Eastern Node

Company Brochure

A company that emphasizes R&D
and strives to continually create
high-performance, environmentally friendly products
to address water environment issues, large and small, worldwide

Eastern Node (Beijing) Environmental Technologies

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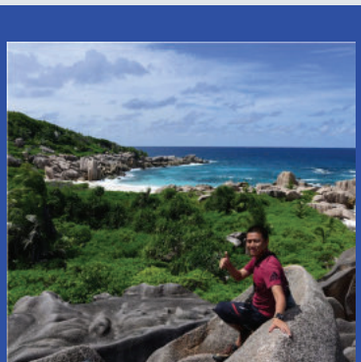
About Us

Eastern Node was founded in September 2022 and is located in the Daxing district in Beijing, China.

We have created an innovative phosphorus sequestering agent by cooperating with our research partners. The new product is a groundbreaking improvement over existing technology which benefits from both a significantly improved ability to remove phosphorus and a dramatic reduction in production costs.

Our company goal is to establish close cooperative relationships with customers and to help them create more value at a lower cost.

Our Team



Xing Wei

Founder & General Manager

Xing Wei, MSc, is the Founder and General Manager at Eastern Node (Beijing) Environmental Technologies Co., Ltd. Before founding Eastern Node, Xing was in charge of the Marketing & Sales Department of PET China for more than two years.

Gavin Guo

Co-Founder & Director

Gavin Guo, BSc, is the Co-Founder and Director at Eastern Node (Beijing) Environmental Technologies Co., Ltd. Gavin co-founded Eastern Node with Xing after working for Phoslock Environmental Technologies Ltd (PET) for three years as marketing director at PET China.

Our Partner

Zhenhua Sun

Founder & Director of Zhanyuan Environmental Technologies

Zhenhua Sun, BSc, Senior Engineer, is the founder and general manager of Zhanyuan Environmental Technologies Co., Ltd. Zhenhua is also responsible for the company's R&D and scientific and technological achievement transformation.

What We Do

Together with our partners and collaborators, Eastern Node endeavors to develop a worldwide portfolio of premium yet cost-efficient products and to become an international leader in the restoration of eutrophic and other contaminated aquatic ecosystems.

Our Product

ZEOFIXER

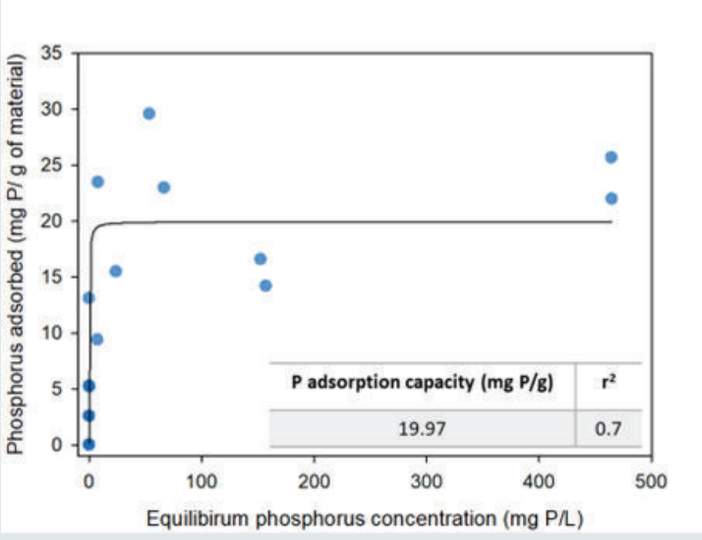
Zeofixer, a silicon-based phosphorus sequestering agent, was developed in China by our close partner (Zhanyuan Environmental Technologies Co.,Ltd.) in 2020 to remove excessive phosphate from the water. The active element in Zeofixer is lanthanum. Zeofixer is comprised of silicon-based materials (90%) and lanthanum (10%).

Lanthanum is a rare-earth element with a strong affinity to bind phosphate. This forms an insoluble and biologically inert compound, Rhabdophane. The process is irreversible, which means that lanthanum is held firmly to the material while retaining its ability to bind phosphate, but does not readily dissociate, i.e., will not form free ions in water. In addition, the manufacturing method significantly increases the ability of the carrier to hold more lanthanum ions.

