

***Injection systems and technology for
problematic waterproofing in
construction and below grade civil
engineering***

Waterproofing products

Concrete repair & reinforcement

Floors, coatings & containment

Cement based products

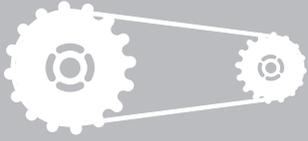
Injection systems for tunneling

Adcos

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ADCOS NV ADVANCED CONSTRUCTION SYSTEMS NV

ADCOS is an independent systemhouse for specialist construction chemicals in the field of waterproofing , concrete repair, structural reinforcement, industrial flooring and high performance coatings. We specialize in R&D, manufacturing , sales, marketing , application know how and consulting. Based in Belgium, we operate through a worldwide platform of construction chemicals specialists.

We offer:

- A complete range of products for waterproofing , concrete repair, structural reinforcement, industrial flooring and high performance coatings.
- Very competitive prices and value for money
- High quality products
- Product personalization and private label
- High added value : application know how, tech-support, technical training , ...

We have:

- A dedicated and accessible team with short and direct communication lines
- Local inventory & production facilities = quick and efficient delivery
- Years of in-house market and technical experience
- Unrivalled level of customer service and flexibility

Why ADCOS?

ADCOS strongly believes that successful business is based on the principle “Your business is our business”. Therefore customer friendliness, flexibility and loyalty are key values to all of us at ADCOS. Doing business with us is more than ordering and getting the goods delivered. In addition to our expertise on product level, we like to think along with our long term partners using our extensive and international experience in the construction chemicals industry.

We respect our:

- Worldwide distribution network
- Long term cooperation principles
- Dedicated partnerships

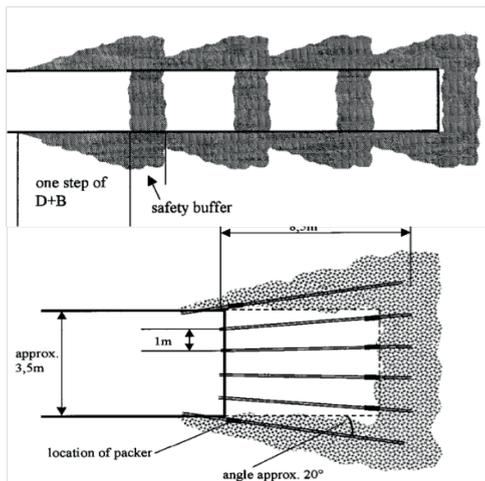
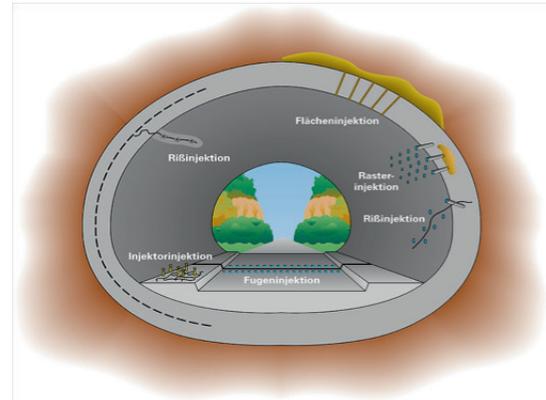
**More information ?
visit www.adcosgroup.com
or contact us**



ADCOS TECHNOLOGY

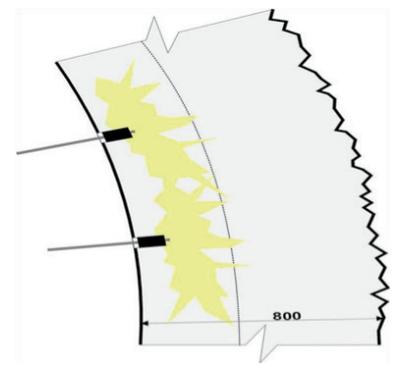
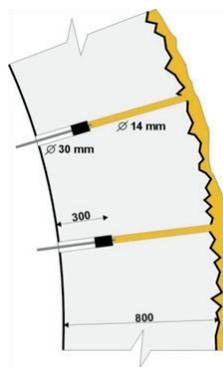
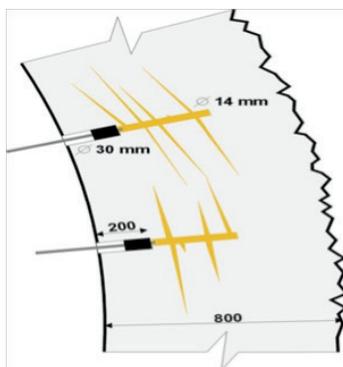
Apart from a good initial design , longterm quality waterproofing is more than anything else a combination of high quality systems and skilled, professional application.

