

SURFACE WATER 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.



APPLICATION OVERVIEW

PROTECTING SURFACE WATER FROM PFAS RUNOFF

PFAS in stormwater, drainage lines and site runoff moves quickly and migrates off-site by flow long before a containment response can be mobilized. Traditional controls are often too slow, too costly, or unsuited to an active drainage line.

RemBind® offers a passive, in-channel RemBind® Containment Barrier (RCB) that treats water as it flows, immobilizing PFAS prior to discharge. This technology works without power, excavation, or engineering, and with minimal operations and maintenance (O&M).

Surface water is often the fastest migration pathway on a site: a single storm event can move contaminated runoff well beyond a site boundary. Left unmanaged, this creates discharge non-compliance, downstream liability and reputational risk. Intercepting base and stormwater flow closes that pathway.

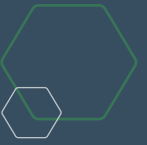


RemBind® SOLUTION

RemBind® CONTAINMENT BARRIER (RCB) INTERCEPTING PASSIVE WATER FILTER

A passive barrier laid perpendicular to flow to treat base and moderate flow. Engineered RemBind® Sorbents immobilize PFAS as water passes through, with recharge cells serviced in place and no excavation of the structure. RCBs can also be deployed within gabion baskets for added structure on higher-energy sites.





THE RCB RANGE

The RemBind® Containment Barrier (RCB) range are supplied in a range of formats to suit channel size, gabion baskets and bulk deployment. All formats use the same RemBind® Sorbents and recharge-cell design.



RCB 500 mm – Handles

RCB-500-H

For smaller gabion baskets and confined deployments. Carry handles for hand placement. Contains 1 recharge cell.

RCB 1 m - Anchor Pegs

RCB-1000-AP

The standard barrier for base and moderate flow in drains and channels. Supplied with 2 anchor pegs. Contains 2 recharge cells.



RCB 2 m - Anchor Pegs

RCB-2000-AP

Extended treatment width for wider channels. Supplied with 4 anchor pegs. Contains 4 recharge cells.

RCB Bulk Bag - 1 m³

RCB-1M3

Bulk format with lifting handles, for gabion baskets. Placed and removed by excavator.



RCB Recharge Cell - 500 mm

RCB-500-CELL

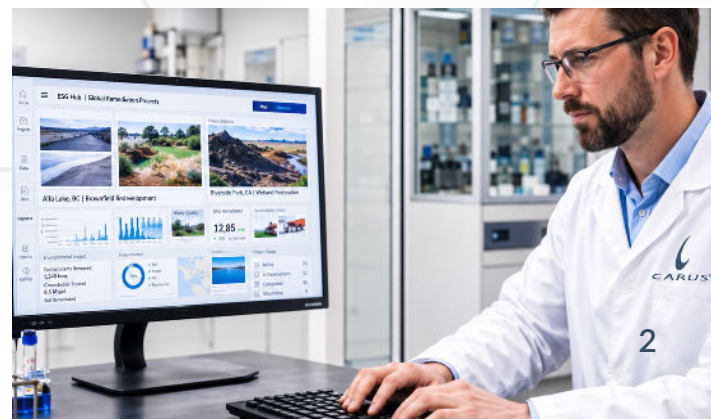
Replacement media cell for every RCB format. Order one per 500 mm of barrier length. Replacement only.

TECHNICAL SUPPORT

Carus is supported by a dedicated technical team that evaluates site data and provides guidance on barrier count, spacing and deployment to suit each project.

Cell count and configuration are determined per site and per structure. Speak to the technical team to size a high-flow RCB deployment for your project.

