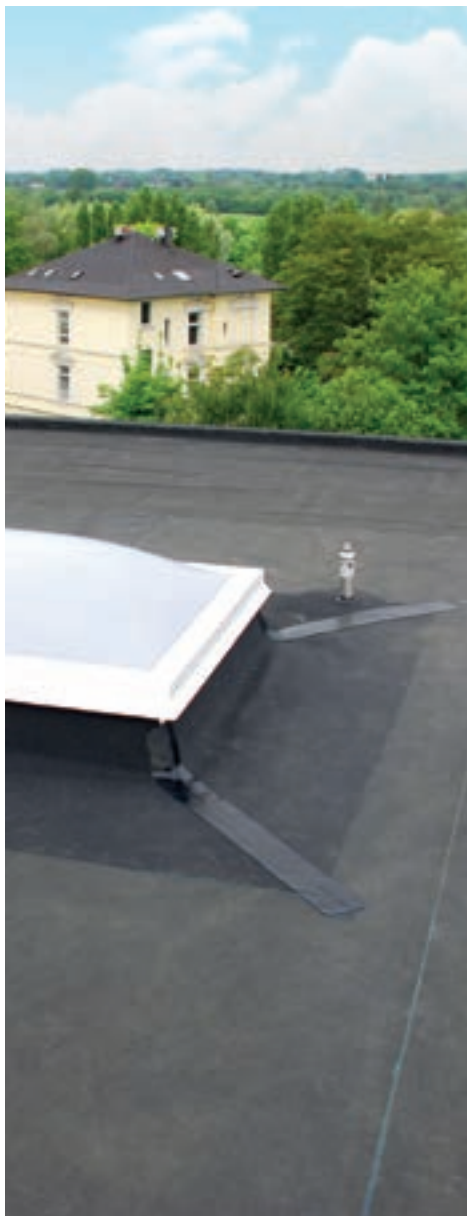
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/ **Product:** *hertalan ks205*

/ **Usage:** approx. 275 gr/m<sup>2</sup> two-sided application (incl. propellant)

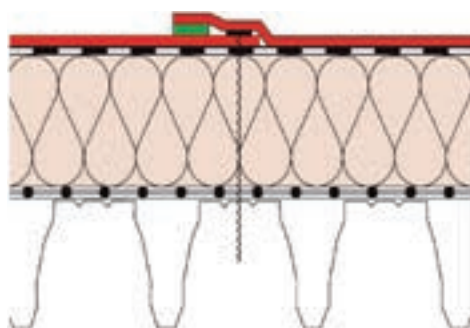
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- / Application is same as the refillable system. For the instructions of the pressurised cannister spray system, there is a specially formatted Instruction Manual.



## 1.4 Mechanically fixed roofing system

Application instructions for the *hertalan easy cover MF* and *hertalan easy weld MF* roofing sheets in a mechanically fixed (MF) roofing system.



### 1.4.1 *hertalan easy cover MF*

- / See universal and specific application instructions.
- / Maximum size of a manageable MF membrane is approx. 7,5 x 20 m (W x L).
- / Place a suitable tube on the outer side of the membrane or sheet to be applied.
- / Roll the membrane onto the tube, to the point where assembly of the membrane starts.
- / Unroll the membrane into the direction of the lowest point of the surface, most likely the roof edge. During unrolling at fixed intervals a fitted flap appears that must be installed at the roof surface with suitable fasteners.
- / Hertalan accepts only certified installation systems with fasteners that have a wind resistance calculation value of at least 500 N.

- / The amount of fasteners must be determined through the calculation of the expected wind load.
- / Place the fasteners as close as possible towards the hot-bonding seam.
- / On the roof edge the last fastener will be installed and the membrane is placed over the edge. Along the other edges of the roof area the membrane can be placed or an edge strip can be used.
- / Continue with adhering the overlaps, fixation of upstands, edges and install necessary details and rainwater outlets.
- / At the end of the day all the work must be finished for protection against the elements.

### 1.4.2 *hertalan easy weld MF*

- / See universal and specific application instructions.
- / For a good hot air connection, the substrate should be sufficiently robust.
- / The *hertalan easy weld MF* sheet must be dry and clean. Position the first sheet at the roof and place the fastener (including the mechanical stress plate 80x40 mm) in the seam area of the sheet.
- / Hertalan accepts only certified installation systems with fasteners that have a wind resistance calculation value of at least 360 N.
- / The distance between the edge of the sheet and the MSP must be at least 10 mm, whereby the MSP must be placed as close as possible towards the EW welding bead. The MSP and the EW should not make contact.



- / Position the second roofing sheet and fixate – if required – the *hertalan* easy weld roofing sheet onto each other with some spot welds.
- / A head-seam between two *hertalan* easy weld roofing sheets can be achieved with a *hertalan* cover strip. At a T-seam with the easy weld roofing sheet a strip of EW must be used to fill in the difference in height and extra fixation.
- / Application of T-joints and other connections require extra attention, see previously described techniques.
- / Application of T-joints and other connections require extra attention, see p. 2.
- / Continue with sealing the overlaps, fixation of upstands, edges and such and install necessary details and rainwater outlets.
- / At the end of the day all the work must be finished for protection against the elements.
- / When the ks137 is touch dry, carefully close the seam without air pockets and compress the seam with a silicone roller.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- / Apply sealant ks96 into the outer 20 mm directly against the bonded section. Apply the roller onto the seam in both length and width so the sealant will be at least 1 mm thick.
- / Make a clean seam by removing the excess sealant.

