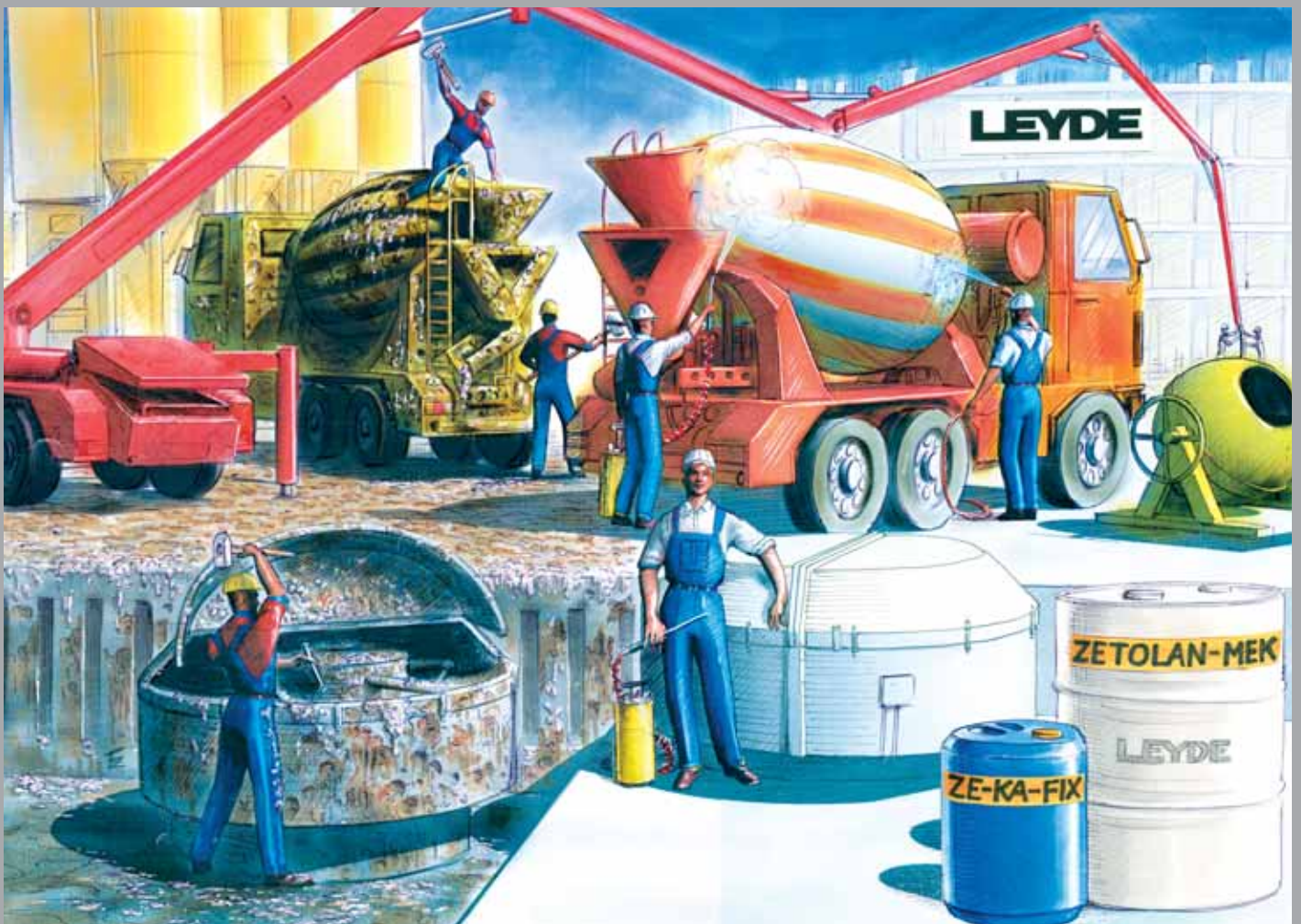


***Plant maintenance and
upkeep with us -
sure-fire benefit***



LeycoChem

LEYDE



Successful Partners in the Construction Industry

A dense grid of logos for various companies in the concrete and construction industry. The logos are arranged in approximately 10 rows and 10 columns. Some of the prominent logos include:

- CEMEX**: Béton de France Rhône-Alpes Alsace
- Dyckerhoff**
- LAFARGE**: BETON
- Holcim**
- HEIDELBERGER BETON**
- GLASER**
- BERDING BETON**
- Märker**
- THOMAS BETON**
- BAUER**
- ELSQUES**
- bbz**: BETON
- BBL**
- SB**: SOLNHOFER BETON
- TB**: TRANSPORTBETON
- SEV**
- DIEPHAUS**: Béton natürlich
- beck**: Betontransportdienst
- RNM**: Röhre-Nische-Mörtel GmbH
- Lichtner beton**
- ZUK**
- HTB**
- BWV**: Betonwerk- und Vertriebswerk
- MARTIN BAUR**
- FBW**: Fachbetonwerk Witten
- FCN**
- MOBIL BAUSTOFFE**
- SB**: SOLNHOFER BETON
- PFLIEDERER**: AKTIENGESELLSCHAFT
- RAILBETON**
- fbr**: FERTIGBETON RHEINLAND
- KRIEGER II**
- EUROVIA**: BETON
- Happy Beton**
- HERBRÜGGER**
- NIB**
- GEORG RÖPE**
- FMK**
- HBF**
- HIB**
- glass**
- eWe**
- KANN**: BAUSTOFFWERKE
- sibo**
- FRISCHBETON**: BRANDENBURG
- STB**
- MEIER**
- BEKA**
- betra**
- HF**
- HORST FLOCK**
- TBL**
- ME**
- KOCHERL-JAGIST**: BETON
- Wulf & Sofsky**: Fertigbetonwerk Graph u. Co. KG
- MAX BÖGL**
- JOCHUM**: BETON PUMPDienst
- abpd**
- KIES&BETON**
- KIMM-Beton**
- Meichle + Mohr**
- BETOMIX**
- Külzer**: MATTHIAS BAUUNTERNEHMEN
- NIEMEIER**
- gth-beton**
- L. REIFE**
- MANTAL**: MORTEL
- Manfred Wittling**
- MBM**
- RAU**
- STREICHER**
- PRIENTZ**: BETON
- MBW**
- NTB**
- MÜLLER-ALTVATTER**
- M**
- HEUDT**
- REISCH**
- K**
- PLÖTNER**: Betonwerk Carl Plötner GmbH
- SBL**
- Schiffbeton**: Lebejahn
- rolfes**
- Schäfer - Beton**
- TUN**
- FETZER**
- SCHUSTER**
- ZAPF**
- peterbeton**
- PTB**
- Emil Geis Transportbeton**
- MONNERJAHN**: GmbH & Co. KG
- DENNERT**: BAUEN MIT IDEEN
- ReZ**
- TBS**
- MOBIL-BETON**
- RENIG**: BETON
- UTB**
- FENGEN**
- UTU**
- MILDE**: SUDING BETON
- gala**
- th-beton**
- RESSNER**
- beb**
- SCHINDLER**: BSH BSH TONEXPRESS FERTIGBETON
- Transportbetonwerk**: Bamberg
- TBB**
- GROSS**: TRANSPORT BETON
- JG**: STÖCK
- TRABET**: Transportbeton Berlin
- HANS FUCHS**
- TE-BE**: TRANSPORTBETON
- TRANSPORTBETON**: MERKLINGEN
- KOLL**
- JÖRG GÜTGEMANN**
- HTG**
- NOE**
- VETRA**: BETON
- EHL**: FALGEBETON
- Z**
- TB K**: Transportbeton Kall
- pro**: BETON
- SCHWARZENBECK**: MÖRTELDIENST SAALE-ELSTER
- M. u. F. Schmieden**
- REGENOLD**
- WEBER**: BETON
- Transportbeton**: Zimmermann
- REIFF**: BETON
- VANKMANN**: Betonwerk
- MÖRTEL**: WERK GMBH
- R. PUENZ**
- DONAU**: TRANSPORTBETON
- RINN**
- TBW**
- ROCKWOOL**
- CEC**
- KB**: KORTMANN BETON
- TBM**
- TRANSPORTBETON GMBH&CO. KG**
- Valkmann**
- SIMONIS**
- SKBB**
- TRAUB**: KIES UND BETON AG BADEN-BADEN
- SCHMITZ-BETON**
- wipptaler bauz**
- ALTAAN**
- RBC**
- Bc**: Betonbouw
- Dreßler**: FERTIGBETONWERK
- neuland beton**: H. Burgle KG (GmbH & Co.)
- MATTHIAS**
- VIBI**
- Terwolde**: BETONINDUSTRIE
- MBI BETON**
- inter**: beton
- MS-MASSIVDECKEN**
- TRÄGER & RÜGER**
- EBEMA**
- TB S**
- N.V. TRANSPORTA S.A.**
- CENTER**: BETON
- zitzmann**: Baufachzentrum
- EIDEN**
- DEMCO**
- ZOONTJENS**
- HERCULES**
- LOVELD**: BEVELANDSEKANTAR IN BETON
- BBL**



