



**BECOSAN<sup>®</sup>**

**CONCRETE FLOORS - MADE BETTER**

# Table of Contents

---

BECOSAN® is more than just a brand. It is a treatment, where we can guarantee an enhancement to and a better performing industrial concrete floor. In this folder we will explain in detail what BECOSAN® consists of, showing some references and case studies. Our team of specialists are ready to give advice and support on how to integrate BECOSAN® into future projects.

## 01 | Process

---

1. Removing micro-roughness
2. Densification
3. Sealing
4. Polishing

## 02 | Certifications

---

1. ISO 9001:2015
2. HACCP - Food Safety Management
3. CE Mark
4. Anti-Slip
5. Water Absorption
6. Abrasion Resistant

## 03 | Benefits

---

1. Dust-proof
2. High Reflectivity
3. Low Absorption
4. Reduce costs

## 04 | References

---

1. Quick references  
Before and after

## 05 | Case Studies

---

1. IBS Logistic Center
2. Amazon Fresh
3. Montosa Avocados
4. DHL Express

First step:

## Removing Micro-roughness By Grinding

---

The 3 step grinding process removes the top layer of the concrete. The floor will become more dense providing a smooth surface where the dust particles will not settle. The BECOSAN® system has its advantages compared to other traditional grinding systems, as it is fast, efficient & very cost-effective.



## Second step: **Densification**

With BECOSAN® Densifier

A special lithium concrete impregnator is used to bind the free lime particles in the concrete. It will also create a more compact and dense surface. The lithium impregnator is water based solution which is designed to penetrate deep into the concrete pores of the surface. It is very different from other similar products as it is not a film forming coating, meaning that its performance on industrial concrete floors is much more durable.



Third step:

## Sealing the pores

With BECOSAN® Protective Sealer

---

This step of the process is the application of the protective sealer. It is a water based chemical which penetrates into the concrete surface. This treatment is not a film forming coating and will protect industrial concrete floors for an extended amount of time.



Fourth step:  
**Polishing**  
Until desired finish



### **Semi-Gloss**

The 4-step process creates a semi-gloss finish. The floor will be smooth, abrasion resistant, dust proof and easy to clean. The surface is protected against water, oil or grease stains.

### **High-Gloss**

The 6-step process creates a high gloss concrete floor. The surface will be extremely hard, abrasion resistant, dust proof and easy to clean. The concrete floor will be protected against water, oil or grease stains. The maintenance costs are reduced to a minimum. The floor will be highly reflective and will result significant energy savings as less lighting and CO<sub>2</sub> emissions in buildings are reduced.

### **Matt-plus**

The 3-step process creates a matt surface. Ideal finishing for customers that do not want a glossy floor. The treated surface is dust proof and abrasion resistant. The absorption of water, oil and grease is minimised.



## 02 | Certifications

**Our Certifications and Standards  
are your Guarantees**

## Quality management systems

**ISO 9001:2015**

ISO 9001 helps organizations ensure their customers consistently receive high quality products and services.



## Managing Food Safety

**HACCP**

Hazard analysis and critical control points.



## Anti-Slip

**DIN 51131**

Testing of floor coverings .  
Determination of the anti-slip property.



## Abrasion Resistance

**BS EN 13892-4:2002**

Methods of test for screed materials.  
Determination of wear resistance-BCA.



## Water Absorption

**DIN 52617**

**DIN EN ISO 15148**

Determination of the water absorption coefficient of construction materials.  
Hygrothermal performance of building materials.



## Declaration of Performance

**CE Mark**

Health, safety, and environmental protection standards for products sold within the European Economic Area