Instructions for preparing a seam with *hertalan* easy weld MF roofing sheets.

Durable joints are prepared by hot air welding the EW welding beads, making a so called green-onto-green joint.

#### 1.4.3 Seams

**Instructions for preparing a seam with *hertalan* easy cover membranes, by adhering with *hertalan* ks137 and sealing with *hertalan* ks96.**

---

// **Product:** *hertalan* ks137

// **Usage:** approx. 500 gr/m<sup>2</sup> two-sided

---

// **Product:** *hertalan* ks96 cartridge

// **Usage:** approx. 7 m<sup>2</sup> pro cartridge one-sided

---

- / On a dry and clean surface pull back the sheet for the seam by 150 mm. Keep clear the outer 20 mm and apply to both sides ks137 in an 80 mm wide band.

---

// **Tool:** hot air welding machine.

// **Temperature and welding speed:**

Depending on surrounding temperature.

---

- / For determining the correct welding speed and temperature, first make a few metres of test welding.
- / Before checking the seams is possible, the seam must cool down. Inspection can be carried out with a special test pin or with a blunt awl.
- / During welding the speed must be correct, this is checked visually by looking at the EW. A small bead of EW must appear from the seam. When the amount of EW is too high the speed must be increased. When there is no EW the speed must be decreased.

- / Before making large seams, fixate the *hertalan* easy weld onto each other with some spot welds created with the welding machine.
- / Place the special welding nozzle between the sheets, creating a seam of at least 30 mm.
- / During welding put adequate pressure onto *hertalan* easy weld with silicone roller. During welding it is important that seam is pressed together. Therefore apply a stabilization band at the seam.

#### 1.4.4 Edge fixation

**It is necessary to apply edge fixation to resist the peel off in case of significant windload. Therefore we split the area in a horizontal part and the vertical area (edge or upstand).**

- 
- / **Product:** *hertalan* ks137
  - / **Usage:** approx. 500 gr/m<sup>2</sup> two-sided
- 

- / Two sided adhesion with a minimum width of 150 mm to the horizontal surface and complete adhesion to any vertical upstand areas.
- / Pull back total required width of the sheet, apply on both the EPDM and the surface ks205. At normal conditions do not apply ks205 on a larger area then can be covered in 20 minutes.
- / After drying, ks205 must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the membrane) and compress the adhered area with a silicone roller.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.

- 
- / **Product:** *hertalan* ks205
  - / **Usage:** approx. 300 gr/m<sup>2</sup> two-sided
- 

- / Two sided adhesion with a minimum width of 150 mm to the horizontal surface and complete adhesion to any vertical upstand areas.
- / When working with a compressor, the condensation has to be drained first. At the end of the day the compressor has to be "blown off".
- / Pull back total required width of the sheet, apply on both the EPDM and the surface ks205. At normal conditions do not apply ks205 on a larger area then can be covered in 20 minutes.
- / After drying, ks205 must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the membrane) and compress the adhered area with a silicone roller.

- 
- / **Product:** *hertalan* ks205  
(pressurised spray system)
  - / **Usage:** approx. 275 gr/m<sup>2</sup> two-sided application  
(incl. propellant)
- 

- / Application is same as the refillable system.

**For the instructions of the pressurised cannister spray system, there is a specially formatted Instruction Manual.**

Instructions for making an edge fixation with *hertalan* easy weld roofing sheets.

---

### Method 1

- / Install the *hertalan* easy weld directly over the roof edge or upstand. An extra mechanical fixation is not necessary.
- / Pull back the *hertalan* easy weld, to a minimum of 150 mm on the horizontal surface. Fully adhere this 150 mm and at least 120 mm against the upstand with *hertalan ks137* or *hertalan ks205*. Preferably adhere the complete upstand (vertical area).
- / After drying, adhesive must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the sheet) and compress the adhered area with silicone roller.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.

### Method 2

- / Place the *hertalan* easy weld roofing sheet towards the outside of the roof area and minimal 150 mm against the upstand.
- / Place at the horizontal area as close as possible to the upstand, at least every 250 mm a fastener with mechanical stress plate (80x40 mm).
- / Fully adhere the up going sheet against the upstand with *hertalan ks137* or *hertalan ks205*.
- / Continue with covering the complete upstand and at least 150 mm of the horizontal surface with a *hertalan* easy weld roofing sheet (usually a strip of 700 mm is sufficient). Pay attention that the EW welding bead doesn't make contact with the installed fasteners. The fasteners (including the mechanical stress plate) must be at least placed 50 mm on the inside of the overlap.
- / With hot air the EW welding bead can be placed

## 2. ACCESSORIES

### 2.1 Accessories Hertalan roofing systems

During application of the different Hertalan roofing systems, details must be integrated in the waterproofing layer. Special Hertalan accessories are developed to solve those situations. So you are assured of a complete and complementary EPDM roofing system.



Depending on the roofing system, following accessories can be used:

#### 1. *hertalan easy stick*

A combination of an EPDM sheet with a self adhesive butyl based backing.

#### 2. *hertalan flashing*

Unreinforced unvulcanised EPDM rubber which is plastically deformable and will vulcanise in natural conditions.

