

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.

- **Fast installation**
new spray technology applies up to 700 m²/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

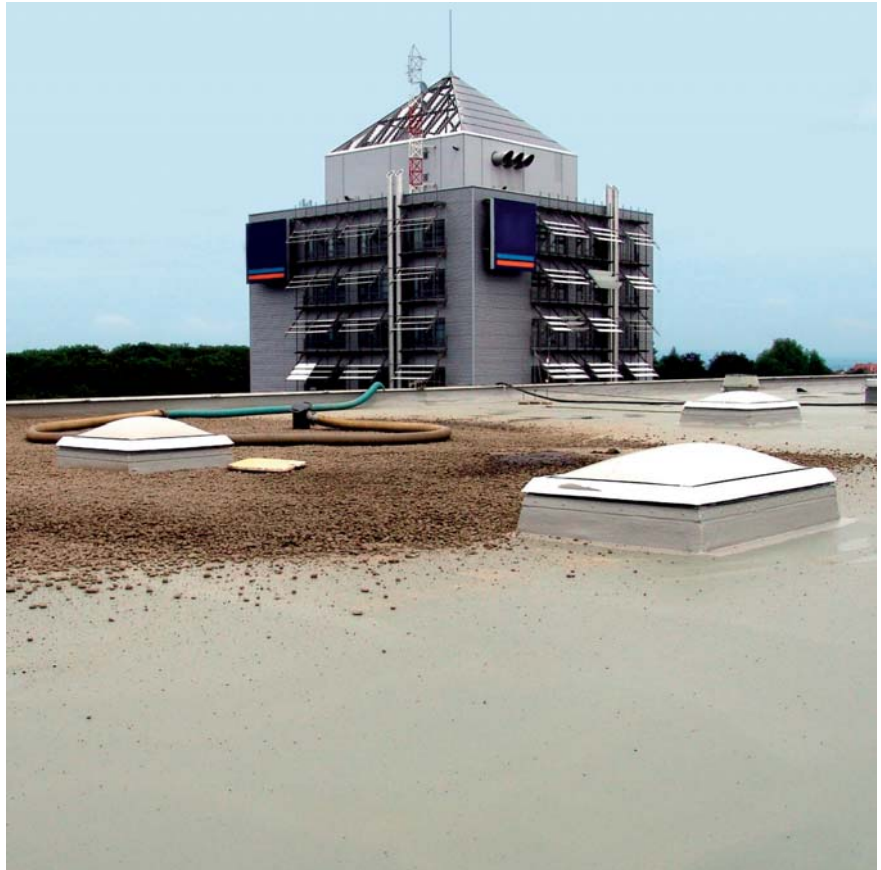
BASF's CONIROOF waterproofing systems are multi-layered and comprise of a series of substrate sealers, primers, waterproofing membranes and protective top-coats. The systems are cold applied thus avoiding the odour and the fire risk of hot works.

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.

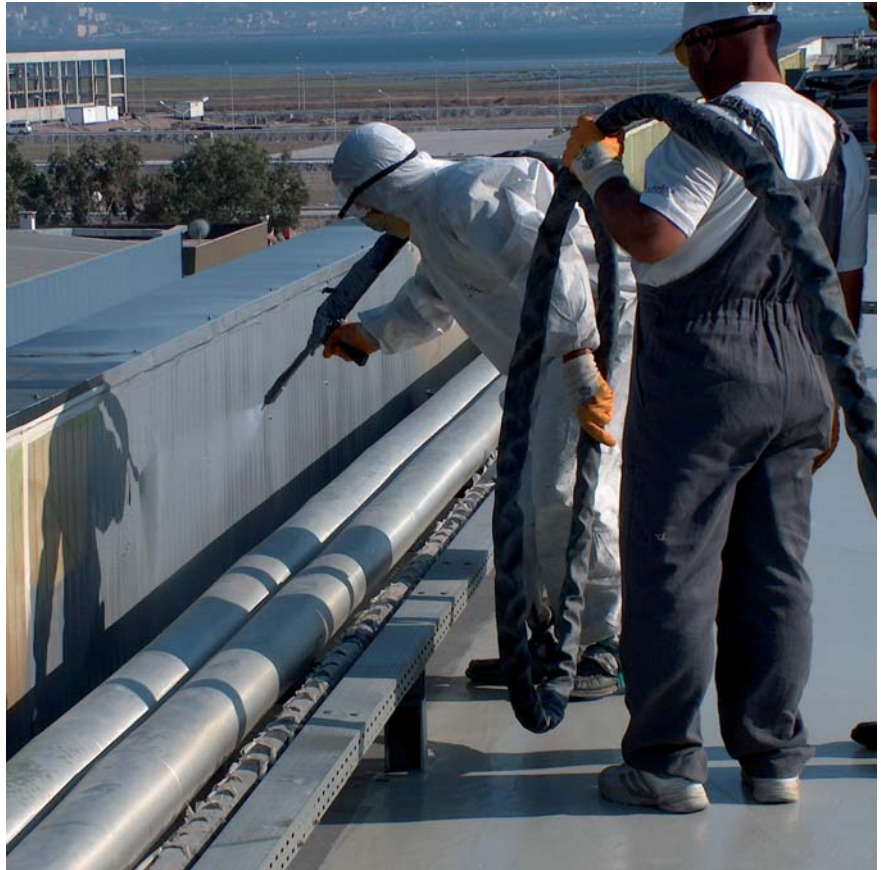
- Compatible preparation coats are available for mastic asphalt, built-up roof membranes and other bituminous substrates.
- Epoxy resin coatings are used for preparing concrete and other dense substrates, e.g. brickwork.
- Polyurethane primers are available for timber, PVC and fibre cement board.
- Other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