Innovation is our strength

World-wide, there are 15,840 companies that we know who are convinced users of our products, and every day, we are happy to continue working towards increasing the number of our satisfied customers.

John Ruskin Law

"There is hardly anything in the world that someone cannot make a little worse and sell a little cheaper, and the people who consider price alone are that person's lawful prey. It's unwise to pay too much, but it's worse to pay too little. When you pay too much, you lose a little money -- that is all. When you pay too little, you sometimes lose everything, because the thing you bought was incapable of doing the thing it was bought to do. The common law of business balance prohibits paying a little and getting a lot -- it can't be done. If you deal with the lowest bidder, it is well to add something for the risk you run, and if you do that you will have enough to pay for something better."

John Ruskin 1819 -1900

LEYCO CHEMISCHE LEYDE GmbH **partner to the concrete industry for more than 45 years**

Over the years, our products have been continuously developed further in close cooperation with our partners in the ready-mix concrete and prefabricated concrete industries as well as well-known concrete plant manufacturers, and adapted to the latest developments in engineering and chemistry.

We are proud of the fact that well-known international manufacturers of truck mixers and concrete machinery recommend the use of our products to their customers.

The products and their applications described in this brochure can also be found on the DVD of the Bundesverband Transportbeton e.V. **German Federal Association for Ready-Mix Concrete** / in puncto Transportbeton GmbH

DVD «Ready-mix concrete driver training» and on the Internet
www.unterwegs-mit-beton.de
www.transportbeton-fahrerschulung.de

We would be happy to send you the DVD or the access code for the online training.

Index

-
- Concrete residue is a tough problem and how it is solved with certainty 1.**

 - Preventive protection for concrete mixers, ready-mix concrete trucks and pumps 2.**

 - Safely removing hardened concrete deposits 3.**

 - Concrete pumping aid – Start work without delay 4.**

 - Cleaning ready-mix concrete trucks 5.**

 - Acid-resistant brushes specially developed for the concrete industry 6.**

 - Professional helpers that simplify the work and make for safety at work 7.**



Concrete residues on plant and equipment is an intractable problem.

Since concrete has been used people have tried to solve the problem of the residues on plant and machinery. Finding no other solution they used hammer and chisels, resulting in scratched paintwork and dented metal, with the result that concrete stuck even more than before.

Then they tried to use aggressive solvents like sulphuric and hydrochloric acids and similar, causing damage to expensive equipment: chromeplated parts, hydraulic cylinders, expensive painted surfaces, electrical circuits and control equipment suffer.

Not to mention the danger and health risks to personnel. Modern legislation puts a heavy personal responsibility on management concerning Health and Safety. Dangerous and hard, dirty work causes lack of motivation in staff, and consequently to lower productivity.

All the above lead to higher costs due to damage to the environment, waste of water which is contaminated for recycling, high product insurance premiums, higher labour costs, risk of contamination to the final product - high quality concrete.

Why take the risk?

The law holds the management and their authorised representatives responsible for compliance with the labour safety regulations and the regulations for safeguarding water supply and the environment.

The old outdated methods !



Therefore products should be used which:

- save time and money
- are kind to every sort of material and surface
- are simple to use
- assists maintenance of plant and machinery
- offer the best Health and Safety regime
- do not jeopardise product indemnity policies resulting from contaminated concrete
- And what about **the environment ?**
(No further questions !)
only **ENVIRONMENTALLY RESPONSIBLE CONCRETE PERFORMANCE PRODUCTS**

Therefore now read on... →



ZETOLAN®-MEK and ZE-KA-FIX® - the efficient and smart solution:

➔ **From now do it like this:**

The kind solution

ZE - KA - FIX®

- A proven Concrete solvent 100 YEARS OLD CONCRETE SOLUTION
- Excellent concrete cleaning result and when diluted as recommended no harmful effect
- **Does not contain chlorides**, and can be use with the recycled washing water
- Cleans all concrete deposits easily, safely and is effective and environmentally friendly.
- Swap the hammer for the BRUSH

ZETOLAN®-MEK

- With ZETOLAN-MEK FORMULA any adhesion of concrete is automatically reduced in concrete mixing equipment
- Metal, rubber, glass and painted surfaces can be treated
- **very good biodegradability**
- Cuts cleaning time dramatically - lower labour costs
- Contains no dangerous solvents or heavy metals
- No time-consuming mechanical cleaning

ZE-KA-FIX and ZETOLAN-MEK are specifically engineered products designed for the protection and cleaning of concrete plant and machinery and developed in close cooperation with our successful partners in the ready mix concrete, construction and prefab concrete industries. The result is success for all parties.

The result is a success to be proud of. Using it is not just cost-neutral, but yields an extra benefit owing to less wear, prevention of damage and labour cost reduction.

Other products may do the job but at higher labour costs, higher consumption rates, higher maintenance costs and higher risk factors.

