

CONIROOF®

# CONIROOF®: Tailor-made Solutions for your Roof



 **BASF**

The Chemical Company



# Introducing the CONIROOF® System

BASF Construction Chemicals is one of the world's largest providers of construction products, systems and services for new construction, repair and refurbishment. CONIROOF membranes have been installed using cold application methods to over 12 million square metres of waterproofing during the last 20 years. BBA approved and certified to European standards, CONIROOF has been designed for use on flat, pitched and inverted roofing projects. This innovative waterproofing solution is an ideal alternative to conventional single ply and built-up bituminous membranes.



CONIROOF is based upon the use of epoxy resin/polyurethane preparation coatings, combined with polyurethane based waterproofing membranes and surface coatings. CONIROOF has been designed to provide a minimum of 25 year performance expectancy in severe climate conditions as a fully bonded waterproofing solution for:

- **built-up roofing systems**
- **overlay systems**
- **podium decks**
- **inverted roofing**

CONIROOF membranes can be sprayed or hand applied onto different types of substrate by using polyurethane or epoxy resin preparation coats and primers.

#### The difference with CONIROOF

- **Fast installation**  
new spray technology applies up to 700 m<sup>2</sup>/day of the waterproofing membrane including detailing
- **Monolithic**  
no laps, welds or seams, the inherent weakness of sheeted systems – makes for reliable detailing
- **Fast-setting**  
30 seconds after application
- **Cold applied**  
requiring no hot works and presents no fire risk
- **Fire retardant**  
meets DIN 4102: Part 7, BS 476: Part 3
- **Lightweight**  
less dead load on existing structures/substrates
- **Solvent-free**  
no odour

- **Robust**  
designed to take vehicular traffic without damage
- **Ideal for landscaping works**  
roof gardens and decking

The ideal alternative to conventional single ply and built up bituminous membranes.





# Preparation

BASF's CONIROOF waterproofing systems are multi-layered and comprise of a series of substrate sealers, primers, waterproofing membranes and protective top-coats. The systems are cold applied thus avoiding the odour and the fire risk of hot works.

The seamless, monolithic waterproofing obtained from the CONIROOF systems requires several application stages:

- cleaning and preparation
- preparation coats/primers
- insulation (optional)
- spray or hand applying the waterproofing membrane
- application of top coat

## Cleaning and preparation

As with all building operations, if the preparation of the substrate is poor, then problems will arise in the future. The cleaning and preparation of the substrate to which the CONIROOF is applied must be carried out thoroughly to leave a sound base for the application.





### Preparation coats/primers

CONIROOF can be applied to a variety of substrates, from dense concrete to lightweight metal. Substrate preparation is key to the successful installation of the CONIROOF systems.

CONIROOF adapts to different types of substrates by using polyurethane or epoxy resin preparation coats and primers. To ensure optimum performance of the waterproofing membrane, a range of preparation coats and primers have been especially formulated.

- Compatible preparation coats are available for mastic asphalt, built up roof membranes and other bituminous substrates
- Epoxy resin coatings are used for preparing concrete and other dense substrates, e.g. brickwork
- Polyurethane primers are available for timber, PVC and fibre cement board.
- Other primers are available for metals such as aluminium, copper and zinc.



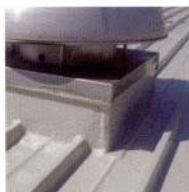
# Waterproofing Membranes

The CONIROOF spray and hand applied elastomeric waterproofing membranes have become a revolutionary alternative to conventional waterproofing methods provided by bituminous membranes and single ply membranes.

These liquid applied non-solvent membranes conform to all irregular surfaces without laps, welds, or seams forming a seamless membrane with no weak points for water ingress. The new spray technology of CONIROOF has also evolved and revolutionised the installation of traditionally hand applied liquid applied roofing membranes. The CONIROOF spray applied membranes set in just 30 seconds after application to form a solid, impervious, monolithic membrane. As with the hand applied system, it is seamless and has the unique benefit of conforming to all irregular surfaces removing the need for laps and pre-formed sections. This makes detailing work using CONIROOF up to 20 times faster than traditional sheeted methods as the system is applied at the same time as the main deck waterproofing membrane. EOTA & BBA approved waterproofing membranes are available and installed by a specially trained network of approved contractors.