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HOW THE RBC WORKS

HOW THE RBC TREATS WATER

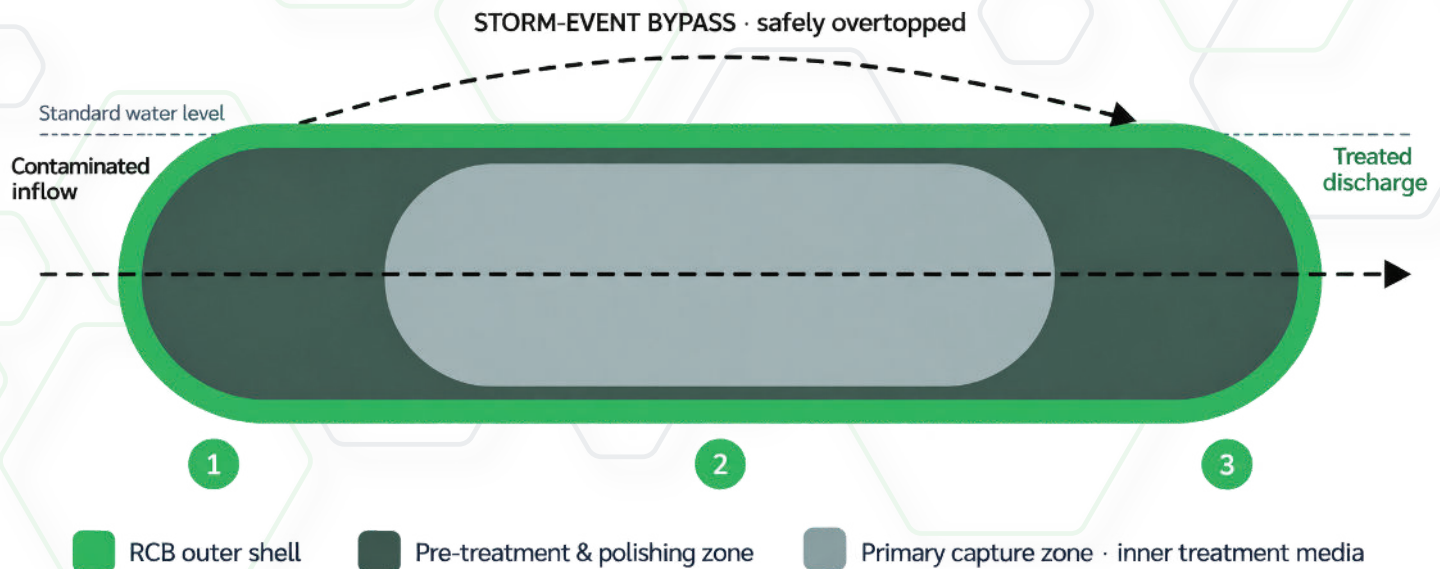
The RCB is sized to treat base and moderate flow, the conditions a site experiences most of the time. Water crosses the barrier in three sequential zones. In storm events, flow that exceeds this capacity crests the barrier and passes safely over the top, rather than pooling or damming the channel.



HOW THE TECHNOLOGY WORKS

- Water flows through the barrier, no pumps or power required.
- Treatment is provided by RemBind® Sorbents, contained within replaceable recharge cells inside the outer shell.
- Contaminants are immobilized within the RemBind® Sorbents as water passes through.
- Recharge cells are replaced without removing the RCB outer shell.

Recharge cells fit inside the RCB covers. Each cell contains RemBind® Sorbents, providing PFAS sorption, reducing environmental load



The pre-treatment & polishing zone and the primary capture zone together make up the recharge cell.

Pre-treatment

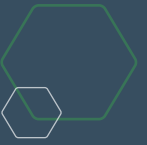
The upstream media conditions the flow before it reaches the treatment core.

Primary Capture

The inner treatment media immobilizes short- and longchain PFAS. This is the principal treatment step.

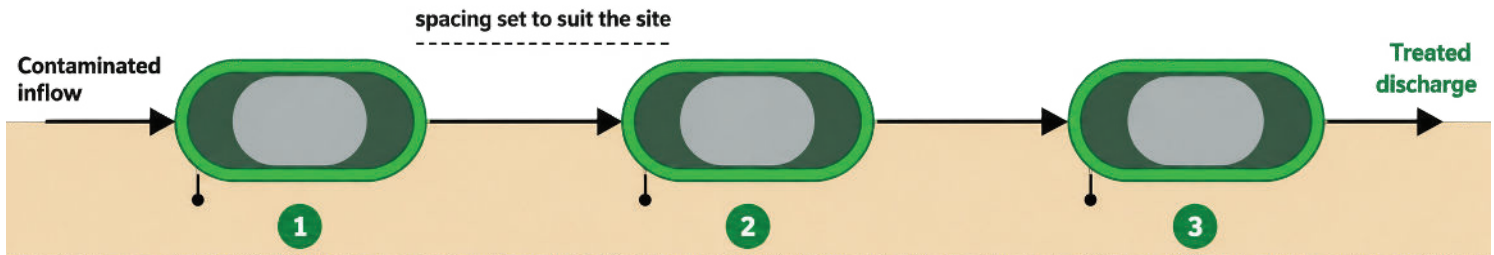
Polishing

Downstream flow-conditioning media captures residual PFAS before water discharges.



DEPLOYED IN SERIES

RCBs are deployed in series so water is treated multiple times, reducing the PFAS load through each successive RCB. Unit count and spacing are set per project to suit site geometry and expected flux (concentration and flow).



Water is treated progressively as it passes each RCB in the series. The small marks at the base of each unit are the anchor points from the D-rings.

WHERE RCB IS DEPLOYED

- Stormwater channels & drainage lines
- Construction & civil sites
- Industrial precincts & yards
- Culverts & creek crossings
- Retention & detention basins
- Urban drainage networks



KEY BENEFITS

Passive treatment. No pumps or power; water is treated as it flows through.

Safely overtopped. Designed to pass storm flow over the top rather than dam the channel.