ZETOLAN-MEK and **ZE-KA-FIX** have been tested by Testing Institute for Construction Materials and is certified as having **no effect on concrete**

ZETOLAN-MEK and **ZE-KA-FIX** have been tested by Hygiene Institut Gelsenkirchen and are certified as **"very good biodegradability"** and friendly to environment.

Results A WIN! WIN! WIN! SITUATION

1 Win for your company !

- Excellent price/value comparison
- Cuts cleaning time dramatically - lower labour costs
- Excellent biodegradable properties- thus no problems with the environmental protection authorities, Health and Safety office, and most importantly with water resources protection regulations
- Due to bright and clean truck mixer, plant and equipment you gain the best image with clients. **'Quality concrete in quality packing'**. This was your aim when you designed your company logo and colours for your company's image as the flagship in the market.

2 Win for your operational staff and delivery personnel !

- No more spraying protective agents in the morning: to start the day without 'a nose full' of oil mist and saving 1/2 to 1 hour a day too !
- ZETOLAN-MEK contains no dangerous solvents or softeners which are a hazard to health and most batchers unknowingly inhale. Because safety masks are not often worn, even if provided. ZE-KA-FIX is safe to use as it contains no poison.
- More satisfaction in the workplace with clean plant, pumps and truck mixers. Creates pride to work in a well run establishment, where management cares for the best conditions in which people work.

3 Win for your valuable investment !

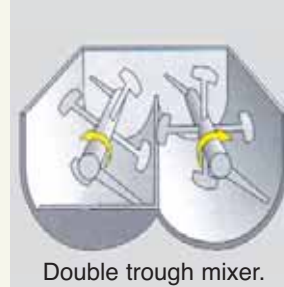
- No damage to the mixing plants and truck mixers caused by the big "hammer cleaning" method - resulting in damaged paintwork and dented plating - where concrete sticks even better !
- Improves maintenance and lubrication giving a longer life for your machines resulting in a higher return.



Planet and pan mixers.



Trough mixer.



Double trough mixer.



Turbo or Force Mixer

Preventive protection in concrete mixing plants

Concrete mixers in ready-mix concrete, prefabricated concrete and concrete block factories.

ZETOLAN®-MEK Plus

The perfect protection and maintenance system

Preventive protection is mandatory.

People, working daily with concrete, are familiar with the problem: concrete sediment builds up inside the concrete mixer, on concrete form-work, concrete moulds and processing equipment.

Hardened concrete can be removed by aggressive, mechanical cleaning methods or a safe concrete remover like ZE-KA-FIX or BETONAC-FIX 2.

With the regular use of ZETOLAN-MEK, no interruption of production.

No necessity to clean and rinse with water several times a day to prevent concrete adhering.

Reduction of operation and labour costs

can only be achieved by the use of highly effective additives and product components that are ingredients in ZETOLAN-MEK Plus.

Responsible to the environment

ZETOLAN-MEK Plus is made of highest-quality raw materials, which are highly biodegradable and solvent free (V.O.C.) The product's ingredients assure that the environment and health and safety issues are safely covered. The test report of the HYGIENE-INSTITUTE des Ruhrgebietes in Gelsenkirchen proves effectiveness of the product. According to the OECD method ZETOLAN-MEK Plus is classified as »Very Good Biodegradability« - 95.2% in 21 days.

ZETOLAN-MEK Plus 1

Product-No.: 10.025

Efficient protection from adhesion of concrete in concrete mixing plants, truck mixers concrete pavers, precast concrete moulds, block machines, where the surfaces are subjected to the abrasiveness of the concrete.

ZETOLAN-MEK Plus 2

Product-No.: 10.019

ZETOLAN-MEK Plus 2 used as a low-viscosity surface protection for Readymix trucks, concrete pumps, concrete pavers, concrete processing equipment and machines.

ZETOLAN-MEK Plus 3

Product-No.: 10.026

Protection and care system with degrading action of hardened concrete by penetration of concrete capillary system, to provide protection from concrete build-up and at the same time, with daily application, the removal of hardened concrete by penetration into capillary system.

»...highly biodegradable«

»...has no influence on the concrete quality

Gelsenkirchen

Sachbearbeiter: Herr Tolksdorf

Hygiene-Institut
des Ruhrgebietes, Gelsenkirchen
Institut für Umwelt hygiene und Umweltmedizin
Oberstr. 20, 45129 Gelsenkirchen

Leucochem Leyde GmbH
Industriest. 155
50999 Köln

BE Product ZETOLAN-MEK
here: Determination of the decomposability

Your ref.: Letters dated 18.03.1996, CL, and 01.04.1996, Dr. Gehrike

Dear Sir and Madam,

based upon the above orders, the product sample ZETOLAN-MEK handed out to us was examined for 1st decomposability within a period of 21 days. The result of the analyses can be seen from the table as well as the accompanying brief report.

The analytic work was performed following to OECD principles for „good laboratory practice“. The test substance ZETOLAN-MEK to be examined is a water-insoluble lubricant, which was examined according to the guidelines of the OECD method L-33-T-82* concerning the decomposition rate. The above named procedure is based on the fact that CH₂Cl₂ molecular groups, which must be considered typical hydrocarbon components of oils and fats, can be extracted from an aqueous medium by means of organic solvents and detected by infrared spectroscopy.

* Co-Ordinating European Council for the development of Performance

HYGIENE-INSTITUT DES RUHRGEBIETS, GELSENKIRCHEN
Institut für Umwelt hygiene und Umweltmedizin Page 2

To this purpose, aliquot amounts of test material are dissolved in trichlorofluorethane, and defined parts of the solvent/substance mixture was mixed into an aqueous, mineral nutrient medium, which was inoculated with polyvalent organisms. The concentration of hydrocarbons was measured in three parallel preparations at the beginning of the test as well after 7 days and 21 days of decomposition. By analogy, the decomposability of a comparison substance (DITA = disisododecylidipate) with known elimination rates was verified.

Examination results

Initial concentration Zetol-MEK mg/KWl	Concentration after 7 days mg/KWl	Elimination %	Concentration after 21 days mg/KWl	Elimination in %
53,9	12,6	76,8	2,6	95,2

Initial concentration DITA mg/KWl	Concentration after 7 days mg/KWl	Elimination %	Concentration after 21 days mg/KWl	Elimination %
38,7	29,5	23,5	8,4	78,3

Based upon the detected elimination rates, the portions of aliphatic hydrocarbons contained in the product ZETOLAN-MEK can be classified as **very well decomposable**.

Yours sincerely
The director of the institute
by order

L.A.