#### 3. *hertalan flash weld*

Unreinforced unvulcanised EPDM rubber provided with EW layer, which is plastically deformable and will vulcanise in natural conditions.

#### 4. *hertalan cover strip*

Unreinforced vulcanised EPDM strip which is provided with a full backing surface layer of EW.

#### 2.1.1 Additional accessories

##### 5. *hertalan rainwater outlet*

An outlet of PE fitted with a sleeve of unreinforced vulcanised EPDM, also available with EW welding strip.

##### 6. *hertalan prefab corners*

Unreinforced vulcanised EPDM internal and external corners, also available with EW welding strip.

##### 7. *hertalan rooflight connection strips*

Unreinforced vulcanised EPDM strips -incl. external corners for watertight installation of roof lights, also available with EW welding strip.

##### 8. *hertalan prefab site sleeve*

Unreinforced vulcanised EPDM site sleeve (square) for installing of roof details, also available with EW welding strip.

##### 9. *hertalan prefab pipe covers*

Prefab EPDM pipe covers incl. connection sleeve, also available with EW welding strip.

### 2.2 Universal application instructions

Hertalan EPDM accessories are complementary components for installing Hertalan EPDM roofing systems. For the application the general and specific application instruction of the Hertalan EPDM roofing systems are applicable.

## 2.3 *hertalan easy stick*

***hertalan easy stick* is extremely suitable for installing rooflights and gutters (both new and renovation). *hertalan easy stick* is self adhering and applied without naked flame.**

*hertalan easy stick* can be supplied in different widths (standard width is 1400 mm) with a roll length of 20 metre.

Application instructions for *hertalan easy stick*.

- / See general and product specific instructions of Hertalan EPDM roofing systems.
- / The surface must be smooth, dry, clean, and free of oil, grease and sharp objects. Depending on the substrate, clean or degrease with white spirit or apply a bituminous primer or prime with *hertalan ks137* contact adhesive (applied one-sided at substrate).
- / Remove the protective layer on the reverse side of *hertalan easy stick*, on larger areas remove layer part by part. Place *hertalan easy stick* onto the substrate and pay special attention to the connection at the periphery of the roof area.
- / To apply *hertalan easy stick* use a silicone roller, so the self adhering butyl layer becomes firmly bonded with the substrate.
- / At low application temperatures it is advisable to activate the butyl adhesive before installing the *hertalan easy stick*. This can be done by warming the EPDM side with hot air. Directly afterwards apply appropriate pressure with silicone roller.

### 2.3.1 Seam

- / Put two *hertalan easy stick* strips parallel (butt joint) together and press on with silicone roller.
- / Subsequently apply a strip of *hertalan S* with a minimum width of 100 mm (install with 2 beads of *hertalan ks96* at both sides of the seam) or apply a *hertalan cover strip*.

## 2.4 *hertalan flashing*

***hertalan flashing* is especially designed for internal and external corners where standard products do not fit, to create watertight solutions at abnormal corners or at a large openings in the roof surface.**

*hertalan flashing* is supplied on rolls in lengths of 5 metres and a widths of 300 mm.

- / See general and product specific instructions for *hertalan EPDM* roofing systems.
- / *hertalan flashing* should only be applied onto Hertalan EPDM with *hertalan ks137* contact adhesive .
- / Mark the area where the *hertalan flashing* will be applied. Apply on both the reverse side of the *hertalan flashing* and the top side of the EPDM (substrate) *hertalan ks137* and let it dry completely.
- / When the *ks137* is touch dry, remove the protective layer from the top-side of the flashing. Fold the flashing in such a way that both sides with adhesive can not make contact.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.

- / Position the flashing with the side with *ks137* against the upstand part and then place it towards the horizontal area. Place the welding nozzle of the hot air gun between the folded parts of the flashing. (do not warm up *ks137* directly!).
- / If the flashing is warm enough, it can be stretched and secured onto the horizontal area. Seams in the rim area must be closed properly. Use a copper roller.
- / Subsequently use a silicone roller to firmly press on the flashing and apply a bead of *hertalan ksg6* to seal the edge of the flashing. Remove the excess sealant in order to make a clean seam.

## 2.5 *hertalan* flash weld

*hertalan* flash weld is especially designed for internal and external corners where standard solutions do not fit and a weldable Hortalan EPDM substrate is available. *hertalan* flash weld is not suitable for application at pipe protrusions and outlets.

*hertalan* flash weld is supplied on rolls in lengths of 5 metres and widths of 180 mm.



- / See general and product specific instructions for *hertalan* EPDM roofing systems.
- / *hertalan* flash weld is applied onto Hortalan EPDM with hot air. It is not allowed to use *hertalan ks137* to install *hertalan* flash weld.
- / Prepare the flash weld in such a way that a welding strip of at least 35 mm remains on both sides of the seam.
- / Assemble a welding nozzle with pre-drilled holes onto the hot air gun. Perform the flash weld by warming up the top surface. Be careful not to overheat the product.
- / Fixate the preformed flash weld by spot bond welds onto the Hortalan EPDM membrane. Position the welding nozzle underneath the flash weld and fixate it by rolling over with a small (28 mm) silicone roller and use a copper roller for the rim area.
- / During welding a small green bead of TPE must become visible on the outside of the flash weld. Seams should never sealed with *hertalan ksg6*.