# 03 | Benefits



## Increased

Abrasion  
Resistance

## Lower

Liquid  
Absorption

## Dust-proof

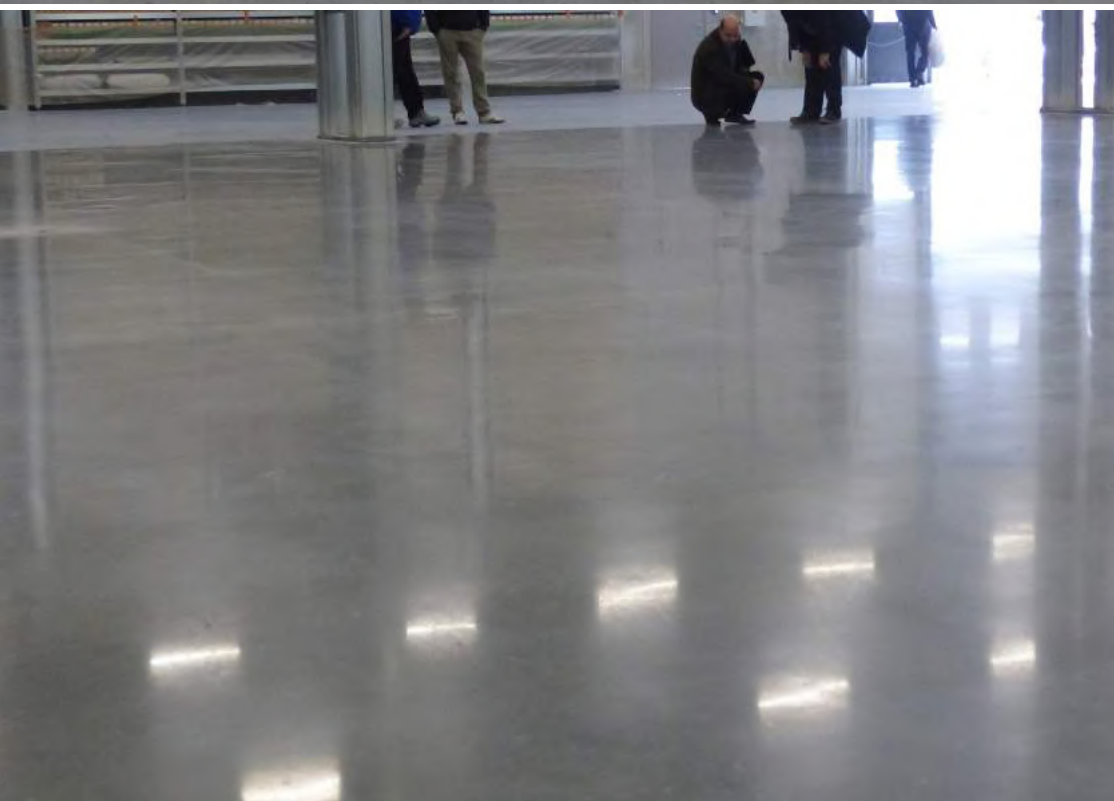
Concrete  
Floors

## Eco-Friendly

Installation  
Process

## 04 | References











# 05 | Case Studies



# IBS Logistic Center

IBS is an integrated logistics provider with innovative solutions for the entire supply chain from procurement logistics, to order management including invoicing, to product-specific storage, to distribution, to retail and end customers on a global scale. They operate a global distribution centre in Heek, Germany covering 15,000m<sup>2</sup> with 20,000 storage bays.



## Problem

IBS were expanding their successful operation in Heek and needed 7,000m<sup>2</sup> of new concrete flooring. Like any busy warehousing operation, the flooring would suffer from very heavy forklift traffic leaving many tyre marks, scuffs and scars.

IBS wanted the new floor to be very durable, easy to clean and with very low maintenance costs.





# Solution

## BECOSAN® Treatment

Working with one of our partners in Germany, the new concrete floor was laid. After a 30-day curing period all micro roughness was eliminated from the concrete surface leaving a high gloss finish. The floor was then treated with BECOSAN® Densifier which significantly increased the hardness of the surface. The final stage was a comprehensive treatment with BECOSAN® Protective Sealer.



# Result

## Testimonials

We asked IBS Book Services what they thought of the finished result. They said, “because of the high abrasion resistance we have hardly any scratches and the dust free surface is very easy to clean. We use much less cleaning agent than in other warehouses. With epoxy coatings, after some years, the surface begins to peel or flake. This is not an issue on this surface”.

# Amazon Fresh

One of the biggest successes of the internet era is Amazon, the online store. Their new service, Prime Now, offers two-hour delivery for a whole range of products, including fresh food, across many major cities across the world from New Delhi to New York. The investment being made by Amazon in this is huge and the speed of expansion is breath-taking with new cities being added all the time. One of those new cities is Madrid where two-hour delivery is free or you can get the product super-fast, in one hour, for 5.90€! Amazon Prime Now in Madrid started in July 2016 but rapid take up for the services meant that demand for extra warehouse space was high.