(Dipl.-Ing. Skurwald)

**«highly biodegradable»
Elimination after 21 days by 95,2 %**

Heidelberger Beton GmbH & Co. KG

11710 Chemische Leyde GmbH
Bism. Jürgen-Leyde
Industriest. 155
50999 Köln

18.12.2006
24888

Zertifikat für ZETOLAN® MEK Plus

Auftraggeber: LEUCO Chemische Leyde GmbH
Auftragsnummer: Verträglichkeitsprüfung in Verbindung mit der Wirkung auf die Betonfestigkeiten und der Luftpermeation

Umfang: 38.01.2006
Anzahl: 1.932,196 Liter/m² C18/20
Anzahl: 12.18
Anzahl: 2,9

Prüfungsort: Gelsenkirchen
Prüfungstermin: 18.12.2006
Prüfungsdauer: 1 Tag
Prüfungsort: Heideberger Beton Research Center & Co. KG

Prüfergebnis / Druckfestigkeit

Norm des Prüfbereichs: 442.1 442.2
Prüfbereich: 100 mm

Prüfbereich	Bezahl	Abmagerung	Druckfestigkeit	Bruchzeit	Bruchzustand
1	7.980	3,37	22.800	190	34
2	7.910	2,24	12.600	190	25

Das Produkt wurde bei Anwendungsbedingungen angetrieben und zeigt gegenüber dem Vergleichsmittel (Eigenschaften) eine 1,4-fache und 2,4-fache Steigerung.

Die Herstellung und Lagerung der Proben erfolgte nach DIN EN 12350-3
Die Bewertung der Druckfestigkeit erfolgte nach DIN EN 12350-1

18.12.2006
18.12.2006
18.12.2006
18.12.2006

Prüfung: 18.12.06

The test report can be found on web site www.leyde.com or send for a copy by post



Protection on all surfaces coming in contact with concrete

for concrete plants, ready-mix trucks, pumps, construction machinery and equipment of all kinds

The Products

are totally different to conventional methods of mixer protection, such as mould oil or ordinary mixer protection oil applied by high pressure sprayer before starting work.

ZETOLAN-MEK Plus instead is applied at the end of the working day, directly after washing down the mixer with water, it is applied on to the still wet interior and exterior surfaces. Due to strong surface activity, water dries off and now ZETOLAN-MEK Plus begins its »Night Shift« penetrating capillaries in the concrete and breaking up hardened concrete deposits, millimetre by millimetre!

The quality of the concrete is not affected, and the air entrainment percentages are not increased, which happens normally with the use of conventional agents

The Efficiency

of ZETOLAN system for the protection and acid-free removal of concrete.

ZETOLAN-MEK Plus is hard on existing concrete deposits but harmless to fresh concrete. (Test certificate available). The active component in the MEK Plus formula penetrates into capillaries and breaks down hardened concrete, layer by layer, millimetre by millimetre. With daily application ZETOLAN-MEK Plus dissolves existing concrete, depending on thickness, within days or weeks.

ZETOLAN-MEK Plus is harmless to rubber, glass, metal, paint, wood or clothes.

Inspection and test results show the best results, in comparison to known competitive products.

The Economics

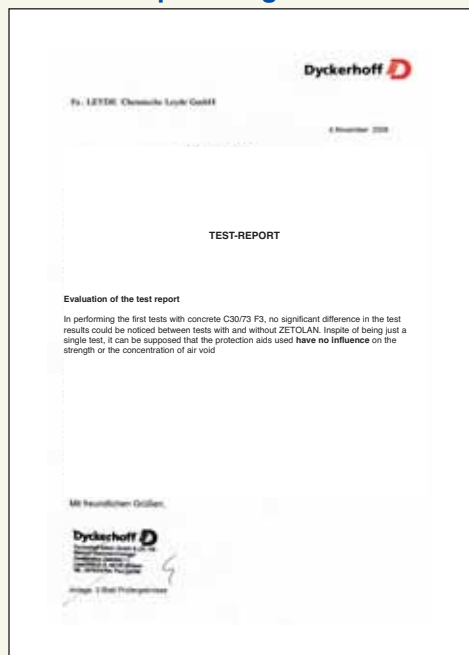
Time consuming and aggressive concrete removal methods like "Hammer washing" etc. became a part of history. Concrete mixing, processing plants and trucks and their components are no longer damaged by crude methods. Entirely abolishing the use of acid products, cleaning becomes a gentle art. By this money-saving practice the adhesion of concrete on mixers, trucks and re-cycling storage is averted. Cleaning times are reduced to a fraction!

Cleaning time is generally reduced from a half to a third.

Processing and "Work safety"

ZETOLAN-MEK Plus is applied with the especially developed LEYCO-MV7 «airless» fine sprayer. Due to the "airless pump" spray action, no "aerosol mist" is produced. The fine spraying equipment is mounted on the barrel and makes for a considerable saving in time. In general the application of ZETOLAN takes not more than 2 – 3 minutes

...no influence on the strength or air entrainment percentage«



...does not contain solvents (VOC) and softeners

Test Report

Products: Concrete machine and equipment protection of different suppliers

Subject: Investigating the reaction on rubber seals in concrete mixers and the effect on electrical installations caused by solvents (VOC) and softeners

Tested by: Klaus & Kohler GmbH, Käserlestraße 7, CH - 4922 Thunstetten, Switzerland

Method: Typical Rubber 5 mm thick and 88.5 mm long was immersed for 21 days in each of the products listed below - dimensional changes due to swelling/ deformation to seals and electrical installations

Test results:

Supplier	Product name	Length (mm)	Difference (mm)	Difference (%)
	Original length	88.5	0.00	0.00
SIKA	Mischerschutz W	104.2	15.70	17.740
SIKA	Mi Ma Fa 160	104.0	15.50	17.514
BLASER	Mischerschutz	102.6	14.10	15.932
PAUTECH	Papet 653	101.3	12.80	14.463
BASF	Limpid 354 (Wasserm)	98.9	10.40	11.751
CRYSO	Bio Tech	98.6	10.30	11.638
MOTOREX	Satum 6600	98.6	10.10	11.412
BASF	Rheofinsh 255C (Wasser)	97.9	9.80	9.944
BERGER	Elaston HA-BE	96.1	7.50	8.588
VAN DEN BERGH	Pluform Prevent	94.1	5.84	6.373
HOESCH	Hoesch 3	94.0	5.87	6.294
PAUCST	Puustel MS 2	91.1	3.48	3.932
LEYCO	ZETOLAN-MEK Plus 3	89.6	2.10	2.147



As an extra benefit to the user of ZETOLAN-MEK Plus, the consumption compared with high-pressure sprayers is reduced by at least 50%



Protection agent for concrete mixing equipment, ready mix trucks and concrete pumps

ZETOLAN-MEK® Plus 5

Product-No: 10.028

Protection and maintenance agent sourced from renewable raw materials



The Product

ZETOLAN-MEK Plus 5 protects construction equipment and machinery, the reverse side of concrete moulds, crane buckets, ready-mix concrete trucks, concrete pumps and road construction equipment from contamination by concrete and mortar.