**Simple, effective,  
seamless detailing.**



# Top Coats

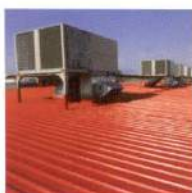


The final stage of the CONIROOF system demands the use of a surface coating. A range of single component, moisture curing, UV resistant protective coatings are available for this purpose.

How the roof is to be used will determine the top coat selected, i.e., as a non-accessed roof, walkway or balcony.

The CONIROOF range of top coats offers the following benefits:

- excellent UV and weather resistance
- highly elastic
- provides superior adhesion even when permanently exposed to water
- single component – no mixing required
- easy to apply
- available in a range of colours
- durable anti-slip finishes have been designed for areas of pedestrian traffic such as walkways, roof terraces and balconies
- smooth, matt and other decorative finishes are available for aesthetic appeal





# Choosing the Right Solution

## Hand applied



### Perfect for confined and restricted spaces

- **Cold hand applied systems** – applied by notched squeegee and roller
- **Flexible** – ideal in confined spaces or where access is limited
- **Economic** – smaller areas up to 250 m<sup>2</sup> can be coated more economically
- **Elastomeric** – will stretch and contract with the movement of roof

### CONIROOF 2150 system

CONIROOF 2150 system is an EOTA approved system under ETAG 005 and provides fire resistant properties under DIN 4102 Part 7. The membrane in this system is applied using rollers/brushes and squeegees. Suitable for all roofing designs where the system is left exposed such as overlays of original roof waterproofing.

### CONIROOF 2160 system

BBA approved system where the membrane is applied using rollers, brush and squeegee. Predominately used in buried membrane applications or where no fire performance is determined.

Type of roof	CONIROOF systems					
	2150 ETA	2160 BBA	2110 BBA	2111	2102 BBA	2103 ETA
Flat/pitched roof	■	■	■	■	■	■
Warm/insulated roof	■	■			■	■
Inverted roof	■	■			■	■
Overlay	■	■	■	■	■	■
Green roofs	■	■	■	■		■
Landscaping podium decks						





## Spray applied

### Fast track seamless solution for complex or large areas

- **Cold applied** – no hot works, no fire risk
- **Fast** – up to 20 times faster than traditional roofing methods
- **Economic** – faster and less labour intensive detailing work required
- **Seamless detailing** – no laps, welds or seams to seal providing simple effective waterproofing of difficult detailing situations



### CONIROOF 2110 system

CONIROOF 2110 system has been used since 1985 to waterproof all types of flat or pitched roofs. Extensively used in buried membrane applications such as inverted (upside down) roofs, roof gardens and landscaped areas. BBA approved and assessed to be durable for 'the life of the structure' that it is applied to.

### CONIROOF 2111 system

Suitable for all types of roofing applications and ideal for buried membrane applications.

### CONIROOF 2102 system

This system has been tested to provide an FAA or SAA fire rating in accordance with BS 476 Part 3: 1958 and can therefore be used on any roofing applications where the system is

to be left exposed, such as insulated/warm roofs, overlays or original roof waterproofing and profiled sheeting re-waterproofing. BBA approved and assessed to be durable for a 'minimum of 25 years'.

### CONIROOF 2103 system

Tested to European standards under ETAG 005 and certified as an EOTA approved system to provide a fire performance in accordance with DIN 4102 Part 7. EOTA approved to be used in extreme climates from Scandinavia to Mediterranean countries and provides an expected 25 year life. Suitable for all types of flat or pitched roofing applications including insulated roofs and roof gardens.



# CONIROOF Inverted Roof Systems

## Concrete decks with paving or ballast surface

The CONIROOF systems are ideal for inverted roof applications.

As the membrane is protected and does not rot or degrade, it will last the 'design life of the roof' as assessed by the BBA.