## Problem

Amazon have rented warehouse space close to the city but the floor wasn't of sufficiently high quality for their needs. The floor was nearly 20 years old, crumbling and very dusty. Given the wide range of products being stored; food, drinks, sports equipment, toys, electronics and clothing, the floor needed to be abrasion resistant, dust proof and easy to clean.



**amazon**fresh

## Solution

### BECOSAN®

---

Working with one of our partners in Spain, the concrete floor was ground down with diamond hard BECOSAN® discs to remove all micro roughness from the surface leaving a high gloss finish. The floor was then treated with BECOSAN® Densifier which significantly increased the hardness of the surface. The final stage was a comprehensive treatment with BECOSAN® Protective Sealer.



## Result

### Quality Guaranteed

---

The surface has proven to be a revelation to the owners of the building who would like other warehouses to be given the same treatment.



# Manufacturing Center

---

Frutas Montosa was formed in 1982 and specializes in the collection, storage, processing and distribution of high value fruit crops including avocados and mangos. In addition to the fruit itself Montosa produces a series of bi- products like guacamole and mango sauces. In 2016 Montosa distributed 25,000 tonnes of avocado, more than half the production of Málaga province in Spain. 2017 was a record year with 36,000 tonnes of fruit distributed and revenues topping 120,000,000€. Frutas Montosa have a 76,000m<sup>2</sup> facility just east of Málaga.



## Problem

---

Because Montosa deal with food products in an unprotected state, hygiene is paramount and dust cannot be tolerated. In the past concrete floors would be coated with an epoxy resin to maintain a hygienic environment but these coatings had two major problems.

For one, the coating will peel and flake leaving the concrete bare in places which would allow the floor to dust and be problematic as repairs needed to be done, which would shut down the facility. Secondly, the floor would be difficult to clean, which for a food production company could not be tolerated.



# Solution

## Floor Restoration

---

The BECOSAN® system has no such drawbacks. No toxic chemicals are used (in fact, the chemicals used meet HACCP safety standards for use in food industry) and floor preparation with BECOSAN® can proceed alongside the building's normal function. Additionally, the floor does not deteriorate with time and can continue to be used for many years.



# Result

## Dust-proof floor

---

Frutas Montosa have been delighted with the BECOSAN® system. Since finishing our original 1,500m<sup>2</sup> we have gone on to complete a further 8,500m<sup>2</sup>. And we expect to continue converting epoxy flooring to the BECOSAN® system at Frutas Montosa.



# DHL Express

DHL Express is a division of the German logistics company Deutsche Post DHL providing international courier, parcel, and express mail services. Deutsche Post DHL is the world's largest logistics company operating around the world, particularly in sea and air freight.



## Problem

DHL owned a large warehouse in Didcot, Oxfordshire in the UK. The floor measures some 18,000m<sup>2</sup>. For 20 years the warehouse had been under heavy use with a large logistics company. 10 years ago the warehouse was leased by a major UK supermarket chain ASDA. Consequently the floor was in a poor state of repair. DHL decided to sell the warehouse to a pharmaceutical company. The buyer made it a precondition of the sale that the floor would be brought up to a very high standard.



# Solution

## Polished concrete

---

Working with one of our partners in the UK, the concrete floor was ground down with progressively finer diamond hard Becosan grits (grade 50, 100 then 200) to remove all micro roughness from the surface.

The floor was then treated with Becosan Densifier to significantly increase the hardness of the surface.

The BECOSAN® applicator then commenced a further round of grinding with finer Becosan grits 400, 1000 and 3000) to bring the floor to a high gloss finish.

The final stage was a comprehensive treatment with Becosan Protective Sealer.



# Result

## Floor ready for any use

---

We spoke to Justin Lemm, Project Manager for the DHL Project. He told us, “The Becosan system meets perfectly the requirements of the business operations, increasing the hardness of the floor and making it easy to clean”.

“The system allows us to obtain a surface very resistant to deterioration, especially in industries with heavy, high intensity traffic in multiple directions”.



**CONCRETE FLOORS - MADE BETTER**

**Kenneth Olsen**

**+45 40 97 97 40**

**ko@becotreat.com**

**www.becosan.com**

