

#### **740 ADHESIVE JOINTING**

- **Side and end joints:**
  - **Laps (minimum):** 100mm
  - **Preparation:** Not Applicable
  - **Sealing:** Apply continuous even coverage of KS137 to both surfaces leaving the outer 20mm free from adhesive. Mate and roll together. Do not wrinkle or stretch. Apply thin even bead of KS87 sealant and roll out to a thickness of 1mm
- **Condition at completion:** Fully sealed, watertight and free draining.
- **Accessories:** 25mm/ 40mm compression roller

#### **760 PERIMETER OF MEMBRANE**

- **General:** Secure membrane at roof edge conditions, changes of plane, curb flashings, upstands to roof lights, etc. with contact adhesive KS137.

### **COMPLETION**

#### **910 INSPECTION**

- **Interim and final roof inspections:** Submit roof covering manufacturer's reports.

#### **940 COMPLETION**

- **Roof areas:** Clean.
  - **Outlets:** Clear.
- **Work necessary to provide a weathertight finish:** Complete.
- **Storage of materials on finished surface:** Not permitted.
- **Completed membrane:** Do not damage. Protect against damage from traffic and adjacent or high level working.

## 520 INCOMPLETE WORK

- **End of working day:** Provide temporary seal to prevent water infiltration.
- **On resumption of work:** Cut away tail of membrane from completed area and remove from roof.

## SUBSTRATES/ VAPOUR CONTROL LAYERS/ WARM ROOF INSULATION

### 650 INSTALLING OVERLAYS TO METAL DECK

- **Setting out:** Lay boards in brick pattern with long edges at right angles to troughs in deck.
  - **Joints:** 2 mm.
  - **End joints:** Centre over crown of deck.
- **Fasteners:** Do not protrude above surface of board.
  - **Type:** Recommended for purpose by fastener manufacturer.
  - **Spacing:** To crowns of deck: \_\_\_\_\_.

### 660 JOINTS IN RIGID BOARD SUBSTRATES

- **Cover strip:** Lay centrally over substrate joints before laying vapour control layers or coverings. Adhere to substrate with bonding compound along edges only.

### 670 LAYING VAPOUR CONTROL LAYER

- **Laying:** Sheets loose, flat and without wrinkles.
- **Laps:** Seal using materials and method recommended by membrane manufacturer.
- **Upstands, kerbs and other penetrations:** Enclose edges of insulation. Fully seal at abutment by bonding or taping.

### 680 INSTALLING WARM ROOF INSULATION

- **Setting out:**
  - **Long edges:** Fully support and run at right angles to \_\_\_\_\_.
  - **End edges:** Adequately support.
  - **Joints:** Butt together.
  - **End joints:** Stagger.
- **Bedding:** \_\_\_\_\_.
- **Mechanical fixing:** \_\_\_\_\_.
- **Completion:** Boards must be in good condition, well fitting and with no springing, flexing or rocking.

## WATERPROOF COVERINGS/ ACCESSORIES

### 710 MECHANICAL FIXING OF WATERPROOF MEMBRANE

- **Installing fasteners:**
  - Use manufacturer's recommended equipment.
  - **Insertion:** Correct and consistent.
- **Washers/ pressure plates/ bars:**
  - **Distance from fixed edge (minimum):** 10 mm.
  - **Fixing:** Flush with membrane.
- **Sheet overlaps:** Extend beyond washers/ pressure plates (minimum): 50 mm.
- **Surface condition at completion:** Smooth.

## 230 INSULATION

- **Requirement:** Determine type and thickness of insulation and integral or separate overlay to satisfy the following criteria:
  - **Thermal transmittance of the roof (maximum):** \_\_\_\_\_ W/m<sup>2</sup>K.
  - **Compressive strength of insulation (minimum) at 10% compression:** \_\_\_\_\_ kPa.
  - **Finished surface:** Suitably even, stable and robust to receive the covering.
  - **Insulation compliance:** To a relevant British Standard, or Agrément certified.