However sometimes failures do occur both during construction or the life of the structure and can cause problematic water ingress with severe consequences . If no other technique is successful only injection will stop water and provide relief and a quality solution for the long term.



ADCOS supplies chemical injection systems and technology for the professional injection contractor.

- Systems based on polyurethane , urea-silicate (organo-mineral) and methacrylate
- One and two component pumps, (manual, electric and pneumatic)
- Injection packers and technology.





PRODUCT RANGE

INJECTION SYSTEMS

Polyurethane based one component injected with one component pump

PURINJECT 1C 115 ECO

One component, solvent free, ecological polyurethane injection foam, ideally suitable for water cut-off in concrete, masonry structures, rock and sandy soils. Reaction with water yields a semi flexible polyurethane closed cell foam. Injected with a one-component pump. Use with 6 to 10% catalyst.

PURINJECT 1C 55 LV

One component, solvent free, very low viscosity polyurethane injection foam, ideally suitable for water cut-off in concrete, masonry structures, rock and sandy soils. Reaction with water yields a semi flexible polyurethane foam. Injected with a one-component pump. Use with 6 to 10% catalyst.

PURINJECT 2C ELASTIC LV

Two component, low viscosity, flexible, polyurethane elastomeric injection resin for the elastic sealing of dry and wet dynamic cracks in concrete structures. Slow reaction to an elastic resin (pot life: 45 min). Injection with a one component pump.

PURINJECT 2C D

A fast-reacting two-component polyurethane injection resin, FCH and halogen free. Hardening of strongly disaggregated, dry or lightly moist mountainous zones.

PURINJECT 1C MULTIFLEX

One component, solvent free, polyurethane injection foam, ideally suitable for water cut-off in wet dynamic cracks and joints. Reaction with water yields a very flexible polyurethane foam. Injected with a one-component pump. Use with 6 to 10% catalyst. Soft flexible foam with closed cells. 1500 % expansion

PURINJECT 1C SOIL

Solvent free very low viscosity polyurethane injection resin for soil stabilization. Harmless for the environment and resistant to biological influence.

PURINJECT 2C MULTIFLEX

Easy 2 in 1 System

Two component, solvent free, polyurethane injection grout ideally suitable for crack injection/ leaksealing in concrete, stone and masonry structures. Reaction with water yields a flexible polyurethane foam and in the second stage or in absence of water an elastic resin. To be injected with a one-component pump.

PURINJECT 2C W

A fast-reacting two-component polyurethane injection resin, FCH and halogen free. For sealing and hardening in water-carrying zones, particularly against pressurized water.

PURINJECT 1C FLEX

One component, solvent free, polyurethane injection foam, ideally suitable for water cut-off in wet dynamic cracks and joints. Reaction with water yields a very flexible polyurethane foam. Injected with a one-component pump. Use with 6 to 10% catalyst. Strong flexible foam with closed cells. 800 % injection

PURINJECT 2C THIX

Fast reacting 2 component urethane thixotropic injection resin for stopping strong water ingress.

Polyurethane based 2 component injected with one component pump

Polyurethane based 2 component injected with two component pump

Urea -silicate or organomineral injection system injected with two component pump

Hydrophillic injection systems.

Special cleaners

SILINJECT 2C FOAM

Organo-mineral, non-flammable two-component foam for filling empty spaces, sealing and hardening

SILINJECT 2C FLEX

Non-foaming, fast-curing, elastici- zed silicate – injection resin for hardening fissured and fractured mountainous zones

PURINJECT HYDROGEL

1 component, solvent free, polyurethane injection system, injected with a two component pump with water as the second component. It produces a resilient, flexible polyurethane foam an elastomeric or soft gel, depending on the amount of water added. Possible applications: expansion joints, heavy water leak- ages, screen injections.

ACRYLINJECT

Polymethacrylate gel for sealing waterbearing cracks in concrete and bricklayered walls, for curtain grouting and and consolidation works in presence of water, for multiple injection of injection hoses.

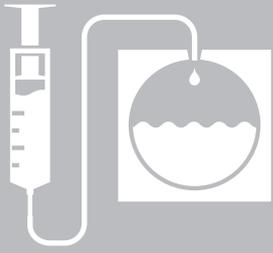
ACRYLINJECT POLYMER

ACRYLINJECT Polymer is used with ACRYLINJECT (resin), acrylate based resins in applica- tions where fluctuating ground- water levels are encountered. The addition of the polymer in the B-component improves the wet- dry characteristics of the cured compound

PURCLEAN

Special product to clean and grease the injection pump after injection work. Replaces acetone, methylene chloride, and main- tains all rubber parts in excellent shape





INJECTION TECHNOLOGY: PUMPS AND PACKERS

We offer a large selection of professional, high quality, injection pumps, packers and accessories from various suppliers.