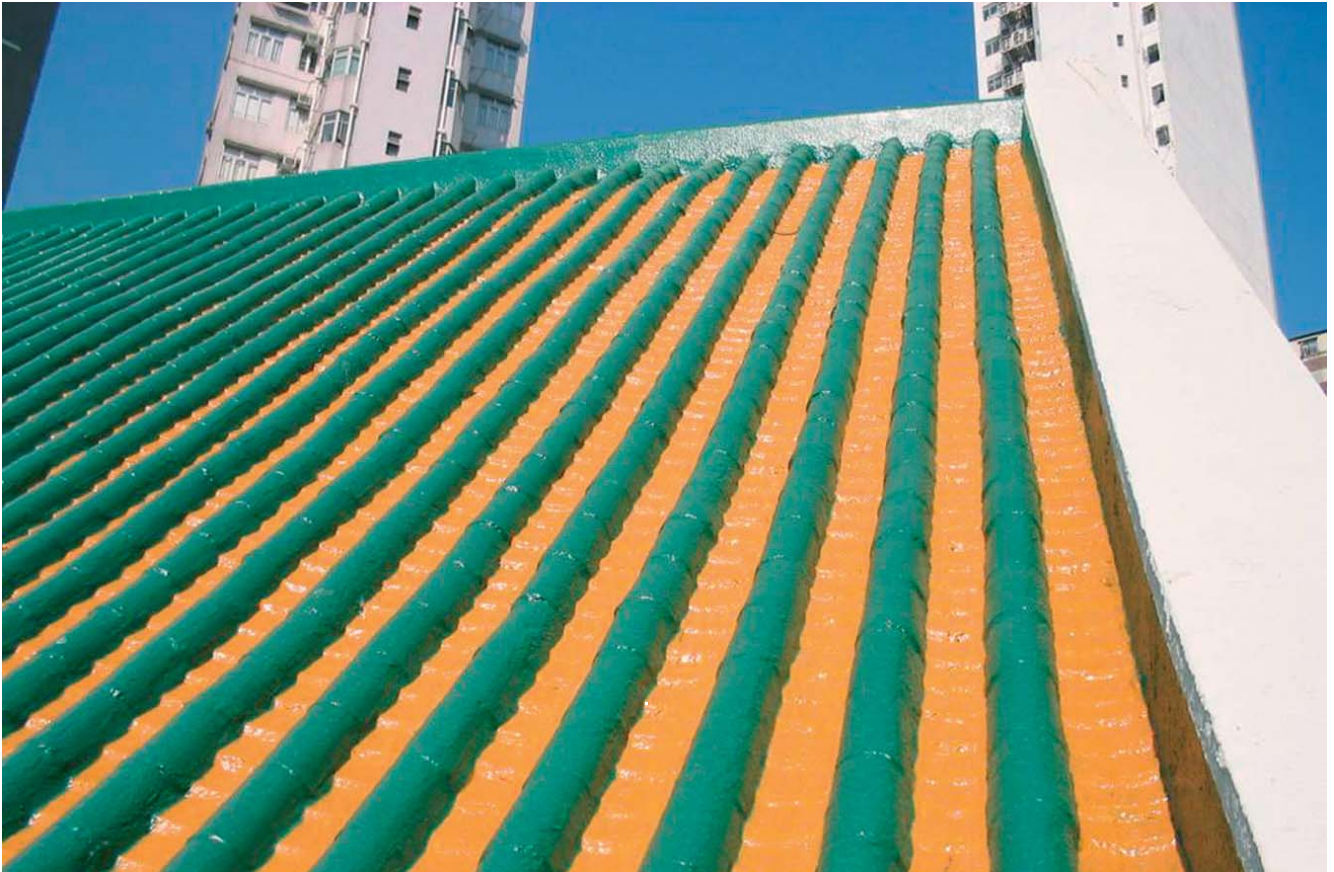
These liquid applied non-solvent membranes conform to all irregular surfaces without laps, welds or seams, forming a seamless membrane with no weak points for water ingress. The new spray technology of CONIROOF has also evolved and revolutionised the installation of traditionally hand applied liquid 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 twenty 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 BASF's 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
- **Economical** – smaller areas up to 250 m² can be coated more economically
- **Elastomeric** – will stretch and contract with the movement of the roof