## PRODUCTS

### 355 MECHANICAL FASTENINGS, WASHERS, PRESSURE PLATES ETC.

- **Type:** Olympic
  - **Manufacturer:** Fixfast, Forge Works, Horsham Road, Homwood, Dorking, Surrey. Tel: 01306 880299
  - **Product reference:** HD Fasteners

### 360 PLYWOOD OVERLAY TO METAL DECK

- **Plywood:** To BS EN 636-2.
  - **Quality:** Naturally durable timber, free from preservatives.
  - **Thickness:** \_\_\_\_\_ mm.

### 365 ORIENTED STRAND BOARD OVERLAY TO METAL DECK

- **Oriented strand board:** To BS EN 300.
  - **Type:** OSB/3.
  - **Thickness:** \_\_\_\_\_ mm.

### 395 VAPOUR CONTROL LAYER

- **Type:** \_\_\_\_\_.
  - **Manufacturer:** \_\_\_\_\_.
  - **Product reference:** \_\_\_\_\_.
  - **Thickness:** \_\_\_\_\_.
  - **Vapour resistance:** \_\_\_\_\_ MNs/g.

### 420 RIGID URETHANE FOAM WARM ROOF INSULATION

- **Material:** \_\_\_\_\_.
  - **Manufacturer:** Kingspan
  - **Product reference:** TR26
  - **Density:** \_\_\_\_\_ kg/m<sup>3</sup>.
  - **Thickness:** Dependant on specification
  - **Facing:** Dependant on system

## EXECUTION GENERALLY

### 510 ADVERSE WEATHER

- **Laying:** Do not lay membrane in wet or damp conditions or at temperatures below 5°C.
- **Unfinished areas of roof:** Keep dry where possible.
- **Work in severe or continuously wet weather:** Suspend or provide effective temporary cover over working area.
- **Unavoidable wetting:** Minimise and make good any damage.
- **Incomplete areas of membrane:** Protect from wind action.

- **Accessories:**

- Hertalan KS137 - contact adhesive
- Hertalan KS87 - lap sealant
- Hertalan KS96 - moisture curing adhesive sealant
- Hertalan KS2000 - acrylic based instant adhesive
- Hertalan roof outlets - Diameters: 40/50/63/75/90/110/125/140 & 160mm
- Hertalan preformed vent sleeves
- Hertalan prefabricated internal, external and skylight corners
- Hertalan Flashing
- Hertaled, the alternative to lead
- Hertalan easy.weld / Flashweld
- Hertalan easy.stick - self adhesive EPDM
- Hertalan easy.tex - 300gm/m<sup>2</sup> geotextile protective fleece
- Hertalan easy.tiles - 15mm recycled EPDM decorative tiles in various colours
- Hertalan easy.wipes - cleaning wipes for the removal of Hertalan adhesives
- Edge trims as clause 765

## PERFORMANCE

### 210 ROOF PERFORMANCE

- General: Secure, free draining and completely weather tight.

### 220 VAPOUR CONTROL LAYER

- **Requirement:** Determine interstitial condensation risk of roof as recommended in BS 6229. Modify calculation method to conform to BS 5250.
- **Basic design data:**
  - **Outdoor notional psychrometric conditions, winter:**
    - Temperature: -5°C.
    - Relative humidity: 90%.
    - Vapour pressure: 0.361 kPa.
    - Duration: 60 days.
  - **Outdoor notional psychrometric conditions, summer:**
    - Temperature: 18°C.
    - Relative humidity: 65%.
    - Vapour pressure: 1.341 kPa.
    - Duration: 60 days.
  - **Indoor notional psychrometric conditions:**
    - Temperature: \_\_\_\_\_ °C.
    - Relative humidity: \_\_\_\_\_ %.
    - Vapour pressure: \_\_\_\_\_ kPa.
- **Winter interstitial condensate:**
  - Calculated amount (maximum) \_\_\_\_\_ kg/m<sup>2</sup>.
  - Calculated annual net retention (maximum): 5%.
- **Vapour control layer:** If calculated amounts of condensate exceed allowed amounts, provide a suitable membrane so that damage and nuisance from interstitial condensation do not occur.

### Timber Surfaces

All timber materials should be fixed in full accordance with the manufacturer's recommendations and must be clean, dry and free from oil, grease and preservatives must be fully cured/ dry. There must not be any height differences in the roof sheets and all fixings must be countersunk, all joints should be installed taking expansion into consideration.