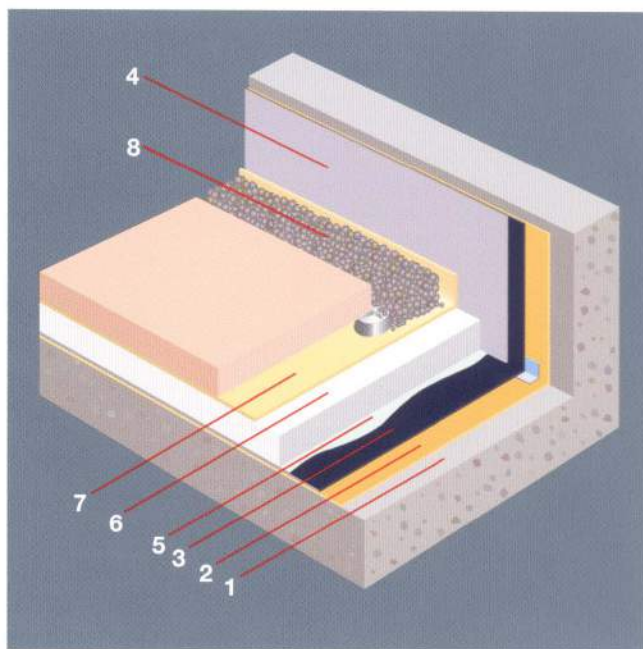
The membrane is fully bonded to the concrete deck ensuring water cannot track under its surface and is lap free. The system requires no falls and its straightforward build up reduces installation time and labour costs. If the spray applied systems are used, up to 700 m<sup>2</sup> per day may be achieved.

This allows the insulation and ballasting to be applied earlier in the project creating a watertight structure. This ensures the early building waterproofing integrity enabling other follow on trades earlier access.

## Features and benefits

- Simple, fast application, building waterproofed faster
- Fully bonded to deck, water cannot track under membrane
- Highly cost effective
- Long term life expectancy
- Secure waterproofing to details
- Falls not required, cost saving
- Membrane protected from damage by users of roof surface

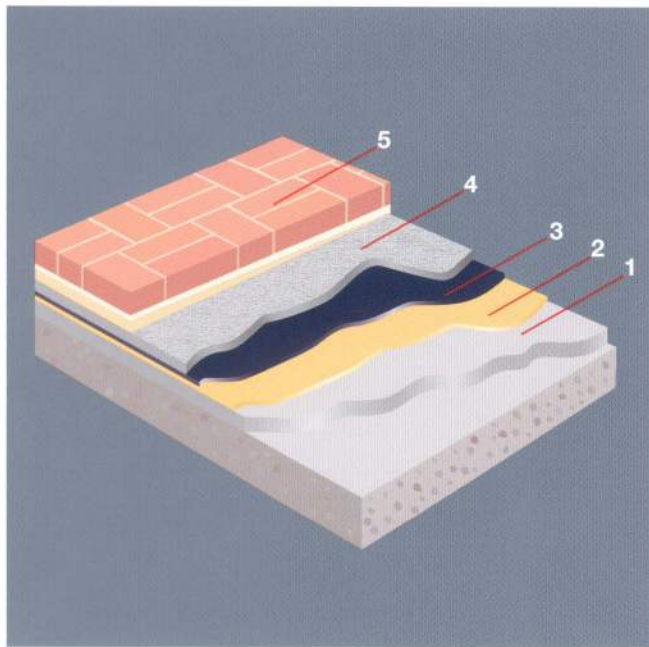
**Fast track solutions**  
**Up to 700 m<sup>2</sup> per day**



Typical Inverted roof specification	Spray applied system	Hand applied system
1. Deck	<b>MASTERTOP primers and preparation coats as recommended by BASF</b>	
2. Preparation coat/primer		
3. Waterproofing membrane	CONIROOF system 2103 CONIROOF system 2110 CONIROOF system 2111	CONIROOF system 2160 CONIROOF system 2150
4. UV protective top coat on exposed membrane		
5. Drainage layer	Drainage board	
6. Insulation	Extruded polystyrene	
7. Filter fabric	Geotextile	
8. Ballast layer	Ballast / Paving	



# CONIROOF Landscaping and Podium Deck Systems



## Roof gardens, paved areas, roadways and water features

The price of land in cities now dictates that the owner should maximise site use by incorporating underground car parks with suspended concrete slabs at ground level (podium deck) or provide garden areas at roof level on commercial developments. CONIROOF can be used most cost effectively in this design and has been assessed by BBA cert. 99/3660 to be effective for the design life of the structure.