The effectiveness

ZETOLAN-MEK Plus 5 forms a protective film on concrete making and processing equipment and machinery as well as on bitumen mixing and processing machines. Adhesion of concrete, mortar, plaster, bitumen and asphalt to metal and painted surfaces is prevented, and machines are protected against oxidation. Immediately after ZETOLAN-MEK Plus 5 has been applied, the protective film becomes effective and is largely waterproof. The active component in the MEK Plus formula penetrates the capillaries of the hardened concrete and breaks them down, layer by layer, millimetre by millimetre with a daily spraying, effective in days or sometimes weeks. ZETOLAN-MEK Plus dissolves existing concrete in this way and at the same time protects and maintains.



With the use of ZETOLAN-MEK Plus 5, plants, moulds, formwork and all equipment get lubricated even in places that are not accessible and movable.

Application

Apply a thin but even film with a sprayer before starting work. The airless-spraying LEYCO-MV7 has been developed for use in enclosed spaces.

Benefit for the user and for the environment

ZETOLAN-MEK Plus 5 has been formulated based on vegetable oils – a renewable resource.

ZETOLAN-MEK Plus 5 comprises vegetable raw materials in all its components and can therefore be classified as highly bio-degradable. Leading environment experts recommend the use of renewable raw materials. They are to be preferred because of their excellent bio-degradability and comparable technical capability in their application, since conventional products, low in price, can only be manufactured based on unsafe products containing solvents and heavy metals.

ZETOLAN-MEK Plus 5 is made from especially highly refined, high-value vegetable oils. This avoids the disadvantage of resinification that occurs when low-quality vegetable oils are used.



Using hydrochloric acid

Safe removal of concrete deposits

in ready-mix concrete trucks, concrete pumps, construction machinery and equipment of all kinds

ZE-KA-FIX®

Product-No: 02.040

Chloride-free, highly concentrated cement and limestone cleaner

ZE-KA-FIX is an extremely economical cleaning concentrate for use in cleaning Concrete Truck Mixers, Concrete Pumps, and Cement Silo Transporters etc.

ZE-KA-FIX is supplied as a high-concentrate to save packing and transport costs and storage volume.

ZE-KA-FIX is a very economical product as it needs diluting with 5-10 parts water before it can be used. Dilution with less than 5 parts water is not recommended, since a stronger concentration means less cleaning efficiency. Even when diluted with 5 parts of water, ZE-KA-FIX is less expensive than the commercially available corrosive acids, and it is not subject to hazardous materials precautions.

ZE-KA-FIX contains no hydrochloric acid and inhibits corrosion!

Of particular importance for the re-use of the washing water in concrete works is the absence of hydrochloric acid in ZE-KA-FIX.

ZE-KA-FIX is chloride free and thus can be used harmlessly with recycled washing water without compromising concrete quality.

ZE-KA-FIX overall finds its application where cement or concrete are used. It makes vehicles spotlessly clean without harming the finish, lengthening the working life of vehicles and enhancing the company's brand.

Oils, grease and other surface contaminants are also efficiently removed.

ZE-KA-FIX is applied to surfaces with either a brush or sprayer. Immediately

the solution of ZE-KA-FIX hits the surface, it forms a foam which attacks the cement. This foaming will slowly diminish, and a further application of ZE-KA-FIX will need to be applied. This process needs repeating until the surface is cleaned. It is advisable to agitate the ZE-KA-FIX solution with a brush whilst it is reacting on the surface.

ZE-KA-FIX contains paint-nurturing components, which reduce post application contamination and simplifies subsequent cleaning.

Vehicles and plants are kept clean with lower costs and less working hours and the life of the investment is extended.

is chloride-free and can be use with the recycled washing water

Baustoffberatungszentrum - Rheinland -
Chemisch-physikalisches Forschungs- und Prüfzentrum für Bau- und Werkstoffe
Herrn Ing. Hans-J. Schöcherl
B.B.A. Sachverständigen

81274 Bonn, Schleierweg 10a, Tel. 0228/46688 - Fax: 0228/47 54 97
Internet: www.bbz-rl.de, E-Mail: bbb@baustoffberatung.de

Sachbearbeiter: Herr Talsdorf

Hygiene-Institut
des Ruhrgebietes, Gelsenkirchen
Institut für Umweltfragen und Umweltmedizin
Direktor: Dr. rer. oec. Hans Schöcherl

Assessment of ZE-KA-FIX Concentrate under the Aspects of Protecting Groundwater and Surfacewater
(Summary of our statement of 14.02.1985, Dir.Tgb.-No. A 341/85(ox, English version)
Your letter of 13.09.1984, Schrika; 30.01.1985, Ilke, 25.02.1985, Goike and 18.05.1998 C. Mathes

The diluted concentrate of ZE-KA-FIX by water, ratio 1:10, shows acid reaction (pH = 0,16). When cleaning tools, transport and other devices, that are spoiled by mortar, cementitious materials or lime, the solution of ZE-KA-FIX gets neutralized when using its optimal cleaning ability, and the pH will rise. When using the ZE-KA-FIX in accordance with the instructions neither strongly acid nor alkaline solutions will result.

The detergents used in ZE-KA-FIX (32,8 g/l calculated as organic carbon) are relatively easily degradable (relation COD/BOD5 as 5:1) and meet the requirements of the law of detergents (Detergentien-Gesetz) as you informed us.

The label of the bundle points out that there might be a hazard of corrosion by means of the phosphorous acid containing. The used solution of ZE-KA-FIX mainly contains calciumphosphate, it is not doted by chlorides. Phosphates in general are not poisonous.

The used ZE-KA-FIX cleaning solution, more or less neutralized by lime or mortar (pH of 5 to 9), may normally be disposed into the wastewater system without problems in accordance to the regulations.

Träger des Hygiene-Instituts: Verein zur Bekämpfung der Volkskrankheiten im Ruhrgebiet e.V., Gelsenkirchen

Tab. No.	Abmessung auf	Abmessung	Einheit
1.	Wärme	Watt	Watt
2.	Strom	Watt	Watt
3.	Wärme und Strom	Watt	Watt
4.	Wärme - Wärmeverlust	Watt	Watt
5.	Wärmeverlust 1 - 30	Watt	Watt
6.	Strom	Watt	Watt
7.	Wärme	Watt	Watt
8.	Strom	Watt	Watt
9.	Wärme	Watt	Watt
10.	Strom	Watt	Watt
11.	Wärmeverlust	Watt	Watt

81274 Bonn, den 20.03.2000

Herr Leiter
Bauaufsichts Sachverständiger
F.A. (Baustoffe) Sachverständiger
Chemische Analyse

Gelsenkirchen

Sachbearbeiter: Herr Talsdorf

Hygiene-Institut
des Ruhrgebietes, Gelsenkirchen
Institut für Umweltfragen und Umweltmedizin
Direktor: Dr. rer. oec. Hans Schöcherl

Assessment of ZE-KA-FIX Concentrate under the Aspects of Protecting Groundwater and Surfacewater
(Summary of our statement of 14.02.1985, Dir.Tgb.-No. A 341/85(ox, English version)
Your letter of 13.09.1984, Schrika; 30.01.1985, Ilke, 25.02.1985, Goike and 18.05.1998 C. Mathes

The diluted concentrate of ZE-KA-FIX by water, ratio 1:10, shows acid reaction (pH = 0,16). When cleaning tools, transport and other devices, that are spoiled by mortar, cementitious materials or lime, the solution of ZE-KA-FIX gets neutralized when using its optimal cleaning ability, and the pH will rise. When using the ZE-KA-FIX in accordance with the instructions neither strongly acid nor alkaline solutions will result.

