



IMMOBILIZATION SOLUTIONS

Address PFAS & Site Remediation
Challenges With New Solutions

RemBind® Solutions Exclusively Available
Through Carus in the U.S.



At Carus, we simplify remediation solutions for our customers and partners. With our expertise and commitment to **SIMPLIFIED SCIENCE®**, we help you navigate the complexities of treatment with ease.



IMMOBILIZATION PRODUCT OVERVIEW

PROVEN CONTAMINANT MANAGEMENT FOR SOLID MATERIALS

Immobilization is a proven remediation approach for managing contamination in solid materials, including soils, biosolids, compost, and sediments. Contaminants can leach and migrate into groundwater and surrounding environments, creating long-term risks to environmental and human health. RemBind® Sorbents bind those contaminants, preventing leaching and reducing mobility. In addition to the remediation products presented in this magazine, Carus' product lines include permanganates, phosphates, catalysts, and polymers.

The process is simple and effective, enabling contaminated materials to be safely managed either through on-site reuse or disposal to landfill in line with acceptance criteria. By reducing reliance on excavation, transport, and virgin materials, RemBind® supports more sustainable and cost-effective remediation outcomes.



CONTAMINANTS SOLVED

METALS
Arsenic, Chromium, Lead, etc.

PFAS
Per- and Poly-Fluoroalkyl Substances

TOTAL PAHs
Polyaromatic Hydrocarbons

BaP
Benzo-a-pyrene



TPH
Total Petroleum Hydrocarbons

ORGANICS & INORGANICS

PCB
Polychlorinated Biphenyls

BTEX
Benzene, Toluene, Ethylbenzene, Xylene

VOCs
Volatile Organic Compounds

PHENOLS & CRESOLS

THE SOLUTION: RemBind® SORBENTS

RemBind® Sorbents are specifically designed for immobilization applications, providing a practical and proven pathway for managing PFAS-contaminated soil without the cost and disruption of full excavation and disposal.

Applied at typical dosage rates of 1-5% by weight with water, contaminants are securely bound within the solid matrix, reducing mobility and environmental risk.

Available in RemBind: 100, 100X, and 200



SUITABLE FOR A WIDE RANGE OF APPLICATIONS

With RemBind® Sorbents, you can effectively manage contamination across virtually any material, supporting safer, more sustainable, and cost-efficient project outcomes:

- **Contaminated Soils & Sediments**
Industrial sites, construction sites, and waterways
- **Recycling of Construction Materials**
Asphalt, concrete, and other solids
- **Water Treatment**
Groundwater and surface water impacted by contaminants
- **Biosolids & Composts**
Stabilizing nutrients while reducing pollutant mobility
- **On-site Material Reuse**
Treated materials can often be safely reintegrated into other projects



SUPPLIED TO SUIT YOUR REQUIREMENTS

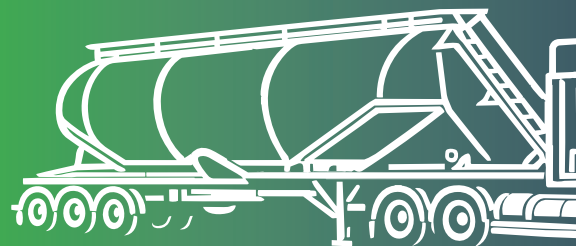
RemBind® products are supplied in a range of formats and delivery methods to suit your specific project requirements.

From smaller packaged volumes through to bulk supply and pneumatic delivery, we offer flexible options that support efficient handling, transport, and application.

Each supply method is designed to align with site conditions, project scale, and operational needs, ensuring a practical and efficient approach across a wide range of remediation scenarios.



1,100 lbs.
Super Sack



Pneumatic Bulk Trailer

IMMOBILIZATION PRODUCT OVERVIEW

MIXING EQUIPMENT

RemBind® can be incorporated using a range of conventional and specialized equipment, including excavators, pugmills, and *in-situ* mixing systems, depending on-site conditions and scale.



Pug Mill



Tractor-Towed Stabilizer



Excavator with Screening Bucket



Trommel Screen



Excavator



Road Stabilizer

TECHNICAL SUPPORT

Carus is supported by a dedicated technical team, providing guidance on product selection, dosage optimization, and application methods to ensure successful project outcomes.

Explore Carus's Peer Reviews



Proven at Scale

Carus provides commercially proven remediation solutions at full project scale, delivering consistent performance across complex and high-risk contamination challenges globally.





PFAS SOIL STABILIZATION & IMMOBILIZATION: COMMERCIAL AVIATION

Project Summary

Delivered a hybrid PFAS remediation program at a former fire training area on a municipally-owned Canadian commercial airport, addressing legacy AFFF impacts from historic firefighter training activities. The approach combined targeted excavation of PFAS hot spot soil with *in-situ* soil mixing using RemBind® 100X, immobilizing residual PFAS in soil and groundwater while preserving soil permeability ahead of site restoration.

Project Outcomes

- 26,000 MT of PFAS-contaminated soil excavated and removed
- 5,000 MT of RemBind® 100X mixed into the excavation floor to stabilize PFAS in saturated soil and groundwater
- >99.2% leachability reduction in treated soils
- Soil leachate reduced from 1.011 µg/L untreated to below 0.002 µg/L PFOS at a 1% RemBind® 100X addition rate
- Substantial reductions in adjacent groundwater PFAS concentrations following soil treatment
- Hybrid approach supported full site restoration while addressing both PFAS source mass and the mobile fraction driving groundwater migration

99.2 %
PFOS leachate
reduction



Stakeholders

Federal Government, Municipality, Regulatory Authority, Community

Location

Canada

Containment Types

PFAS (PFOS)

Products Used

RemBind® 100X

Equipment Used

Excavator

Further Resources

Platform Presentation



PFAS SOIL STABILIZATION: MILITARY BASE

Project Summary

RemBind® delivered *in-situ* PFAS stabilization at a military base fire training facility, addressing legacy AFFF contamination built up over decades of firefighting foam exercises. Concentrations at the site were high, so a fieldproven treatment technology was implemented with protocols refined through bench-scale testing before being applied systematically across the site.

Project Outcomes

- Successfully treated PFAS contamination from legacy AFFF fire training activities at an active military base
- Treatment was done on site, so there was no need to excavate soil and truck it off base, and base operations continued without disruption
- PFAS immobilization has held steady through 19 months of monitoring at the facility
- The field data gives a validated basis for rolling the technology out to other military bases
- Treatment integrity was confirmed with moisture and NMR monitoring, even under live operational conditions
- The project establishes a protocol Defence can apply at other fire training facilities nationally

99 %
PFAS leachability
reduction



Stakeholders

Federal Government, Land Owner,
Community Authority

Location

North Dakota, USA

Containment Types

PFAS (PFOS, PFOA, PFOSA,
multiple compounds)

Products Used

RemBind® 100

Leachability

Reduction Achieved

PFAS: >99% over 19 month
monitoring period

Equipment Used

Excavator

Further Resources

Platform Presentation,
Peer-Reviewed Paper



READY TO EXPLORE RemBind® SOLUTIONS?

Whether you're addressing PFAS, metals, petroleum hydrocarbons, or other site remediation challenges, Carus can help identify the right RemBind solution for your project.

Contact our remediation team to discuss your site conditions, technology selection, and implementation approach.

CONNECT
with a Carus Remediation Specialist Today

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Scan for Product Information
& Technical Resources



RemBind® Solutions. Carus Expertise.

Bringing innovative immobilization technologies
to remediation professionals across the United States.

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Driving Safety & Sustainability

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