Top Three Benefits

1. Outstanding cost-efficiency
2. Up-to-date technological innovation
3. Safer to use

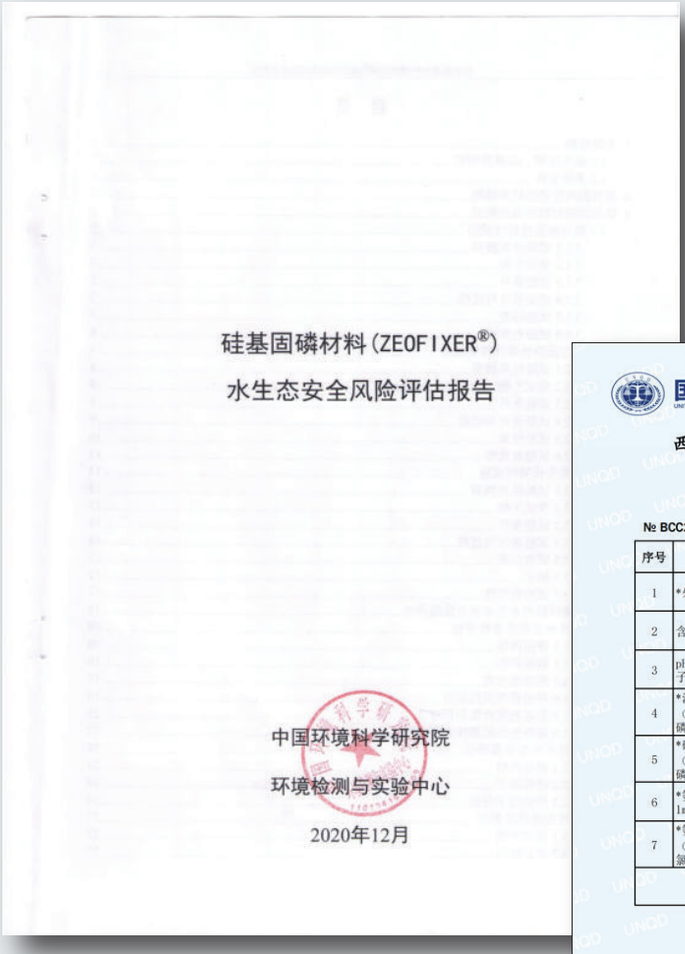
Maximum Adsorption Capacity



Our Product

ZEOFIXER

Testimonial



硅基固磷材料(ZEOFIXER®)

水生态安全风险评估报告

中国环境科学研究院

环境检测与实验中心

2020年12月

国联质检

西安国联质量检测技术股份有限公司

Xi'an United Nations Quality Detection Technology CO.,Ltd.

检测报告

№ BCC210104213-1

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序号	检测项目	单位	技术指标	检测结果	单项评定	方法标准
1	*外观	/	浅灰色固体粉末或颗粒	浅灰色固体粉末	符合	Q/ZYST-001-2020
2	含水率（水分）	%	/	3	/	GB/T 6284-2006
3	pH（10g/1000ml 去离子水）	/	/	7	/	GB/T 23769-2009
4	*溶解性无机磷去除率（0.1g/1L 0.65mg/L 磷溶液）	%	>90	91	符合	Q/ZYST-001-2020
5	*磷吸附容量（0.3g/40ml 300mg/L 磷溶液）	mg/g	>20	26	符合	Q/ZYST-001-2020
6	*氨氮去除率（0.1g/1L 1mg/L 氯化铵溶液）	%	>30	31	符合	Q/ZYST-001-2020
7	*氨氮吸附容量（0.1g/40ml 100mg/L 氯化铵溶液）	mg/g	>5	8	符合	Q/ZYST-001-2020
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UNITED NATION QUALITY DETECTION

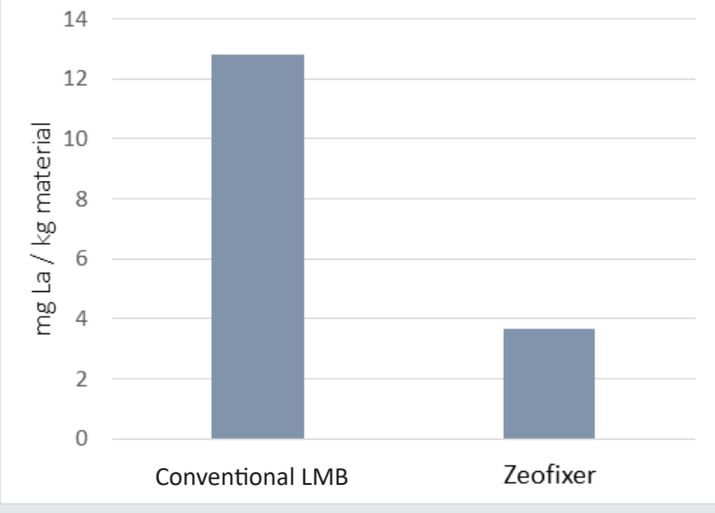
UNQD 400-808-2011 www.xaunqd.com

Eco-toxicity tests and assessments have been undertaken on a wide range of test species by the Chinese Research Academy of Environmental Sciences (a governmental research institution) in 2021.

