

Betopro[®] Concrete Release Agent

by Ecoratio

Michael Hollenbenders

Director

Commercial Development



When the quality of the concrete surface is what really matters...



What your customers want:

A perfect concrete surface:
no stains, no voids, no cavities!

What you want:

- Reduce / eliminate oil spillage/waste
- Improve productivity
- Improve working conditions
- Reduce costs & reworks
- Help with ISO 9001/14001 Environmental Policy

A decorative graphic of a stylized orange leaf with several veins, pointing towards the bottom right corner of the slide.

State-of-the-art release agents are crucial!

A key issue: employee health and sustainability



You prefer a **release agent** that:

- is **environmentally friendly** and biodegradable
- does not cause skin irritation and unpleasant odor
- is non-flammable
- does not incur any costs associated with:
 - protective clothing
 - chemical waste disposal
 - extraction units
 - special storage and insurance requirements
- HR



What can we do for you?

For more than 14 years, Ecoratio's core business has been to develop, produce and distribute premium-quality **water-based release emulsions**.

We deliver:

products that ensure **perfect formwork stripping results** whilst being **environmentally friendly and non-hazardous to health!**



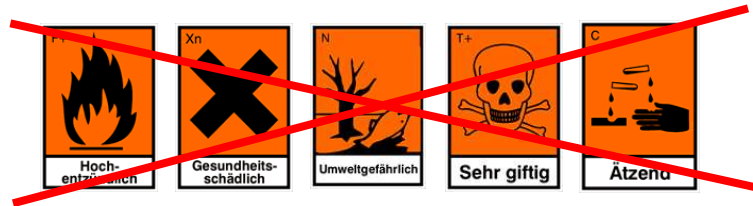
Ecoratio's vision since 1998

Sophisticated, premium-quality products

Water-based release agents that yield the same or even better results than mineral-oil based reference products

Environmentally friendly and non-hazardous to health

Not in our products!



Excellent service

- Thinking ahead on site & solving problems together with the customers
- Develop and build customer-specific sprayers

Results of 14 years of dedication and commitment



Our Betopro[®] concrete release agents – Naturally Smooth!

18 different types
of Betopro[®] =
always the right
solution whatever
your practical
needs!

Betopro[®]

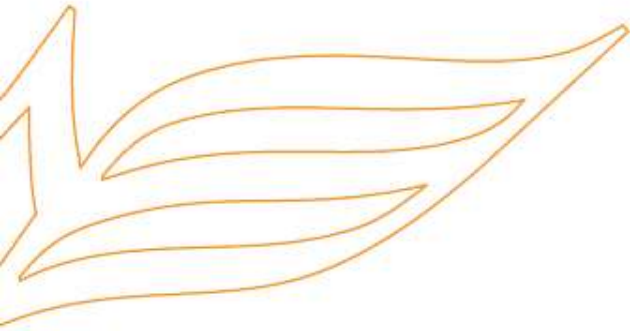
creates optimised concrete surfaces and protects your
formwork

Betopro[®]

is safe for your people and the environment

Ecoratio[®]