## 2.6 *hertalan* cover strip

*hertalan* cover strip is especially designed for creating an adequate joint between two roofing sheets or a T-seam.

*hertalan* cover strip can be supplied on rolls in lengths of 20 metre and widths of 120 or 180 mm.

- / See general and product specific instructions for Hortalan EPDM roofing systems.
- / *hertalan* cover strip and Hortalan EPDM sheet (as a substrate) must be smooth, dry, clean and free of oil, grease and sharp objects.

### 2.6.1 Seam

- / Put two *hertalan* easy stick plus strips parallel (butt joint) together or with an overlap and press on with roller.
- / Place the *hertalan* cover strip onto the seam and position it so that the seam is exactly in the middle of the *hertalan* cover strip (If more than one membrane is applied, the hot-bonding seams at the head side must be placed with at least 3 cm in between).
- / If a seam must be prepared between a *hertalan* cover strip and existing Hertalan EPDM roofing material (green-on-black connection), the existing surface area must first be cleaned with white spirit.
- / Then carefully roughen the surface area with a Powerfile and remove the dust with a hot air hand tool. This treatment must also be executed in case the joint can't be prepared on the same day (max. two days).
- / Fixate the *hertalan* cover strip every metre by making spot welds. Subsequently position the welding nozzle between the *hertalan* cover strip and the Hertalan EPDM material. Move the hot air gun with appropriate speed alongside the seam making a weld of at least 35 mm.
- / During welding proper pressure must be applied onto the *hertalan* cover strip with a silicone roller. A small green bead of TPE must become visible at the outside of the flash weld. If too much TPE is beside the seam, the working speed should be increased.
- / At a T-seam, at the spot of the hot-bonding seam of the membrane, a strip of EW (welding material) must be placed to fill the gap and for extra fixation.
- / Apply extra pressure by welding the *hertalan* cover strip onto the hot-bonding seam, by using a 5 mm wide copper roller.

### 2.7 Additional accessories

**Hertalan accessories are modified for direct application onto Hertalan EPDM material.**

The product range consists of a series of standard products, most kept on stock. Apart from that Hertalan offers the possibility for ordering different sizes or special designs.

- / See general and product specific instructions for Hertalan EPDM roofing systems.
- / Mark the position where the rainwater outlet, corner or other detail must be installed.
- / Apply on both the under side of the accessory and the topside of the EPDM substrate (marked area) *hertalan ks137*. A strip of 20 mm at the perimeter of the EPDM material and flap of accessory must be kept clear of adhesive.
- / The *ks137* must be touch dry before both sides are assembled. Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- / Position the accessories onto the substrate, fitting the marked area. Make sure, if applicable that the materials in the area of the upstands are put together properly. Use a copper roller. The remaining surface can be pressed on with a silicone roller.
- / To complete the installation of the accessory, apply a bead of *hertalan ks96* along the outside of the 20 mm adhesive free strip of the EPDM and substrate. Apply appropriate pressure with roller along the seam, so a layer of minimal 1 mm thick paste will form.
- / Make a clean seam by removing the excess sealant.



## 2.8 Additional application instructions

### Additional application instructions for assembly of round roof accessories (pipes or such) with prefab or tailor made sleeve:

- / Mark the centre of the round area to be perforated onto the EPDM material. (Assuming the EPDM material is placed over the round accessory).
- / Mark a circle, with a diameter of 1/3 of the required roof opening, around the previous made marking, or a circle with a diameter that is 6 cm smaller than the needed roof opening, the largest option must be applied.
- / Punch the required opening into the EPDM material, larger openings can be made with scissors. Subsequently place the EPDM material over the accessory and pull it towards the fitted slab.
- / The tension created by the smaller opening in the EPDM material creates an upstand and watertight connection at the placed accessory.
- / A 150 mm EPDM upstand collar should be formed to conform to Building Regulations.
- / In case the used accessory has a rough surface (no watertight connection possible) or welding seam, pull back the upgoing EPDM and apply a bead of *hertalan* ks96 adhesive sealant. Unfold the EPDM and apply appropriate pressure with roller along the seam, so a layer of minimal 1 mm thick paste will form.
- / Make a clean seam by removing the excess sealant.



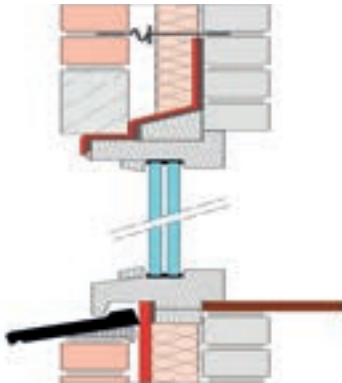
## 3. HERTALAN EPDM DPC SYSTEMS

### 3.1 Façade applications

As a waterproofing system, EPDM has a favourable environmental impact, is water and air tight, shows no leaching, is recyclable, has long term flexibility and will not be affected by acids present in water.

Furthermore EPDM has a long life expectancy and can be adhered onto almost all substrates with specially developed adhesives.

These features make EPDM rubber products from Hertalan the ideal material for a water proofing barrier in building constructions.



Depending on the building construction, there are the following applications:

#### 1. *hertalan S*

Unreinforced vulcanised EPDM strip.

#### 2. *hertaled*

Composite material of vulcanised EPDM strip and 200 mm wide aluminium mesh metal reinforcement.