CONIROOF 2160 system

BBA approved hand applied membrane system for exposed and light traffic (pedestrian and maintenance) roofs. Can be used in situations where there is a mixed roof use (landscaping or roof gardens, as well as exposed areas).

CONIROOF 2162 system

Hand applied membrane system for inverted or non-exposed roofs. Ideal for roof gardens or loose laid paving.

Type of roof	CONIROOF systems			
	2162	2160	2113	2110/2111
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
- **Economical** – 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 2110/2111 system

BBA Approved spray applied membrane system for flat or pitched roofs that are exposed to UV or light traffic (pedestrian and maintenance). Suitable for mixed roof situations where sections are exposed and there are roof gardens or landscaping.

CONIROOF 2113 system

Spray applied fast-cure systems for inverted and covered roofs. Suitable for roof gardens and paved podiums.



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

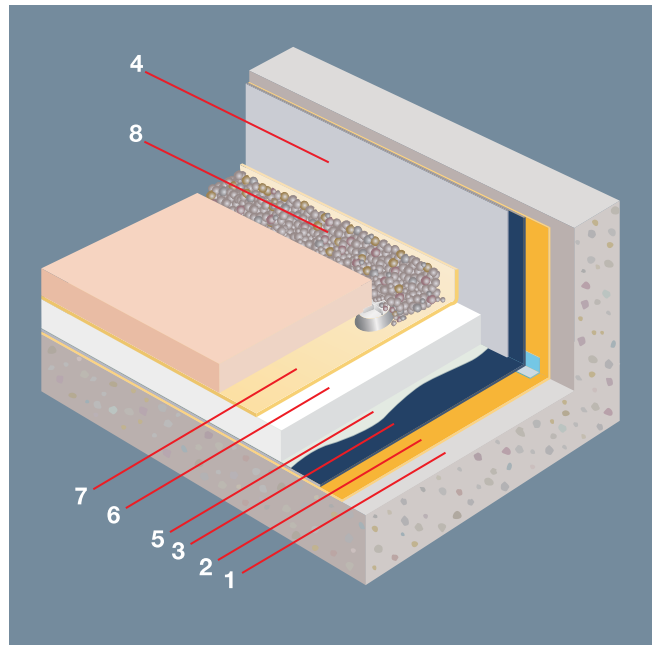
If the spray applied systems are used, up to 700 m² per day may be achieved.

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

Features and Benefits

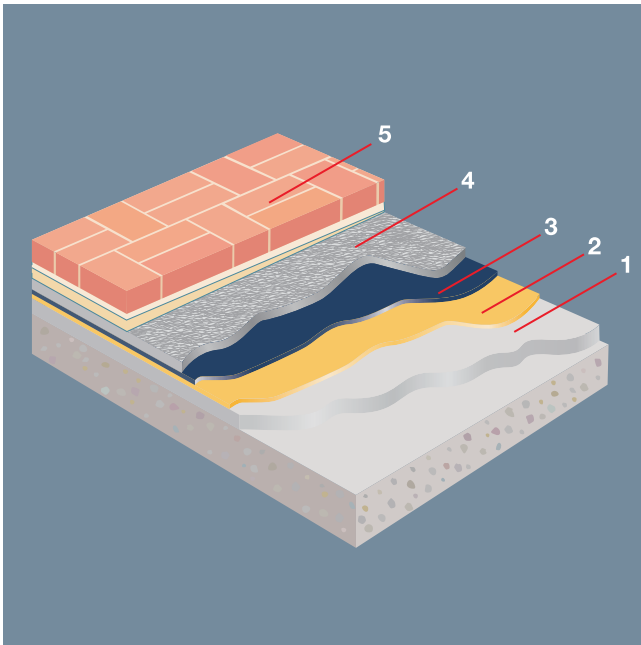
- Simple, fast application, building waterproofed faster
- Fully bonded to deck, water cannot track under membrane
- Highly cost effective
- Long term life expectancy
- Secure waterproofing to details
- Falls not required, cost saving
- Membrane protected from damage by users of roof surface

