1. HERTALAN EPDM BASEMENT SYSTEMS

1.1. Guidelines for the application on foundation walls and floors

For almost 50 years HERTALAN® EPDM has been used successfully in Europe, Middle East, Africa and Asia. HERTALAN® EPDM has excellent resistance against extreme temperature fluctuations and constant exposure to direct UV and sunlight.

HERTALAN® EPDM basement systems are exceptional elastic and will not split or crack under normal building movement. It is a high quality solution for a contemporary watertight application.

Hertalan offers a wide range of basement applications and appliances with in general prefabricated membranes or standard strips.

Depending on the systems, the applications are:

1. *hertalan* EPDM strips
un-reinforced vulcanized EPDM strip

2. *hertalan* easy cover
un-reinforced vulcanized EPDM membrane

3. *hertalan* flashing/ flash weld
un-reinforced non-vulcanized rubber

1.1.2 Universal application instructions

For the installation of HERTALAN® EPDM basement systems we have some general guidelines that have to be considered to realize a waterproof basement system.

/ HERTALAN® has developed a number of adhesives for adhering Hertalan EPDM for a variety of applications. Only adhesives and sealants recommended by HERTALAN® are permitted.

/ HERTALAN® EPDM basement systems are installed without naked flames at a minimum working temperature of + 5 ºC.

/ The surface must be smooth, clean, dry, free from oil/grease and sharp points/edges.

/ All concrete substrates should be sufficiently hardened and cured.

/ It is important that the HERTALAN® EPDM base systems are installed with clean working equipment and appliances.

1.2 Hertalan EPDM strips and membranes

HERTALAN® EPDM strips and membranes are a very easy to use material for realizing a waterproof basement system. In principle there are two basic solutions for adhering the basement system, either fully adhered or partially adhered.

The specification of HERTALAN® EPDM strips are: width of 1.40 m (55 inch), thickness 1.5 mm (0.038 mil) and length of 25 m (82 feet). The membranes are multiple of this.

1.2.1 Fully adhered wall system (with loose laid floor)

// Product: *hertalan ks*137 contact adhesive
// Coverage: approx. 500 gram/sqm (applied on two sides)

// Product: *hertalan ks*205 pressurized canister spray system
// Usage: approx. 275 gr/m2 two-sided application (incl. propellant)

/ See our universal application instructions

/ Foundation walls and floors should be free from oil and grease (e.g. when the foundation is built with a formwork). The surface has than to be roughened with a steel brush or grinding machine.

/ Install a separation layer of a non-woven polyester with a minimum of 300 gram/sqm on the surface.

/ The EPDM system on the foundation floor is a loose laid system. The overlap between the strips/membranes is realized with *hertalan ks*137 in combination and *hertalan ks*96 (adhesive sealant).

Application Method

/ Overlap the HERTALAN® a minimum of 100 mm, both sides of the HERTALAN® EPDM must be clean and dry.

/ Apply *hertalan ks*137 contact adhesive to both contact areas over a minimum width of 80 mm leaving a 20 mm clear strip at the exposed edge, apply the *ks*137 with a brush (using a circular motion) or fleece roller.

/ Allow the *ks*137 to dry for between 5 to 20 minutes (dependent on temperature and humidity) until the adhesive is touch dry.

/ Carefully place the HERTALAN® EPDM together avoiding wrinkles, creases and tension. Thoroughly roll across the joint using a silicone roller. To the remaining 20 mm, apply *ks*96 sealant up to the *ks*137 and between the strips/membranes.

/ After applying the sealant roll along the length of the seam, to give a final thickness of 1 mm.

/ The installation of the foundation walls is a fully adhered system. Apply the *hertalan ks*137 or *hertalan ks*205 adhesive to both the HERTALAN® EPDM and the base using a fleece roller, wait until the adhesive is touch dry before bringing the adhered surfaces onto contact with each other.

/ Roll well after joining with a silicone roller. Leave sufficient EPDM uncovered with adhesive, to create an overlap with the EPDM on the foundation floor.