The detergents used in ZE-KA-FIX (32,8 g/l calculated as organic carbon) are relatively easily degradable (relation COD/BOD5 as 5:1) and meet the requirements of the law of detergents (Detergentien-Gesetz) as you informed us.

The label of the bundle points out that there might be a hazard of corrosion by means of the phosphorous acid containing. The used solution of ZE-KA-FIX mainly contains calciumphosphate, it is not doted by chlorides. Phosphates in general are not poisonous.

The used ZE-KA-FIX cleaning solution, more or less neutralized by lime or mortar (pH of 5 to 9), may normally be disposed into the wastewater system without problems in accordance to the regulations.

Träger des Hygiene-Instituts: Verein zur Bekämpfung der Volkskrankheiten im Ruhrgebiet e.V., Gelsenkirchen

The use of ZE-KA-FIX is demonstrated on the DVD «Betonfahrschulung», which is published by Deutschen Bundesverband Transportbeton e.V.





Cleaning cured concrete deposits off

Concrete mixers, concrete transporters and construction equipment

Concrete pumping

The cleanest, quickest and

BETONAC®-FIX 2

Product-No: 02.051

The Product

BETONAC-FIX 2 is a uniquely effective concrete and scale remover, with which, not only can concrete splashes be removed from a surface, but thanks to the use of substances that lower surface tension, penetrates the concrete and seeps under hardened concrete deposits, which results in the removal of unsightly marks.

BETONAC-FIX 2 is a proven cleaning agent cleaning of flagstones, tiles and slabs fast, as well as ready-mix trucks, cement carriers and all building equipment involved with cement or concrete.

BETONAC-FIX 2 is a concentrate and should be diluted with water between 1 and 10 times. The contaminated surfaces should be cleaned with a brush or scrubber.

Advantages

- **Highly concentrated**
- **Economical, dilutes with water**



- **Safe for use on paintwork, concrete transporters and pumps, road pavers, concrete buckets and all concrete processing equipment as well as plastics, cable insulation, glass and rubber parts.**
- **Inhibits corrosion and has a strong action of lowering the surface tension**

Application:

Application is by means of a brush. Where there are heavy deposits repeated applications might be necessary. The cleaning action is visible by the foaming reaction on contact with the deposits of concrete or cement. If the foaming stops further applications are needed until the surface is cleaned. After cleaning the surfaces must be well rinsed with water.

BETONAC-FIX 2 is the best agent for dissolving thick deposits. After cleaning, subsequent concrete contamination should be prevented by the use of ZETOLAN-MEK Plus.



Increases pump

The Product

LEYCO-SLICK is a powder packed in water-soluble, ready-to-use, pre-weighed pouches. It is a unique compound of high performance components, which offers superlative cost reductions by saving time and protecting pumps and pipes. LEYCO-SLICK eases concrete pressure in the pump and pipes and optimises pump capacity when using "sticky" concrete mixes. With LEYCO-SLICK, the pump pipes and concrete carrying pipes are "lubricated" from the inside and problem-free sliding of the concrete is facilitated.

The hydraulic system and assemblies of the concrete pump are protected and the life of the pump is extended thanks to reduced wear.

Faster priming means less time on job and more jobs, i.e., more revenue per day.

Application

Remove the outer bag and mix the 230g water-soluble inner bag with 18 - 40 litres of water in a container. (Depending to the delivery pipe length) Stir the mix with a rod for 1 minute. Leave the mix for at least five minutes to allow it to go off until it is smooth and oily.

The dissolved LEYCO-SLICK is then poured into the cleaning opening of the concrete carrying pipe, if there is one, or into the hopper before starting pumping. In this way pumping concrete can start immediately. For concrete pumps without a pipe cleaning opening, please ask for the special operating instructions on a CD or for advice from one of our consultants.



aid - start work fast and reduce costs!

easiest way to prime a pump in 5 minutes

LEYCO®-SLICK

Product-No: 21.050

capacity - reduces pressure in concrete pumps and concrete pipelines



Instead of 30 minutes of tediously producing cement slurry now start pumping concrete in 5 minutes with LEYCO-Slick

Advantages:

- Clean and easy preparation of the primer
- In 5 minutes the equivalent primer is ready, as opposed to lugging sacks of sand and cement
- Superior concrete pump capacity
- Minimises wear and abrasion of concrete delivery pipes
- The risk of "stop" and "block" is reduced to virtually nil
- LEYCO-SLICK is environmentally friendly, contains nothing harmful to concrete, like alkalis, chlorides or active air entraining substances, and is compatible with all accepted products in the construction and concrete industries.

No effect on the concrete

Beauftragungsunternehmen: Bauhandwerk
 Chemische + physikalische Fertigungs- und Produktions- für den Betonbau
 Ingenieurbüro und Sachverständigenbüro Dipl.-Ing. Christ. Wenzel

TEST REPORT
 Reg. No.: 24-120506-CPA-8120

Applicant: LEYCO-Chemie Leyle GmbH
 Industriestraße 117
 59999 Kalle / Germany

Product tested: LEYCO-Slick
 Concrete Pump Primer

Test method: DIN EN 480-2: 1998-07
 DIN EN 12390-2: 2009-06
 DIN EN 12390-3: 2002-06

Date: June 16, 2009

No.	Materials / Concrete Mix Design	Quantity in kg/m³
1	Portland cement CEM I 42,5 R	150
2	Aggregate (blender grade) and sand 0/4 mm	1700
3	Water	170
4	Water/Cement ratio	0,70
5	LEYCO-Slick	0,075
6	Compressive strength, Prism (MPa)	36,7
	(28 days control casting)	38,3
		38,3
	Average value	37,8

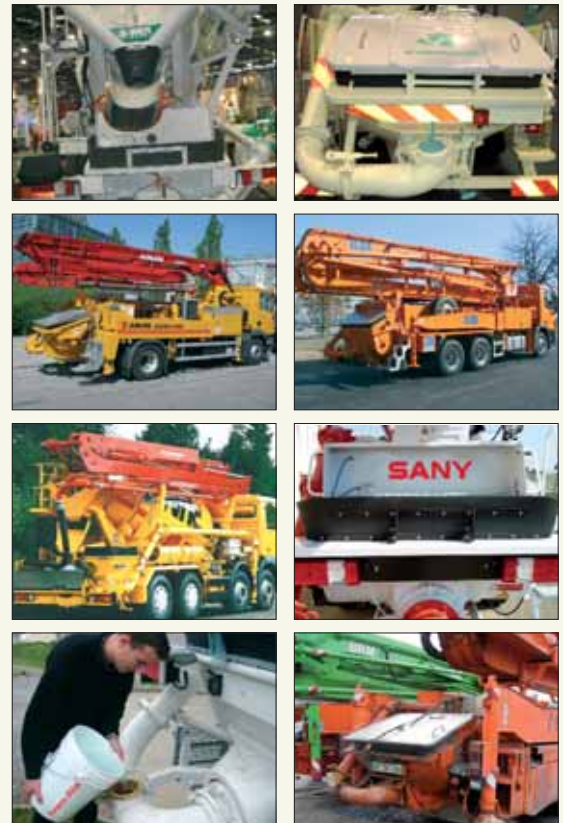
No effect on the compressive strength of the test concrete, using LEYCO-Slick and the control concrete, was established.