### 3.2 Universal application instructions

For applying Hertalan EPDM strips there are universal product specific application instructions. These must be followed to obtain a perfect wind and water tight result.

- / Hertalan EPDM façade systems are applied without naked flame and at a minimum surrounding and material temperature of 5°C.
- / All components of the Hertalan systems are adapted to each other and form a complete system. Only Hertalan approved adhesives and sealants are to be applied.
- / It is important to apply Hertalan façade systems with clean materials and appropriate tools.
- / In the constructive design, condensation behind the construction must taken into account.
- / Every surface in the construction where Hertalan EPDM façade systems are applied, must be smooth, dry, clean and free of oil, grease and sharp objects.

### 3.3 Specific application instructions

- / Adhering an EPDM strip (with *hertalan ksg6*) on porous substrates, this substrate must first have a primer applied. The same applies to concrete surfaces which have shuttering oil. First roughen and then prime with a special *hertalan ksg6* primer.
- / If the EPDM strip is applied with adhesive on porous substrates (*ks205* or *ks137*) you should first apply a layer of adhesive onto the substrate, this acts as a primer. When the priming layer is completely dry, the second layer can be applied to the substrate and the first layer applied to the EPDM. Once touch dry the two surfaces can then be connected.
- / *hertalan* lead replacement is not suitable for application onto roof tiles.

### 3.4 *hertalan S*

#### 3.4.1 *Hertalan EPDM strips*

*Hertalan S* EPDM strips are suitable both for prefabricated applications in a working factory (such as panels, window frames, dormers, etc.) and directly on site (including use in cavity walls as an alternative to lead products, water rejecting barriers for details, etc.).

The strips can be adhered onto almost all substrates using specially developed adhesives. The strips can be supplied in different widths (Max. 1400 mm) with a roll length of 20 metre.

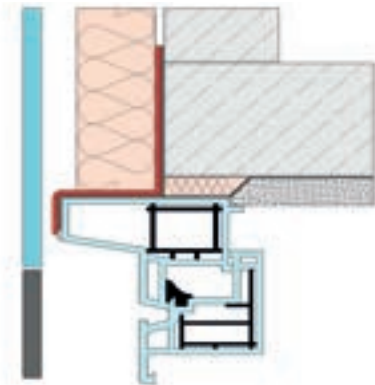
#### 3.4.2 *hertalan ksg6 adhesive sealant*

Application instructions for *hertalan S* installed into a building construction with *hertalan ksg6*.

- 
- // **Product:** *hertalan ksg6*  
(pressurised spray system)
  - // **Usage:** approx. 15 m<sup>3</sup> for a sausage of 600 ml
- 

- / See universal and specific application instructions.
- / When an EPDM strip is installed on a porous surface a primer has to be applied first. This has also to be considered for concrete surfaces covered with shuttering oil. First roughen the surface a little bit and then apply the primer. (Use the *hertalan ksg6* primer).
- / Cut away the top 35 mm of the provided nozzle, so an opening with a 7 mm diameter is created.

- / Apply the *ks96* one sided in beads of  $\varnothing$  7 mm, do not spread the *ks96*.
- / The number of beads applied depends on the size of the strip. Strips up to a width of 300 mm are applied with 1 bead. Wider strips should be applied with at least two beads.
- / Where *hertalan S* is applied onto a substrate that has height differences, corners and such, every level and corner must be fixated with a bead of *ks96*.
- / After applying several M<sup>2</sup> of *ks96*, place the *hertalan S* directly onto the first bead of *ks96*.
- / Use a silicone roller to put pressure onto the EPDM covered bead in such a way that a seam of approximately 30-40 mm with a thickness of at least 1 mm is formed.
- / Handle the remaining beads of *ks96* in the same way. Put pressure onto bead to form a 30-40 mm wide seam with a thickness of at least 1 mm.
- / Make a clean seam by removing the excess of sealant.



### 3.4.3 *hertalan ks137* contact adhesive

Application instructions for *hertalan S* installed into a building construction with *hertalan ks137*.

- 
- // **Product:** *hertalan ks137*  
(pressurised spray system)
  - // **Usage:** approx. 500 gr m<sup>2</sup> two-sided
- 

- / See universal and specific application instructions.
- / Apply *hertalan ks137* to both construction surface substrate and *hertalan S*. This is can be done with a brush (rotating movements) or for larger areas with a roller.
- / Allow both surfaces to dry, *ks137* must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the EPDM) and compress the adhered area with a silicone roller.
- / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.

### 3.4.4 *hertalan ks205* sprayable contact adhesive

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// **Product:** *hertalan ks205*

// **Usage:** approx. 300 gr m<sup>2</sup> two-sided

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- / See universal and specific application instructions.
  - / *hertalan ks205* is applied with a closed spray system. Apply adhesive to both the substrate and the *hertalan S* surface.
  - / When working with a compressor, the condensation has to be drained first. At the end of the day the compressor has to be "blown off"
  - / Pull back total required width of the sheet, apply on both the EPDM and the surface *ks205*. At normal conditions do not apply *ks205* on a larger area then can be covered in 20 minutes.
  - / After drying, *ks205* must be touch dry, put both sides carefully together without air pockets (prevent the forming of folds and tension in the membrane) and compress the adhered area with a silicone roller.
  - / Depending on weather conditions, apply no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- 

// **Product:** *hertalan ks205*

// **Usage:** approx. 275 gr/m<sup>2</sup> two-sided application (incl. propellant)

---

- / Application is same as the refillable system. For the instructions of the pressurised cannister spray system, there is a specially formatted Instruction Manual.