Serviceable cells. Recharge cells are exchanged in place, with no excavation of the structure.

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

BULK DEPLOYMENT FOR HIGH-FLOW SITES

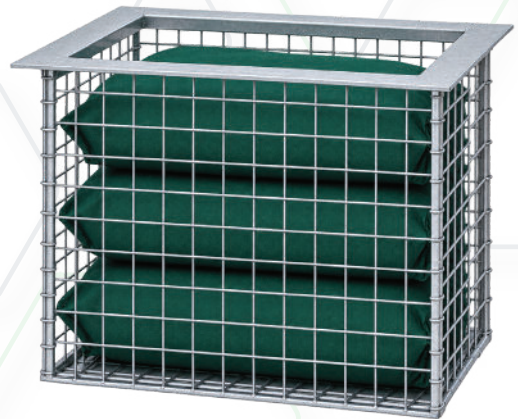
The standard RCB is sized to treat base and moderate flow, the conditions most drainage lines experience day to day. Some sites see higher-energy flow or have a larger channel than the standard RCB is designed for. For these sites, RemBind® recharge cells can be deployed inside gabion baskets positioned within the drainage line, instead of the standard RCB system.

Each recharge cell carries its own pre-treatment, primary capture and polishing zones. Stacking cells within the structure multiplies that residence time within the media, the same principle that lets RCBs placed in series treat water progressively (see Deployment and Benefits), applied within a single structure rather than along a channel.



RemBind® CONTAINMENT BARRIER (RCB): HIGH-FLOW CONFIGURATION

RemBind® supplies the recharge cells: the same engineered media used in the standard RCB, deployed inside a high-flow containment structure already in use or planned for deployment.



DEPLOYMENT FORMATS

Individual Cells

Recharge cells are stacked within the structure and serviced one at a time, with no excavation required to replace a spent cell. Cells with reinforced carry handles are supplied for use within smaller gabion baskets, packed for a gabion footprint rather than a drainage system.

Bulk Format

Cells are pre-packed into a bulk bag that is then deployed into the structure and lifted out once they are approaching capacity, by an excavator. Faster to deploy at scale — the whole unit is swapped rather than individual cells.

WHERE IT APPLIES

Any surface water site where a high-flow containment structure is already in use or planned.



CONTAINMENT BARRIER (RCB) PRODUCT SPECIFICATION

RemBind® Containment Barriers (RCBs) are designed to be inserted into surface water overland flow and discharge areas to remove Per- and Polyfluoroalkyl Substances (PFAS). RCBs consist of an outer shell and recharge cells. Each recharge cell has a pre-treatment and polishing outer cell surrounding a primary treatment inner cell filled with RemBind® Sorbents, independently shown to effectively bind PFAS. Once the RCBs have extracted PFAS from the surface water, they are removed from drainage channels, removing PFAS environmental loads.

RCBs are classified as Non-Hazardous Goods. See the RemBind® Safety Data Sheet (SDS) for further safety information.



PARAMETER	SPECIFICATION
RemBind Containment Barrier	
Material	Nylon
Material Pore Size	Engineered to retain reagent and maintain flow
Product outer dimensions - 500 mm	0.5 m x 0.45 m x 0.17 m
Product outer dimensions - 1 m	1 m x 0.45 m x 0.14 m
Product outer dimensions - 2 m	2 m x 0.45 m x 0.14 m
Product outer dimensions - 1 m ³ Bulk Bag	1 m x 1 m x 1 m (or custom height)
Outer casing description	Robust UV resistant permeable material
RemBind Containment Barrier	
Particle Size Distribution (PSD)	< 6.5 mm
Moisture content	< 6 %
PFOS sorption capacity per 1 m RCB ^{1,2}	28,860 mg
PFOS sorption capacity per 2 m RCB ^{1,2}	57,720 mg

1 - Sorption isotherms for RemBind® reagent were carried out by an independent third-party engineering firm using PFAS-contaminated wastewater from a commercial airport site. A sorption capacity of 2,560 µg of PFOS per g of RemBind® was calculated at equilibrium at a constant temperature of 25°C. Additional sorption capacity values are based on recognized industry-standard test methods and assumptions.

2 - Sorption capacity in the field may vary considerably based on the water quality and flow rate, the type and concentration of PFAS substances (flux), and the presence of co-contaminants such as hydrocarbons. It is strongly recommended that bench-scale trials are conducted using site water to determine site specific application longevity.

Nylon components are not compatible with permanganate-based oxidants.

This Product Specification Sheet should be read in conjunction with the RCB Installation Instructions. It supersedes any former publication and is subject to change without notice. The technical data contained herein is based on tests believed to be suitable and reliable for the intended purpose and is offered as a guide only, it being expressly understood that all such advice is being given and accepted at the Buyer's risk.

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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RemBind® Solutions. Carus Expertise.

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

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