provides on-site support and service



Naturally Smooth
Betopro[®] Release Agents

APPLICATIONS



Applications

Floors/DW



Sleepers/Piles



Tunnel lining segments



Hollow Core



Garages



On site constructions



Hollow Core Floors

1. Perfect surface quality:

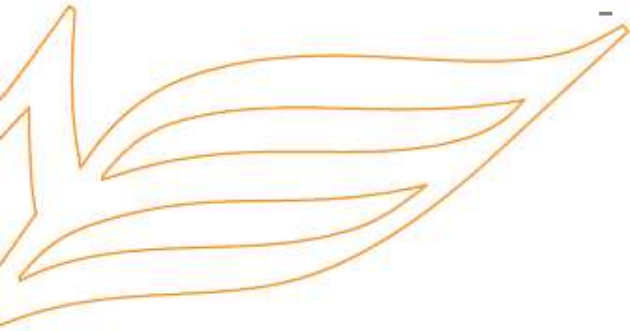
- no voids, no cavities, clean edges

2. Formwork protection

- no corrosion, no build-up

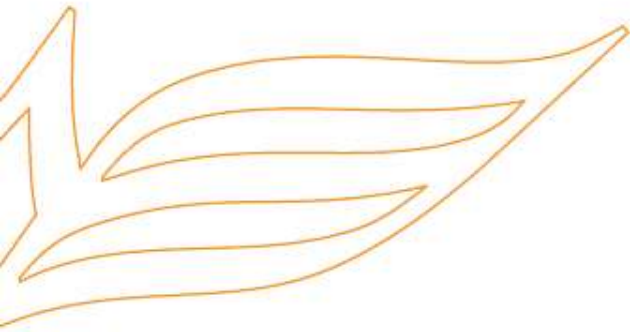
3. Production efficiency

- customer-specific development and optimisation of automatic spraying equipment
- Betopro® suitable for use in slipform and extrusion process
- shorter cycle times (no wiping required)
- easy formwork cleaning



Applying the product

- Betopro is designed to be sprayed through a fine jet so overspray is reduced.
- white in colour when applied so you can see where you have applied it and use less.
- Betopro will not block the nozzles.



Applying the product

Immediately after treatment (emulsion)



Applying the product

Mould oil



Betopro[®]



Floors/Double Walls

Quote:

Mr. Andreas Thiele, Elskes Concrete
(20.000 EUR savings on complaints)