### 3.4.5 Seam

Creating sea m by adhering with *hertalan ks137* and sealing with *hertalan ks96*.

---

// **Product:** *hertalan ks137*

// **Usage:** approx. 500 gr m<sup>2</sup> two-sided

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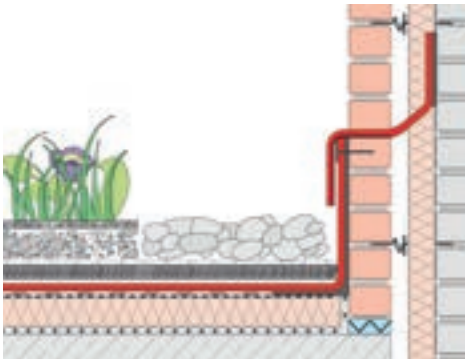
- / On a dry and clean surface pull back the membrane for the seam by 100 mm. Keep clear the outer 20mm and apply the *ks137* in the 80 mm wide band.
- / When the *ks137* is touch dry, carefully close the seam without air pockets and compress the seam with a silicone roller.
- / Depending on weather conditions, add no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- / Apply *ks96* adhesive sealant onto the outer 20 mm directly against the bonded section. Apply the roller onto the seam in both length and width so the sealant will be at least 1mm thick.
- / Make a clean seam by removing the excess sealant.

## 3.5 *hertaled*

### 3.5.1 Hertalan lead alternative

Hertaled is developed by Hertalan as a lead substitute for several applications such as cavity walls constructions, window frames and roof lights. Hertaled is a composite of *hertalan S* with a reinforcement of 200 mm wide aluminium mesh metal. The mesh metal makes it possible to shape and bend the hertaled into the required form.

Hertaled can be supplied in 210, 450 and 650 mm on rolls of 6 and 12 metre.



### 3.5.2 *hertalan ksg6* adhesive sealant

// **Product:** *hertalan ksg6*

// **Usage:** ca. 15 m<sup>3</sup> for a sausage of 600 ml

- / See universal and specific application instructions.
- / The required width of the hertaled depends on the width of the cavity and the method of fastening onto the inner wall.
- / Position on the first layers of the outer wall the reinforced part of the hertaled. Place the hertaled in such a way that 150 mm is at the outside of the outer wall and 50 mm in the masonry joint of the outer wall.
- / Whilst working up the outer wall, care should be taken that no mortar or other debris falls into the cavity.
- / Shape or bend the 150 mm wide reinforced part of hertaled along the outer wall, in such away that it is tight against the wall.
- / Fixate the unreinforced part with 2 beads of *hertalan ksg6* against the inner wall and firmly roll over with a silicone roller. The unreinforced part can also be mechanically fixed with a suitable clamp strip against the inner wall at the correct height.

### 3.5.3 Seam

// **Product:** *hertalan ks137*

// **Usage:** ca. 500 gr./m<sup>2</sup> two-sided

- / Position two *hertaled* strips against each other with a gap of 5 mm.
- / Apply onto the *hertaled* on both sides of the seam 80 mm of *hertalan ks137*. Take a 200 mm wide 0.75 mm thick strip of *hertalan S* EPDM and also apply *ks137*, leaving the outer 20 mm free of adhesive.
- / When the *ks137* is touch dry, carefully place the *hertalan S* EPDM strip onto the *hertaled* and close the seam without air pockets and compress with a silicone roller.
- / Depending on weather conditions, add no more adhesive than can be covered in 5-15 minutes. During high temperatures this open time will shorten.
- / Apply *ks96* adhesive sealant onto the outer 20 mm directly against the bonded section. Apply the roller onto the seam in both length and width so the sealant will be at least 1 mm thick.
- / Make a clean seam by removing the excess sealant.

// **Product:** *hertalan ks96*

// **Usage:** ca. 15 m<sup>1</sup> for a sausage of 600 ml

- / Apply 2 beads of *hertalan ks96* to both sides on the first 75 mm beneath the seam.
- / Take a 150 mm wide 0,75 mm thick strip of *hertalan S* EPDM and position this onto the seam so the *ks96* is covered.
- / Apply appropriate pressure with a silicone roller so the *ks96* becomes visible at the outside of the *hertalan S* strip.
- / Make a clean seam by removing the excess sealant.

### 3.5.4 Corner detail

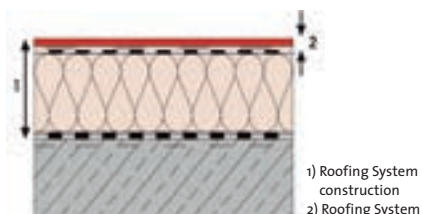
- / In creating a corner detail don't make an over-lap with *hertaled*. Preferably use the prefab *Hertalan* internal and external prefabricated EPDM corners. The seam must be prepared as per the aforementioned described instructions.



## APPENDIX 1 – WHICH HERTALAN EPDM ROOFING SYSTEM TO CHOOSE

### 1. General

A flat roof always consists of a support structure and a roof deck which combined are referred to as the substructure. This substructure is be decisive in the choice and method of attachment a Hertalan EPDM roofing system.