Fast track solutions
Up to 700 m²
per day



Typical Inverted roof specification	Spray applied system	Hand applied system
1. Deck	MASTERTOP primers and preparation coats as recommended by BASF	
2. Preparation coat/primer		
3. Waterproofing membrane	CONIROOF system 2113	CONIROOF system 2162
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 maximize 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 2113	CONIROOF system 2162
4. Drainage layer with geotextile filter	Drainage board	
5. Paved surfacing sharp sand bedding	Brick pavement Green roof	

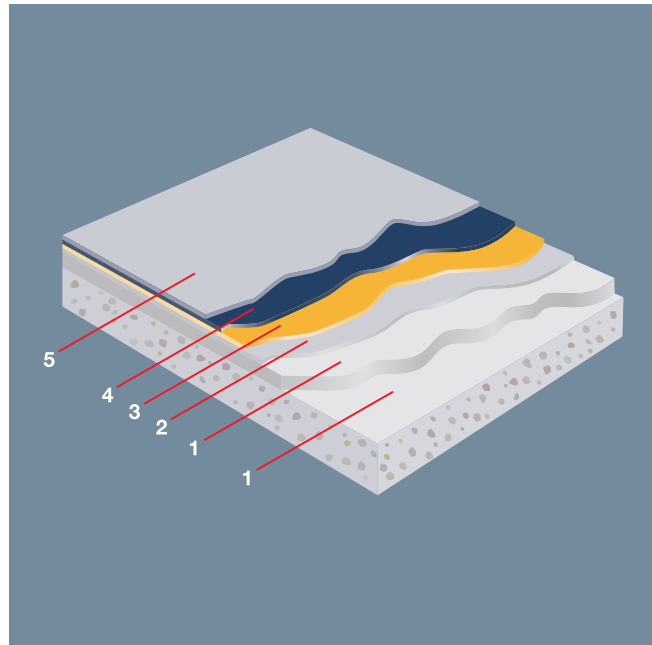
CONIROOF Overlay Systems

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. 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 a suitable overlay system.

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 2110/2111	CONIROOF system 2160
5. Top coat		



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 and simple operation, 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.