## Features and Benefits

- BBA approved
- Provides recreational area for building occupiers
- Fully bonded to deck – water cannot track under the system
- Robust, puncture resistant waterproofing
- No falls are required in the deck, expensive screeds not required, cost saving
- Built in root resistance to DIN 4062 standards, separate root barrier not needed, saving time and reducing cost

Podium deck	Spray applied system	Hand applied system
1. Screed to falls	Optional	
2. Preparation coat/primer	MASTERTOP primers and preparation coats as recommended by BASF	
3. Waterproof membrane	CONIROOF system 2110 CONIROOF system 2111 CONIROOF system 2103	CONIROOF system 2150
4. Drainage layer with geotextile filter	Drainage board	
5. Paved surfacing sharp sand bedding	Brick paviour Green roof	

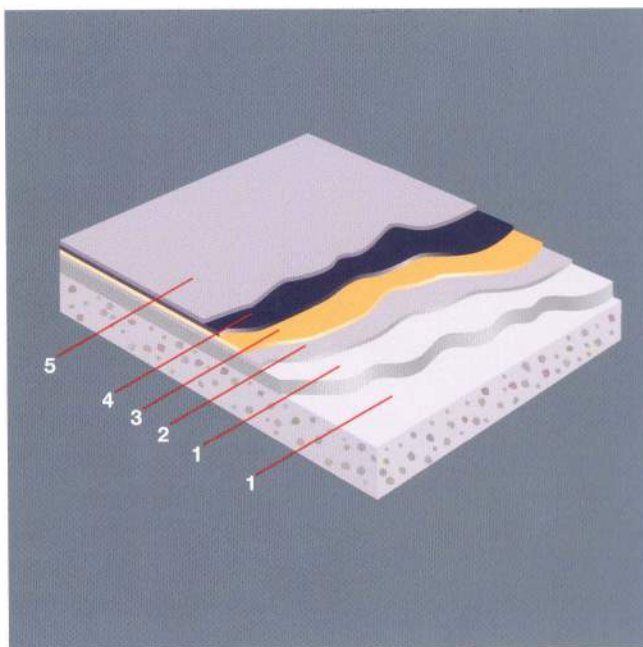
# CONIROOF Overlay Systems

## Mastic asphalt, bituminous membranes, single ply and profile sheets

CONIROOF is a very cost effective overlay solution for the reinstatement of the waterproofing of defective existing roofs currently covered in mastic asphalt, bituminous membranes, single ply membranes, asbestos, fibre cement, or profile/metal cladding with coatings and liquid applied systems.

Each type of roof brings with it a host of waterproofing failures, and as part of our support service, we are able to offer a free roof inspection to clarify the defective nature of the roof/structure and recommend the suitability of overlaying it.

In order to treat and prepare each roof for the reinstatement of the waterproofing, BASF has a range of primers and preparation coats, which have been specially designed to ensure the CONIROOF waterproofing systems are fully bonded to the existing surface.



Typical overlay roof specifications	Spray applied system	Hand applied system
1. Deck	BASF is able to provide a survey of the existing roof to assess suitability for refurbishment	
2. Mastic asphalt/Bituminous membrane	Prepare and clean	
3. Primer	Consult BASF technical services	
4. Waterproof membrane	CONIROOF system 2102 CONIROOF system 2103	CONIROOF system 2150 CONIROOF system 2160
5. Top coat	CONIROOF system 2110 CONIROOF system 2111	





#### Features and benefits

- Cold application, no fire risk
- Robust, puncture resistant waterproofing
- Quick, effective drainage
- Fast installation
- No disruption to building tenants
- No strong odours
- Fully bonded to existing surface
- High elasticity over existing cracks/defects

#### Single ply overlay systems

Single ply systems have been used extensively since the 1980s and some roofs are now starting to fail. Stripping the existing waterproofing is not always a cost effective solution and is extremely disruptive. A fast simple operation of CONIROOF will bond a new waterproofing solution onto the original membrane. Clarification of the existing single ply type and the suitability of overlaying it must be established before commencing work.

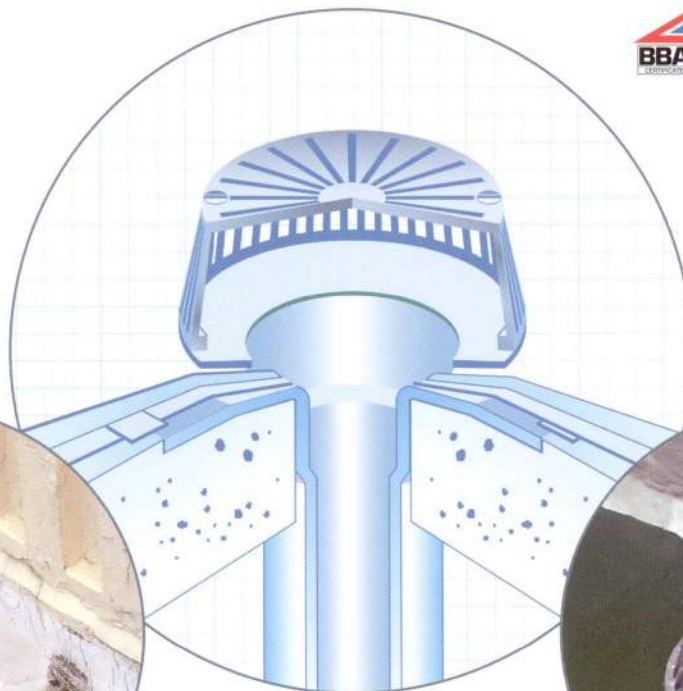
- All pre-formed details and welds covered in monolithic membrane
- No laps/welds or seams to break down
- Termination bars can be removed – reducing maintenance requirements