### 2. Definitions

First, it is wise to elucidate several definitions

- / Supporting structure: these are the components of a building that acts as the structure supporting against external forces (e.g., wind, snow and dead load) discharging into the foundation.
- / Roof deck: has a function as a sealing layer and an insulating function against the heat and cold. The roof deck has a supporting function for the waterproofing and is sufficient to with stand foot traffic.
- / Substructure: the structural part of the roof which can help determine the choice of the roofing system.
- / Roofing Construction: these are all material layers above the substructure, such as a vapour barrier, thermal insulation and roofing system.
- / Roofing system: it consists of one layer EPDM roofing with all details and joints (connections). These can be determined according to the method of the substructure construction.

### 3. Standards and regulations

Both the design of a roofing construction and the installation of a roofing system must meet strict requirements. These requirements are partially required by the market and partly by legislation (Building Regulations).

Hertalan has a wide product range of EPDM systems and accessories, suitable for all general flat roof systems. With *hertalan* easy cover and *hertalan* easy weld, Hertalan offers a complete package of EPDM membranes, sheets and complementary accessories suitable for traditional non-ventilated flat roofs up to special flat roof structures such as loose laying with ballast or an adhesive or mechanical fixation according to wind load calculations.

Hertalan has developed a wide range of accessories as solutions for specific details. The Hertalan EPDM accessories range consists of tools for installing Hertalan EPDM systems. This includes for example cover strips, flashing, flat roof drains, pipe covers, fixings, internal and external corners.



## 4. Roofing systems

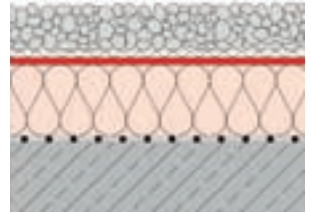
Hertalan has a wide product range of EPDM systems and accessories suitable for all general flat roof systems

### Loose laid and ballasted roofing system

These can be applied under the condition that the substructure is capable of withstanding the extra weight of the ballast layer.

**Product choice:**

*hertalan easy cover* or *hertalan easy weld*



### Mechanically attached roofing system

EPDM roofing membrane or sheet mechanically connected to the substructure. This type of system does not require a protective layer of gravel or a green roof.

**Product choice:**

*hertalan easy cover MF* or *hertalan easy weld MF*



### Partially adhered roofing system

EPDM roofing membrane or sheet partially adhered to the substructure. This type of system does not require a protective layer of gravel or a green roof.

**Product choice:**

*hertalan easy cover* or *hertalan easy weld*



### Fully adhered roofing system

EPDM roofing membrane or sheet fully adhered to the substructure. This type of system does not require a protective layer of gravel or a green roof.

**Product choice:**

*hertalan easy cover* or *hertalan easy weld*



## APPENDIX 2 – INSULATION MATERIAL

Before a thermal insulation material can be selected, generally attention has to be paid to the desired roof system. This is also the case by application of EPDM rubber sheets, not every insulation material can be applied together with all Hertalan EPDM roof-and facade systems.

### 1. Loose and ballasted roof systems

For ballasted roofs all types of non-laminated insulation material can be used but must be limited to the central area of the roof surface. Along the edges and corners an insulation material with lamination must be used (at least one width of an insulation board), because of the edge fixation that must be applied.

### 2. Green roof

For green roofs the same conditions are applicable as for ballasted roofs.

### 3. Mechanically fixed roof systems

For mechanically fixed roof systems the same conditions are valid as for ballasted roofs, non-laminated insulation materials in the central area and laminated types along the edges (at least one width of a insulation board).

### 4. Adhered roof systems

For adhered roof systems an insulation board must be laminated. Given the fact that not all laminated insulation boards are suitable for adhering, it is strongly recommended to contact Hertalan technical support, for advice concerning the use of a specific type of insulation material.

### 5. Delamination strength

The delamination strength of the top layer on the insulation board must be adequate. In our certificates the different application methods on insulation materials are described. Besides that Hertalan has an extended file of lab tests and field experience of the Hertalan adhesive systems on different types of insulation boards. If more assurance is requested, Hertalan will carry out adhesion tests, to determine the required parameters as peel resistance.

This bonding strength is determining for all roof systems (not only adhered systems). In each system an adhered edge fixation must be applied.

## APPENDIX 3 – MAINTENANCE AND CLEANING GUIDELINES

### 1. Maintenance

**A Hertalan EPDM roof system has no specific maintenance requirements; however we advise observing the following items to be sure of a durable roofing construction.**

- / Prevent rainwater outlets from being blocked so no extra weight will ballast the roof construction.
- / Oily products have a strong negative effect on EPDM roof materials and can eventually cause serious damage. Therefore prevent the storage of oily products like solvents, fats, petrol and other liquid products with petrochemical components on the Hertalan EPDM material.
- / If the Hertalan EPDM comes in contact with chemicals or polluted products, contact the Hertalan technical support. They can inform you about the effects of those products on the EPDM materials.
- / To prevent any mechanical damages on an installed Hertalan EPDM Roof System, foot traffic should be limited. In case maintenance on possible installations on the surface is necessary, a pathway should be installed, towards and around the installation. Always protect your roof against mechanical damages!
- / Roof surface penetrations, rainwater outlets, ventilation shafts and other details must be inspected twice a year (preventive maintenance). Preferably inspections should be carried out before the beginning of summer and winter. Rainwater outlets should be cleared of leaves and debris.
- / For repairs use exclusively original Hertalan materials. If other materials are used the warranty will no longer be valid.
- / If a part of the roof system has to be changed or adapted, please contact Hertalan technical support for advice.