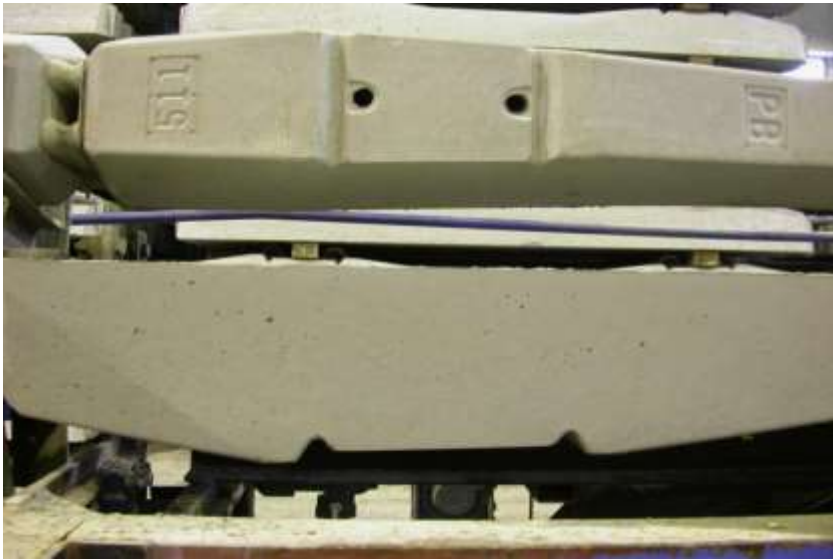


Betopro[®] release agent



Reference product

Sleepers

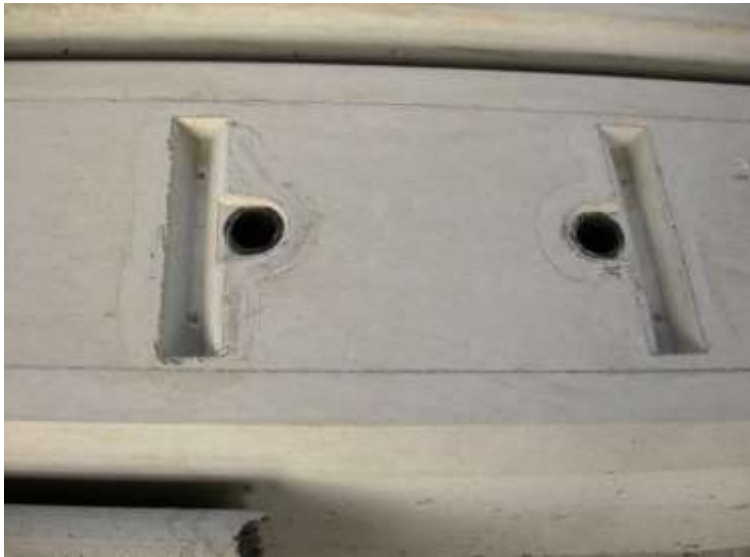


Betopro[®] release agent

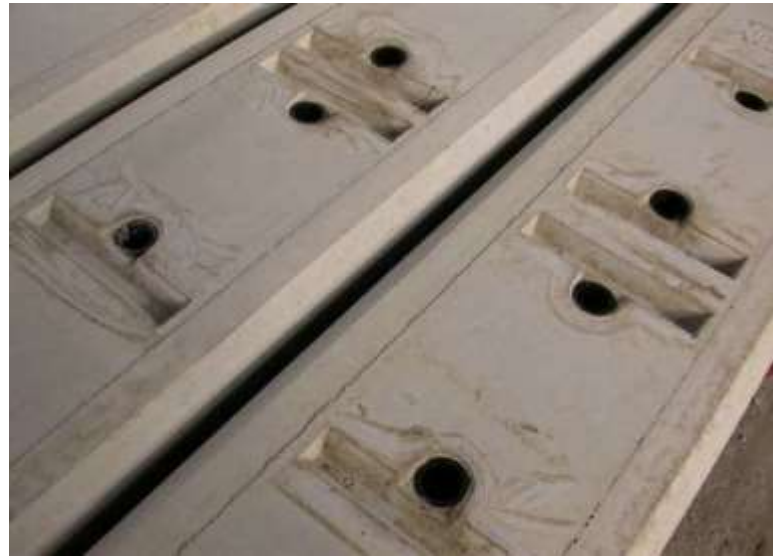
Reference product



Sleepers



Betopro[®] release agent



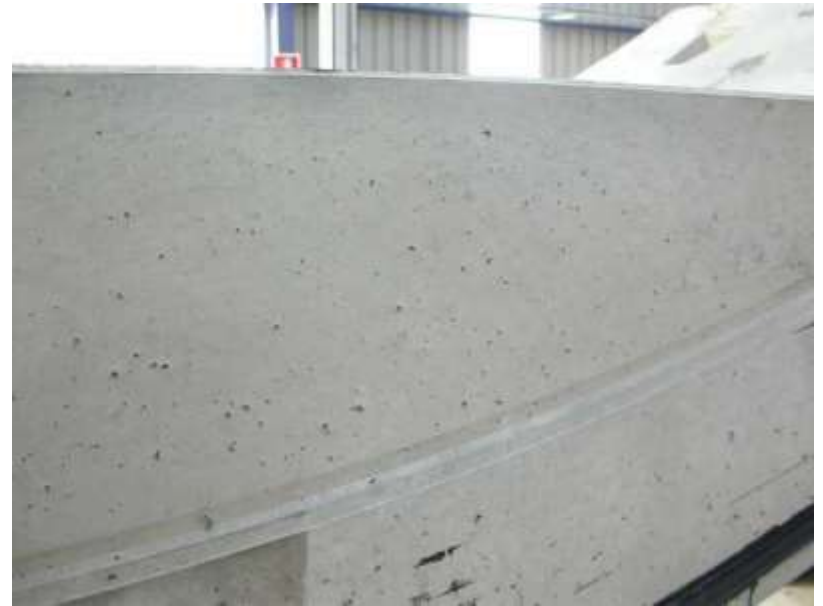
Reference product



Tunnel Lining



Betopro[®] release agent



Reference product



Hollow Core Floors



Reference
(pin holes and stains)



with Betopro®



Hollow Core Floors



Reference...Rust from wire



with Betopro®



T Beams

Reference oil



with Betopro®



General Precast

Reference



with Betopro®



General Precast

“That improvement will save 1 hour in making good on that one stair.”