12379 Bonn, June 16, 2009

Dipl.-Ing. Christ. Wenzel
 Sachverständigenbüro

Leyle GmbH
 Dipl.-Ing. C. Wenzel

Compression strength in N/mm² (Mpa)
 Control sample of concrete: 37,8
 Inspection sample of concrete: 37,9





Cleaning of vehicles and effective spraying technology

High-pressure cleaner for ready-mix concrete vehicles and concrete pumps

LEYCO-MV7 «airless» barrel sprayer

Vehicle surface cleaner

LEYCO-MV 7 - «airless» barrel sprayer

LEYCO®-RASANT

Product-No: 20.172

Special, high performance cleaner for gloss surface and motors

The Product:

LEYCO-RASANT has been especially developed for the construction industry. And especially for application when vehicles and equipment are subject to intense dust deposits and road dirt.

The effectiveness:

LEYCO-RASANT breaks through the electrostatic layer that binds road dirt such as exhaust gases, diesel stains, dust, soot and greases to the vehicle surfaces. It breaks through this electrostatic film without manual processes, so that it can be easily hosed down.

Recontamination is also decreased by the use of LEYCO-RASANT, because it leaves a protective film on the surface that makes the cleaned areas seem polished. LEYCO-RASANT leaves an anti static layer, which protects against new contamination. Each new application of LEYCO-RASANT leads to stronger gloss. The normal hand washing is significantly reduced. The vehicle can be cleaned with a high pressure or steam cleaner in a lot less time (about 80%) than normal.

Advantages:

- Highly concentrated
- very economical - dilute 1:5 - 1:50 depending on degree of dirt
- leaves an anti static layer
- environmentally friendly - 90% of cleaning tensides are biodegradable

LEYCO®-MV 7

Product-No: 80.180

The effective sprayer technology to minimise consumption of ZETOLAN-MEK

The fine spraying equipment is pre-mounted on the delivery barrel and makes for a considerable saving in time.

As a general rule the job is effectively done in a mere 2 – 3 minutes.

By using the LEYCO- MV 7 the consumption of ZETOLAN-MEK is dramatically reduced by 40-50%.

ZETOLAN-MEK3 is applied precisely where it belongs – to prevent the adhesion of concrete and to protect surfaces and mixer equipment, concrete trucks or pumps!

Time saving

The gain over usual methods, which take 5 – 10 minutes. This is easily calculated in Euros.

Workplace and environmental safety

Due to the «airless» pump spray action, no aerosol mist is produced. It is very significant that the Workplace Protection Code is in general very seldom followed one hundred percent. Unnoticed spillage of the product due to the fixed assembly of the spray apparatus is not possible.

The installation

The fine spraying equipment is pre-mounted on the delivery barrel and makes for a considerable saving in time.

Technical Data

Size:	dia 0.148 mm
	Ht. 187 mm
Weight:	ca. 4.15 kgs
Output:	80l/h at 2 bar
Electric supply:	240 V Or 110 V.
	50 Hz. 150 VA
Cable length:	5 m
Pressure:	0.3 - 0.5 bar
Delivery hose:	ca. 20 m (can be longer)
Lance length:	50 cm normal.
	Optionally telescopic
Screw diameter:	G2 (R2") outside dia.
Spray nozzle:	80° - chisel jet
	supplied as standard
Filter:	0.5 mm grid



Bi-Level-BETONAC®-Orange and

BETONAC®-Orange Brush
Product-No: 80.212

Telescopic extension
handle
Product-No: 80.235

BETONAC®-Orange-Brush
Product-No: 80.214 / 15

Product-No: 80.213

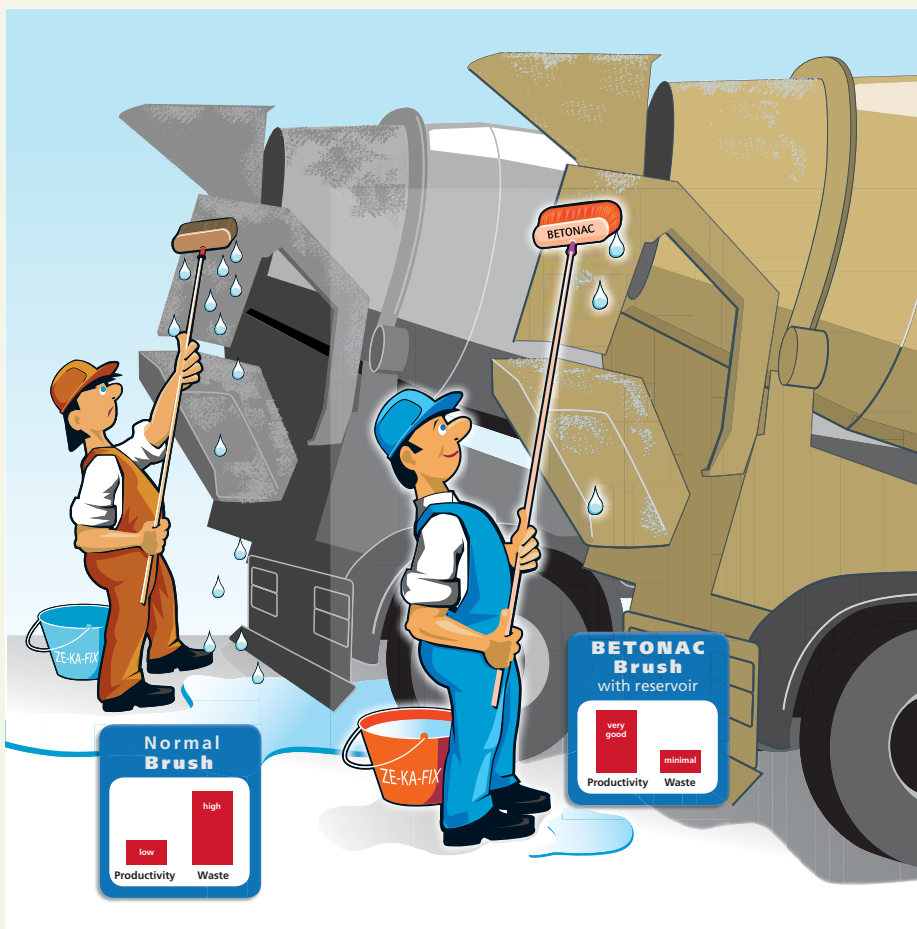
BETONAC®-
"Abrasive Blue"
Product-No: 80.216 / 17

Avoiding application losses

It doesn't matter how expensive or how cheap a product is. It doesn't matter whether it is a good or a bad product - with a bad brush up to 90% of the cleaning agent lands on the floor. (Wasted!)