### 2. Cleaning

There are several detergents that can be used for cleaning the surface of Hertalan EPDM. Water with soft soaps is the most environmental friendly solution. For proper cleaning of the surface structure, the use of a medium sized brush should be used. After cleaning the surface, wash away the remaining soap with plenty of water so a clean surface of the Hertalan EPDM roofing material remains.

**For consistent pollution it is possible to use:**

- / **Spirit** – Methylated spirits or white spirit is suitable for cleaning the surface of Hertalan EPDM. Apply the spirits by using a rag and clean the concerning surface. After cleaning the surface, it must be wiped off with a clean towel. Afterwards, wait 30 minutes before applying Hertalan adhesive systems onto the cleaned roof surface.
- / **Dry-cleaning naphtha** – The technique for cleaning with dry-cleaning naphtha (never with turpentine) is the same as with spirits.

### 3. Exception

Spirits or dry-cleaning naphtha may never be poured out onto the Hertalan EPDM (to clean afterwards). Spirits/dry-cleaning naphtha will be absorbed by the Hertalan EPDM with the possibility that it will swell.

## APPENDIX 4 – SUBSTRATE

Every substrate, on which a Hertalan EPDM roofing system is to be applied, must constructively comply with current building regulations.

### 1. General

Substrates, on which Hertalan adhesive systems will be applied, must be smooth, clean, in good order, frost free, surface dry and free of oil, grease and sharp objects. Hertalan adhesive systems are not suitable to be applied onto unfaced polystyrene or plasticized PVC-foil.

### 2. Roof slope

The slope of the roof construction must be carried out according to current building regulations. Possible positioning of the hot-bonding seams of the membranes, right-angled to the roof slope has no negative effect on the quality of those seams. Such a positioning of the seams does not have to be avoided by determine the positioning plan of the membranes.

### 3. In situ concrete decking

This type of substrate, cured sufficiently, must be smooth, in good order, surface dry and free of oil and grease. The same is valid for present equalize-and/or slope layers and the edges c.q. upstands and such. Always apply a 300 gr/m<sup>2</sup>. non-woven polyester fleece as a separation layer onto the in situ concrete substrates.

### 4. Timber decking boards

When installing timber roof boards ensure that no height differences are built in and that counter sunk fasteners are used. The boards must be placed without a gap between them so open spaces is prevented. Preferably install the EPDM with mechanical fixing. All described Hertalan EPDM roofing systems can be applied onto timber decking boards.

### 5. Profiled steel decking

The decking must be undamaged, clean and free of metal deposits and sharp edges or objects. The steel sheets must be placed, or fixed to the construction in such a way, that differences in vertical movements between plates and between plate and other parts of the construction, are ruled out.

The channels must be free of water and no height differences between the plates may be present.

Do not apply a Hertalan EPDM roof system directly onto profiled steel sheets, an interlayer of a suitable insulation material or timber should be installed first.

## 6. Existing bituminous roof surfaces

A bituminous substrate must be clean, dry, smooth, and free of oil, grease and sharp objects. Loose parts of roofing material must be removed. Existing APP roofing material must first be treated with a flame, SBS material or glass fleece material must be primed.

If the construction is suitable, all described Hertalan EPDM roofing systems can be applied onto an existing bituminous substrate.

## 7. Connection onto zinc – lead-aluminum

EPDM doesn't release any toxic materials to the environment (no leaching) and also doesn't absorb them. Opposite to zinc and lead Hertalan EPDM is environment neutral, it is not affected by rain water or salts or acids present in the air.

Therefore Hertalan EPDM is frequently used in building constructions as an alternative to these heavy metals. For fixation onto zinc, lead or aluminum it is important that the substrate is dry, clean and free of oil and grease. Degrease the substrate with dry-cleaning naphtha or white spirits (don't use turpentine).

If a self-adhering EPDM layer (*hertalan easy stick*) is to be installed, a primer must be applied onto the substrate first.

## 8. Connecting to an existing Hertalan EPDM roofing system

The existing roof surface must be cleaned with soft soap and a hard brush, hereafter wash away the soap residue with hot water. The surface must be dried and be roughened with sandpaper or a copper/brush. Finally the whole surface must be degreased with white spirits or dry-cleaning naphtha.

## 9. Special Note

Hertalan EPDM should never be applied in direct contact onto a substrate of low melting bitumen or tar containing roofing materials. In those cases always apply a separation layer of insulation material or *hertalan easy tex* (a non-woven polyester fleece of 300 gr/m<sup>2</sup>).



**CARLISLE® Construction Materials Ltd**

Unit 4A Isabella Court  
Millennium Business Park  
Mansfield Notts NG 19 7 JZ

**Tel.** +44 (0)1623 62 72 85

**Fax** +44 (0)1623 66 68 04

**Hertalan Production**

Industrieweg 16  
8263 AD Kampen

**Tel.** +31 (0) 38 339 33 33

**Fax** +31 (0) 38 339 33 78

**E-Mail** [info@hertalan.com](mailto:info@hertalan.com)