### Profiled Steel Roof Sheets

Sheets must be undamaged, clean, de-burred and free of sharp edges or points. The sheets must be attached to each other and to the structure in such a manner that differences in vertical movement between the sheets and/or other structural parts is not possible, the troughs must be free of water and there should be no differences in height. Plywood overlay as clause 650 with taped joints as clause 660 – recommended in new work where the base is a profiled metal deck as a base for the vapour control layer.

### Existing Bituminous Roof Coverings

Suitable bituminous substrates must be clean, smooth and free of oil and grease and sharp protrusions, all loose roof covering must be removed prior to the installation of Hertalan. *Hertalan must never be applied in direct contact with a substrate containing low melting point tar or bitumen, in these cases a separating layer of insulation or Hertalan Easy.tex must first be installed to receive the Hertalan.*

#### - **Roof covering:**

- Manufacturer: Hertalan (UK) Ltd. Units E6 & E7, Lowmoor Road, Kirkby-in-Ashfield. Nottinghamshire. NG17 7DE. Tel: 01623 721500. Fax: 01623 721700. Email: [sales@hertalan.co.uk](mailto:sales@hertalan.co.uk) Web: [www.hertalan.co.uk](http://www.hertalan.co.uk)
- **Lower protective layer (loose laid):** Not Applicable
- **Vapour control layer:** 1000 gauge polyethylene sheet as clause 220  
**Laying:** Loose laid, laps sealed with double-sided butyl tape.
- **Insulation: Kingspan** Rigid urethane foam as clause 420 in accordance with the manufacturers recommendations/specifications for use with single ply membranes. For suitability of other insulation materials contact the Hertalan technical department  
**Attachment:** As per manufacturer's instructions and installation manual.
- **Separating layer (loose laid):** Not required if insulation has appropriate facing
- **Waterproof membrane:** Hertalan EPDM Roofing System.  
**Thickness:** 1.2 / 1.5 mm  
**Colour:** Black  
**Attachment:**  
Mechanically attached as clause 355 and 710.
- **Upper protective layer (loose laid):** Not Applicable
- **Surface protection:** Not Applicable

## **J42 SINGLE LAYER POLYMERIC SHEET ROOF COVERINGS**

To be read with Preliminaries / General Conditions.

### **TYPE OF COVERING: MECHANICALLY FIXED**

#### **110 WARM ROOF COVERING**

Hertalan (UK) Ltd EPDM single ply roofing membrane systems are designed for use on all types of roof and can be loose laid and ballasted or fully/partially adhered. Hertalan can also supply a secret mechanical fixing system using specially designed flaps of EPDM hot welded to the membrane, with the spacing of the flaps and the number of fixings required calculated by the Hertalan technical department depending on the type of roof construction, local wind conditions, roof area and shape. The roofing system is manufactured to combat ageing and is designed to be unaffected by ozone, UV radiation and strong sunlight. The membrane is 100% root resistant. Installation is only carried out by operatives trained and approved by Hertalan (UK). Consult with Hertalan (UK) for a list of approved contractors. The manufacturer offers a 20year guarantee on all materials.

Hertalan loose laid and fully adhered EPDM roofing systems have been awarded the British Board of Agrément Certificate No 91/2728/C.

**Dimensions:** Prefabricated custom-made formats in any dimension up to 400m<sup>2</sup> in one piece.

- **Substrate:**

Galvanised steel metal deck – minimum 0.7mm thick  
Aluminium metal deck – minimum 0.9mm thick  
Timber board deck  
Plywood deck  
Cement bonded particle board deck  
Oriented strand board deck  
Wood wool slab deck  
Aerated concrete slab deck

- **Preparation:**

The structure of the substrate to receive Hertalan must be in full accordance with current building regulations and practice.

*Pitched/Sloping Roofs*

The slope of the structure must comply with all current regulations

*Concrete*

All concrete substrates should be sufficiently hardened and cured, the surface should be smooth, clean, dry and free from oil and grease, all other surfaces to receive Hertalan should also meet this criteria.