LEYCO®-Special brushes

Especially designed for cleaning concrete pumps and vehicles that transport concrete.



BETONAC-Orange brush

The BETONAC-ORANGE acid-resistant brush has been especially designed for cleaning concrete pumps and vehicles that transport concrete. Their unique advantage is that they hold the liquid cleaning agent in the bristles and that they extend the service life in acid-containing media.

Experience has shown and studies reveal that up to 90% of a liquid cleaning agent gets wasted on the way from the bucket to the surface on which it is meant to be applied. It pours onto the ground unused.

No so with BETONAC ORANGE Brush. The acid resistant split-end bristles, which guarantees a gentle cleaning action on painted surfaces, act like a reservoir. The gain over normal brushes is 60 percent.

Thus six times more product reaches the surface you want to clean when you use a BETONAC BRUSH.

BETONAC Abrasive Blue brush

The BETONAC – "Abrasive blue brush" is a very hard abrasive brush and is specially designed for cleaning hoppers and chutes, where water for washing cannot be used.

No surface cleaning can be carried out without cleaning losses. But these losses can be drastically reduced.

Lets do some quick sums:

If 1 kg of ZE-KA-FIX costs 5.0 € and it is diluted with 1:5 parts of water, so the solution costs (5.0 € ÷ 6 parts) = 0.83 € each kg

Ten litres of water containing cleaning agent costs 8.30 €

Experience has shown and studies reveal that up to 90% of a liquid cleaning agent gets wasted on the way from the bucket to the surface on which it is meant to be applied.

By using the normal brush 90% = 7.47 € wasted

By using the special brush only 30% = 2.49 € wasted

Advantage by using the BETONAC-Orange brush 60% = 4.98 € gain

If you dilute ZE-KA-FIX with 1 part : 10 parts of water (5.0 € ÷ 11 parts) so the solution of the cleaning agent only costs = 0.45 € each kg



Professional aids

to simplify the job and products that look after your safety

Foam Pistol



When cleaning requires that a good lather remains on the surface for some minutes.

Art.-No: 80.190

Poly-Sprayer



LEYCO-HP 5 and LEYCO-HP 10 – Oil and chemical resistant sprayer especially for ZE-KA-FIX and LEYCO-RASANT

Art-No: 80.406 + 80.407

Oil-resistant high-pressure sprayer



The oil-resistant high-pressure sprayer is suitable for applying ZETOLAN-MEK Plus

Art-No.: 80.408 + 80.409

LEYCO-Dosage System



Water is combined with cleaning concentrates to whatever proportion is required.

Art-No.: 80.198

LEYCO-MV 7



Self priming, electric "airless" barrel spray pump
Reduces waste to a minimum and enhances workplace safety, as it produces no mist.

Art.-No: 80.180

Hand operated barrel and container pump



for filling ZE-KA-FIX and BETONAC-FIX. The barrel and tank pump facilitates precise feeding into the processing barrel.

Art-Nr.: 80.193

Protective goggles



Protects the eyes from surrounding spray of aggressive products, particularly when working like crazy.

Art.-No: 80.231

Protective gloves



Protective gloves with anatomically formed shape and firm extended cuffs, good resistance against many chemicals, non-slip profile, excellent wearer comfort due to flock lining.

Art.-No: 80.230

LEYCO-DS 300



Barrier cream, which should be consistently applied to unprotected skin. e.g. hands, face etc. Protects safely from acids and cleaning solvents.

Art.-No: 20.039

LEYCO-KLARON



is an intensive, and very efficient but enhancing hand-cleaning cream. A body rub, which also contains natural oils to help the cleaning action.

Art.-No: 20.528

With a daily cost of 60p's worth of product, you will save £12 daily, which it is said is the habitual wastage of normal working practices.

What could convince you better than a recommendation from your business friends or even competitors in the vicinity, who have already been successfully using our products for years?

This will certainly be of interest to you, and if you mark a cross on the field , we will be happy to provide a list of these companies.

Our pride: OVER 15,840 CRAFTY, PENNY PINCHING CUSTOMERS ARE MAKING THESE SAVINGS DAILY. WHY NOT YOU TOO?

Order

LEYCO CHEMISCHE LEYDE GmbH

Industriestrasse 155
D - 50999 Köln / Cologne
Tel.: 0049 (0)2236 - 9 66 000
www.leyde.com

Fax: +49 (0)2236 - 966 00 10
leycochem@leyde.com

or scan this page and send it by email to:
leycochem@leyde.com

Material Safety Data Sheets (MSDS) and test reports are available under: www.leyde.com

Delivery address

Name, First name

Company

Position

City / postal-code

Street

Tel.

Fax

E-mail

Stamp and signature

Yes, we are interested in proven products that reduce our costs and secure the best maintained state of our plants and vehicles. Please send us free trial sample quantities.

Art-No.:	Product description	Free trial sample	We order hereby or please send us an offer		
			Quantity	Verpackung	Price
02.040	ZE-KA-FIX Chloride-free, highly concentrated cleaner of cement, Dilution 1:5 to 1:10	<input type="checkbox"/>			
10.025	ZETOLAN-MEK Plus 3 Superprotection for concrete equipment	<input type="checkbox"/>			
10.028	ZETOLAN-MEK Plus 5 Protection and maintenance agent sourced from renewable raw materials	<input type="checkbox"/>			
02.051	BETONAC-FIX 2 Highly active cement, concrete and limescale remover	<input type="checkbox"/>			
20.154	LEYCO-POON 3 Concentrated vehicle shampoo with an acidic base	<input type="checkbox"/>			
20.172	LEYCO-RASANT Special, high performance cleaner for gloss surface and motors	<input type="checkbox"/>			
10.500	LEYCO-SLICK Concrete pumpng aid	<input type="checkbox"/>			
80.180	LEYCO-MV 7 «Airless» barrel sprayer				
80.212 - 80.217	ORANGE BETONAC-Brushes Acid-resistant brushes				
80.190	Foam pistol when cleaning requires that a good lather remains on the surface for some minutes				
80.406 80.407	Poly-Sprayer Chemical resistant sprayer (5 and 10 Ltr.)				
80.408 80.409	Oil-resistant high-pressure sprayer Suitable for applying ZETOLAN-MEK (5 and 10 Ltr.)				
80.198	LEYCO-Dosage System Water is combined with cleaning concentrates				
80.193	Hand operated barrel and container pump for filling ZE-KA-FIX and BETONAC-FIX				
20.039	LEYCO-DS 300 Protects safely from acids and cleaning solvents	<input type="checkbox"/>			
20.528	LEYCO-KLARON Hand-cleaning cream containing skin protecting agent	<input type="checkbox"/>			