OUR PRODUCT

ZEOFIXER

Lanthanum Release Comparison



Lanthanum release from Zeofixer is extremely low (3.6 mg La/kg material), lower than that of conventional LMB (12.8 mg La/kg material).

Removal Rate Comparison

Sample	0d	1d	3d	6d	12d	19d	49d	60d	Removal Rate After 60d
Zeofixer	1.350	0.565	0.347	0.152	0.052	0.048	0.035	0.032	97.6%
Conventional LMB	1.350	0.735	0.685	0.660	0.615	0.600	0.688	0.665	50.7%
Blank Control	1.350	-	1.140	1.150	-	1.360	1.375	1.366	-1.2%

The maximum adsorption capacity of Zeofixer is approximately twice that of conventional LMB, under the same dosage (50 times of TP).

Our Product

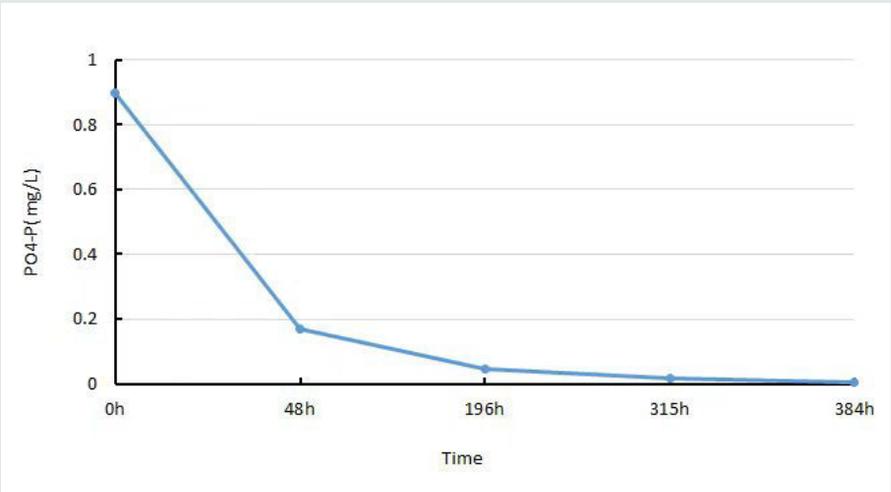
Kylin Pellets

Kylin Pellets, a insoluble phosphorus adsorbing pellets, was developed in China by our close partner (Zhanyuan Environmental Technologies Co.,Ltd.) in 2020 to remove excessive phosphate from the water. The maximum adsorption capacity of Kylin Pellets is 25mg/g.

Top Three Benefits

1. Suitable for a wide range of application conditions
2. Sustained adsorption with high capacity
3. Lanthanum Free

Phosphate Removal Curve



Case Studies

Shanghai Jiao Tong University, China, 2020

The pre-treatment total phosphorus concentrations in the water body were 1.36-1.80mg/L, and the concentration of PO_4-P was 1.07-1.20mg/L.

Sixty days after the application, the total phosphorus concentration in the overlying water had stabilized at 0.03mg/L (Removal Rate: 98.3%), and the phosphate concentration had stabilized at 0.02mg/L (Removal Rate: 98.3%).

Zhenghe Park, Nanjing, China, 2021

The pre-treatment total phosphorus concentration in the water body was 0.45mg/L, and the concentration of PO_4-P was 0.31mg/L.

Thirty days after the application, the total phosphorus concentration in the overlying water had stabilized at 0.17-0.18mg/L (Removal Rate: 62%), and the phosphate concentration had stabilized at 0.04-0.07mg/L (Removal Rate: 87%).

Taiwan Farmers Pioneer Park, Ezhou, China, 2021

The pre-treatment total phosphorus concentration in the water body was 0.2mg/L, and the concentration of PO_4-P was 0.09mg/L, according to data provided by the local environmental protection bureau.

Fifteen days after the application, the total phosphorus concentration in the overlying water had stabilized at 0.04mg/L (Removal Rate: 80.0%), and the phosphate concentration had stabilized at 0.03mg/L (Removal Rate: 66.7%).

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