/ Connect the foundation wall with the floor by creating an overlap with *hertalan ks*137 in combination with *hertalan ks*96.

/ To protect the HERTALAN® EPDM for mechanical damage a non-woven polyester of 300 gram/sqm has to be installed on the EPDM surface. The foundation walls have to be protected with e.g. expanded polystyrene plates.

/ The concrete can only be poured on the EPDM when the seams are strong enough to bear a load and have reached the maximum strength and heat resistance.

1.2.3 Partially adhered system

// Product: *hertalan ks*96 adhesive sealant
// Coverage: approx. 15 m for a sausage of 600 ml

/ In general the installation is the same as in a fully adhered system. Only instead of adhering the EPDM with a contact adhesive to the surface, it is realized with *hertalan ks*96, a high quality one component adhesive sealant.

/ Cut the top of the spout at an angle to create a hole of 7 mm diameter.

/ Apply the *hertalan ks*96 in a single bead 7 mm thick each 300 mm. Do not spread and apply the HERTALAN® EPDM to the surface with *hertalan ks*96 within 5 minutes.

/ In the edges of a foundation wall or floor an extra bead of *hertalan ks*96 has to be applied on the horizontal and vertical part of the edge.

/ It is important to roll out the strips/membranes over the *hertalan ks*96 with a silicone roller to create an adhered joint of approx. 25 mm width. This would be 50 mm if two beads of *hertalan ks*96 were applied.

/ Always check coverage by lifting a seam to ensure even spread of ks96, this should be carried out regularly and rolled back on completion of each inspection.

/ The seams should always be realized with *hertalan ks*137 in combination with *hertalan ks*96.

/ The concrete can only be poured on the EPDM when the seams are strong enough to bear a load and have reached the maximum strength and heat resistance.

1.3 Foundation Piles

A watertight connection has to be realized between the foundation piles and the installed HERTALAN® EPDM. If these details are unsuited to our standard solutions, we recommend working with *hertalan* flashing or *hertalan* flash weld.

hertalan flashing is a non-vulcanized rubber that can be moulded into any shape or form by using heat, it will vulcanize in open air with the effect of sunlight and heat. The specification of *hertalan* flashing is: width 0.30 m (12 inch), thickness 1.6 mm (0.040 mil) and length 5 m (16 feet).

hertalan flash weld is similar to the flashing, only the underside is weldable. This enables *hertalan* flash weld to be joined to any other HERTALAN® membrane using a hot air gun. The specification of *hertalan* flash weld is: width 0.18 m (7 inch), thickness 2.0 mm (0.050 mil) and length 5 m (16 feet).

1.3.1 *hertalan* flashing

/ Universal application instructions.

/ Cut from a strip HERTALAN® an EPDM cuff, cut a suitable opening and pull this over the pile. The (opening) size of the cuff depends on the situation.

/ Apply *hertalan ks*96 in a single bead of 7 mm approx. 3 cm from the top edge of the cuff (between EPDM and concrete) and roll out over the EPDM with a silicone roller to create an adhered joint.

/ Create an overlap between the cuff and the foundation floor with *hertalan ks*137 in combination with *hertalan ks*96.

/ The *hertalan* flashing must only be fixed to the EPDM cuff and concrete of the piles with *hertalan ks*137.

Application Method

/ Mark off the area of *hertalan* to receive the *hertalan* flashing.

/ Apply *hertalan ks*137 to the flashing and the EPDM (and in this situation also the top of the concrete pile). Allow the *ks*137 to dry for between 5 to 20 minutes (dependent on temperature and humidity).

/ When the *ks*137 is touch dry the protecting cover of the flashing can be removed. Always fix the vertical plane first. Press the flashing to the substrate and apply heat to the surface of the flashing, do not heat the *ks*137 directly.

/ When the flashing is hot enough it can be applied carefully to the substrate. Ensure that all edges are properly adhered and roll the flashing with a silicone roller. To complete the work, seal off all edges *ks*96 and clean off all surpluses.