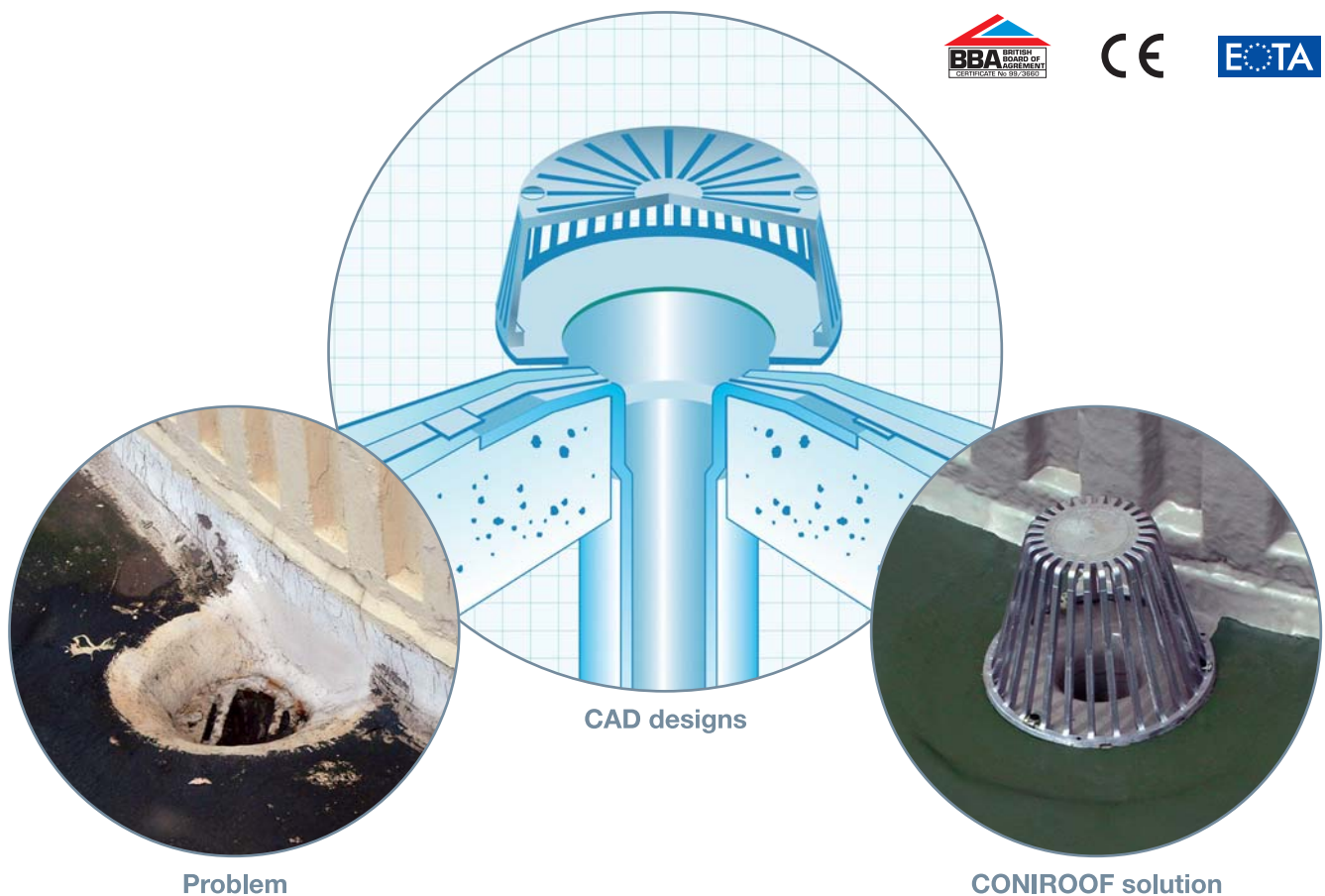
- All pre-formed details and welds covered in monolithic membrane
- No laps/welds or seams to break down
- Termination bars can be removed
 - reducing maintenance requirements



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



Seamless Detailing

CONIROOF's most important feature is the ease with which detailing 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 and 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



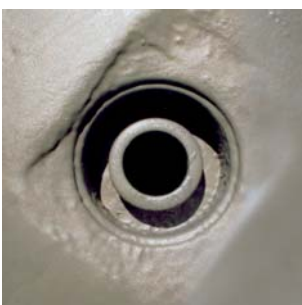
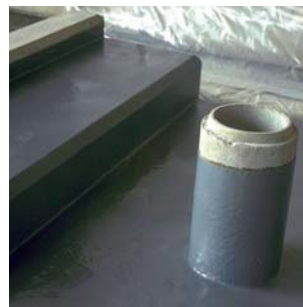
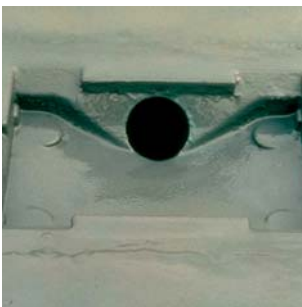
Preparation



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 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
- Masterpren®** – Sheet Membranes
- 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
- Glenium®, Rheobuild® and Pozzolith®** – Concrete Admixtures
- Ucrete®** – Flooring Solutions for Harsh Environments
- PCI®** – Tile Fixing, Cement Underlays and Waterproofing Systems



BASF Construction Chemicals Asia Pacific

Australia
+61 2 8811 4200

New Zealand
+64 9414 7233

China Head Office
+86 21 6485 3300

Philippines
+63 2636 1813-16

Indonesia
+62 21 8934339

Singapore
+65 6861 6766

Japan
+81 3 3582 8815

Taiwan
+886 49 2255 138

Korea
+82 31677 3900

Thailand
+66 3845 3020

Malaysia
+60 3 3344 3388

Vietnam
+84 650 743100

Pakistan
+92 21 111550550

India (Sri Lanka, Bangladesh)
+91 22 2761 9992

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.

Further information on BASF is available on the Internet at www.basf.com

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