# Technical Support

BASF can help with the technical aspects that determine specifications to meet the criteria of successful roof design. All applications will primarily maintain the internal environment as required by the building's use/occupants, namely:

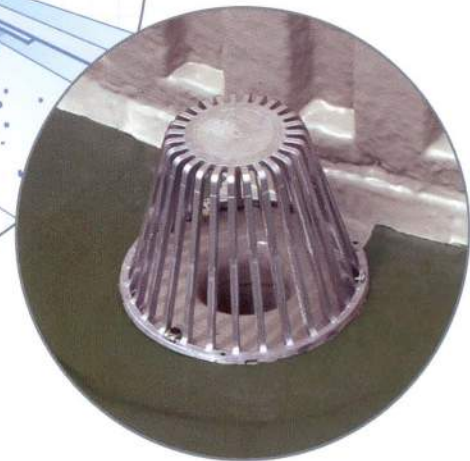
- Provide an adequate barrier to the penetration of the elements
- Provide an adequate resistance to heat loss
- Safely resist all imposed loadings such as snow and wind
- Be capable of accommodating thermal and moisture movements
- Be durable so as to give satisfactory longevity and keep maintenance to a minimum



CAD designs



Problem



CONIROOF solution





# Seamless Detailing

CONIROOF's most important feature is its ease of detailing that can be carried out reliably.

It is common for waterproofing problems to occur through poor sealing of sheet systems to details such as pipes, metal brackets, upstands and thresholds.

The seamless application of CONIROOF removes this potential area of risk. The system will conform to all profiles/shapes as it is liquid applied. This allows complicated details to be reliably waterproofed, which would otherwise be difficult to seal using sheet systems.



**Before**



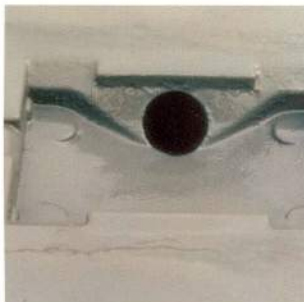
**Preparation**



**Final application**



**CONIROOF – taking care of the details, however complex your project.**



## Intelligent Solutions from BASF Construction Chemicals

Whatever your construction problem, whatever the structure is you are building, BASF Construction Chemicals has an intelligent solution to help you be more successful.

Our market leading brands offer the widest range of proven technologies to help you build a better world.

**Emaco®** – Concrete Repair Systems

**MBrace®** – Composite Strengthening Systems

**Masterflow®** – Precision and Structural Grouts

**Masterflex®** – Joint Sealants

**Masterseal®** – Coatings and Waterproofing

**Concresive®** – Resin Based Mortars, Adhesives and Injection Systems

**Conica®** – Sports Flooring

**Conideck®** – Hand and Spray Applied Waterproofing Systems

**Coniroof®** – PU Based Roofing Systems

**Conibridge®** – PU Based Membranes to Protect Bridge Decks

**Mastertop®** – Decorative and Industrial Flooring Solutions

**Ucrete®** – Flooring Solutions for Harsh Environments

**PCI®** – Tile Fixing, Cement Underlays and Waterproofing Systems



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*BASF is the world's leading chemical company: The Chemical Company. Its portfolio ranges from chemicals, plastics, performance products, agricultural products and fine chemicals to crude oil and natural gas. As a reliable partner to virtually all industries, BASF's intelligent system solutions and high-value products help its customers to be more successful. BASF develops new technologies and uses them to open up additional market opportunities. It combines economic success with environmental protection and social responsibility, thus contributing to a better future.*

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