Quote from Paddy McKeague
Director, Creagh Concrete



Betopro[®] release agent



Reference product

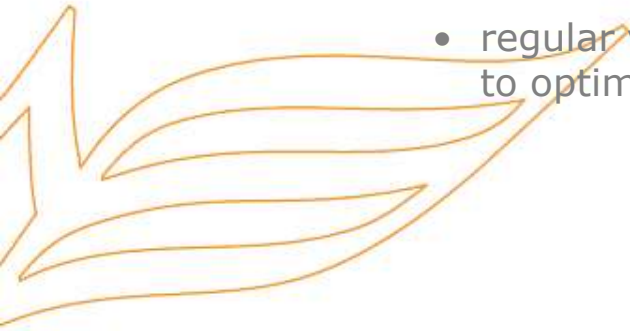
Naturally Smooth
Betopro[®] release agents

Different Service



Ecoratio's Service: We come to your site!

- Five-stage service model for new customers:
 - Introductory on-site meeting:
 - presenting products, discussing improvement opportunities
 - First practical test (several cycles):
 - presenting results with Betopro and selecting the best-suited type of Betopro
 - Analysis of results
 - analysing initial results
 - if positive (92% of all cases!), determine conditions and timeline
 - Conversion:
 - on-site service, including spraying equipment
 - Continuous customer service:
 - regular visits, sharing experience and exchanging views with customers to optimize products



Ecoratio's Service

We think ahead!



Customer-specific spraying system



Naturally Smooth
Betopro[®] release agents

CORROSION



Problem: Corrosion in precast operations

- Increased corrosion of steel forms observed in the past few years
- Costly and time-consuming rework of precast elements with corrosion stains required (especially for architectural concrete)

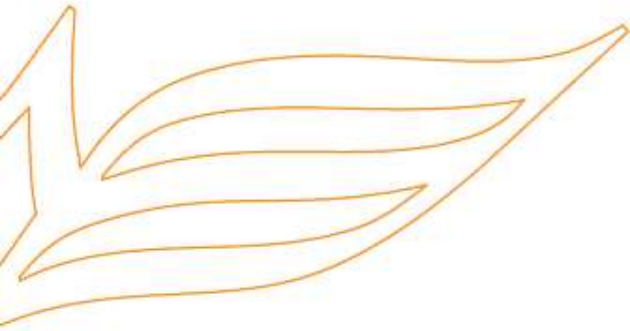


Corrosion stains on the formwork also show on the surfaces of precast elements. Their removal requires a lot of time and effort.

How can corrosion be prevented? **Experience gained by Ecoratio**

Ecoratio has continuously improved the range of water-based release agents and added further options that contain various "cocktails" of corrosion inhibitors to cover the widest possible range of causes of corrosion.

The new emulsions were tested at several precast plants across Europe under varying production conditions (the effectiveness of rust suppression depends on the conditions specific to each plant).



How can corrosion be prevented?

Experience gained by Ecoratio – success rate: > 92%

Water-based release emulsions can prevent rust!



Reference situation:
Corrosion on the form



shown on the
concrete element



Practical experience

Corrosion problems solved!



Betopro[®] release agent



Reference product

Naturally Smooth
Betopro[®] release agents

SUMMARY



Betopro concrete release agent = a small process step with a major effect

You can rely on Ecoratio!

Sophisticated, premium-quality products!

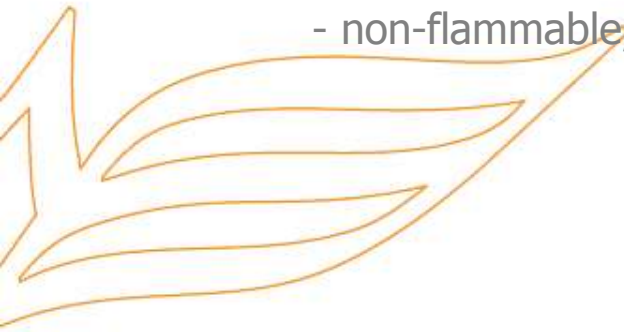
- outstanding surface quality
- release agents are our core business

Excellent service!

- Our differentiator: Expert field service for release agents only

Environmentally friendly and non-hazardous to health!

- focus on water-based release agents
- non-flammable, odorless, non-toxic, biodegradable



References you know



Michael Hollenbenders

Director

Commercial Development

Mobile: +49 162 788 2860

Ecoratio BV

Industrieweg 161

3044 AS Rotterdam

The Netherlands

P: +31 88 22 44 440

F: +31 88 22 44 444

www.ecoratio.com