Injection pumps

1 component injection pumps for polyurethane systems (manual and electrical)

2 component injection pumps for hydrophilic polyurethane systems

2 component heavy duty pumps for polyurethane and organo mineral systems

2 component injection pumps for methacrylate systems

Injection packers

Plastic and steel injection packers (nipple or flathead)

Borehole seals

Manual 1 component injection pump



Electric 1 component injection pump



Electric 2 component injection pump



Electric 1 component injection pump



2 component injection gun for Hydrogel



2 component injection head with static mixer



Pneumatic 2 component heavy duty injection pump



Pneumatic 2 component methacrylate injection pump



Steel conehead injection packer



Plastic injection packers



Steel flathead injection packer



Borehole seals





SOME REFERENCES

ADCOS injection systems and solutions are used for maintenance and during construction of important (underground) infrastructure projects throughout the world such as metro and tunnels, hydroelectric waterdams, water treatment plants or any other concrete structure.

Some of our major references include :

Paris Underground stations and tunnels maintenance work

PURINJECT 1C 115 ECO and ACRYLINJECT used for maintenance and repairing leaks in the Paris underground stations and tunnels



Ambarli Sewage treatment plant Istanbul Turkey

PURINJECT 1C 115 ECO and 1C FLEX injection in digesters



Water containment reservoirs Jeddah , Saudi Arabia

Injection of PURINJECT 1C 115 ECO and 1C FLEX



Paris underground

PURINJECT 1C 115 ECO and ACRYLINJECT used for maintenance and repairing leaks in the Paris underground stations and tunnels



Satu Mare Water treatment plant Romania

Injection of waterbearing cracks with PURINJECT 1C ECO and 1C FLEX



**Taksim Tünel
Istanbul, Turkey**

Injection of leaking masonry tunnel with PURINJECT 1C 115 ECO and ACRYLINJECT



**Melen Utility tunnel
Turkey**

Injection of leaking segments with PURINJECT 1C 115 ECO and 1C FLEX



**Marmaray
Seeproject Tunnels
Istanbul, Turkey**

Injection of leaking tunnels segments with PURINJECT 1C 115 ECO and 1C FLEX



**Taksim Tünel
Istanbul Turkey**

Screen injection of leaking masonry tunnel with PURINJECT 1C 115 ECO and ACRYLINJECT



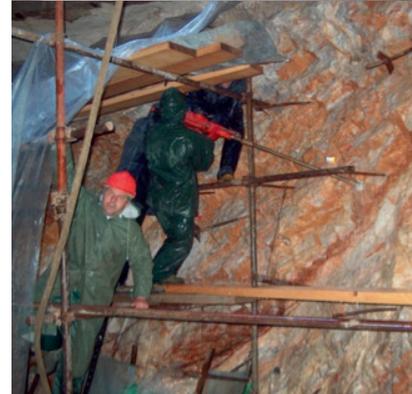
**Athens Metro, Greece new
extensions**

Injection of cracks with PURINJECT 1C 115 ECO



Bulgaria

Injection of waterbearing cracks with PURINJECT 2 CD and 2CW



**Athens Metro, Greece new
extensions**

Injection of cracks with PURINJECT 1C 115 ECO



Holland

Injection of PURINJECT 1C ECO and 1C FLEX in deep excavation for enabling works





CERTIFICATIONS & REFERENCES

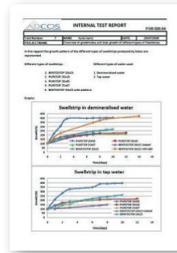
Comprehensive services tailored for each customer.

Our aim is to promote the best solution in accordance with the needs of each customer

We contribute our technical skills, product quality and application know how for medium and large scale (below grade) infrastructure and construction projects.

We can assist with the design and best practice and implement ongoing improvements to cost saving. Through our international platform of skilled and dedicated professional contractors we provide a quality service without putting people and the environment at risk.

ADCOS has a wide range of certification and test reports from renowned international university labs and certification bodies. In case our customers do require a specific certificate, our team is pleased to support you in the process of certification



Conformity and quality certificates



European Community
Declaration of Conformity



ISO 9001 Standard
Quality Management Certification
(in progress: end of 2013)

Food and potable water contact certifications

As food and potable water guidelines are specific for any individual country, certification is made on request. Our systems are formulated in conformity with the most recent eco friendly chemical technology safe for environment and endusers. Systems are in compliance with LEED, solvent free and do not contain any VOC.

Tests

The physical and chemical properties of the ADCOS systems are tested in different, specialized European labs. Further more ADCOS entertains close cooperations with international university labs for independent testing.



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