



Technical Data Sheet

P-Sorb Activated Carbon

For PFAS Sorption

Benefits Include

High surface area powder
Activated carbon
P-Sorb™ PAC is easily
injectable.
P-Sorb™ GAC is injectable
and effective for
permeability enhancement.
Economical solution
compared to other
available products
Complements other
remediation approaches
and reagents

Applications

Soil Mixing: Excavation and
treatment of impacted soils
for backfill or off-site use

In-Situ: Direct push injection
in groundwater and by
hydraulic fracturing

Soil or sediment
Stabilization or Trench PRB

May be combined with
other reagents and
remediation approaches
to meet site specific
remediation objectives

Target Contaminants

PFAS- perfluoroalkyl
substances

PFAS/PFOA/PFOS

Chlorinated Solvents

PCE, TCE, DCE, VC

Petroleum Hydrocarbons:

BTEX- Benzene, toluene,
ethylbenzene, xylenes

MTBE- Methyl tert-butyl-ether

Gasoline, Diesel and Oil

Polycyclic Aromatic
Hydrocarbons (PAHs)

Boron, Mercury (Hg) and other
metals

P-Sorb™ is a virgin activated carbon (AC) produced from a rare coal utilizing a high temperature activation process under stringent quality control uniquely suited for sorption of **PFAS with exceptional sorption capacity compared to standard activated carbons**. *Activated carbon is an approved method for treating PFAS ([ITRC 2023](#))*. CERES brings this technology to the market for water treatment systems or soil and groundwater remediation applications to use as a standalone solution for PFAS compounds or in combination with other sequestration and reduction reagents including MTS®, organoclay, ZVI, Bacteria, TEAs or Donors to degrade or reduce many other contaminants of concern including heavy metals, chlorinated solvents, petroleum hydrocarbons, methyl tert-butyl ether (MTBE), PAHs or other VOCs and SVOCs.

- Applicable for both liquid phase and gas phase applications
- Particularly suitable for potable water treatment to remove PFAS and other organic compounds
- Rapid adsorption kinetics
- Standard packing is 44 lb bags or bulk sacks up to 900 lb.

P-Sorb™ Powder Activated Carbon

Spec	Iodine Number	Min	mg/g	900
	325 mesh	Min	%	90
	200 mesh	Min	%	95
	100 mesh	Min	%	99
Typical	Particle Size d50	-	micron	15
	Surface Area	-	m ² /g	1000
	Tapped Density	-	g/cm ³	0.4
	Moisture	-	%	up to 8

Meets ANSI / AWWA B-600 standard

Meets EN 12903 standard



P-Sorb™ Granular Activated Carbon

8x30, 12x40 and 20x50 sizes available

Spec	Iodine Number	Min	mg/g	900
	Moisture	Max	%	5
Typical	Hardness #	-	-	88
	Surface Area	-	m ² /g	950
	App. Density	-	g/cm ³	0.40
	Moisture	-	%	2

Meets ANSI / AWWA B-604 standard



What is P-SorbTM and how does it function?

P-SorbTM is a non-corrosive and non-toxic powder and granular activated carbon that can be very effective in low permeability formations and injected into silts and clays (Winner and Fox, 2016) or combined with sand to improve hydraulic conductivity and preferential pathways for more rapid diffusion and effective capture of PFAS compounds.

How does it improve remediation performance in mixed COC applications?

Introducing adsorptive media, like **P-SorbTM**, to the treatment zone improves sequestration of PFAS compounds over time to reduce mass flux and when combined with biotic or abiotic reagents can facilitate the formation of active biofilm and enhanced biodegradation processes (Voice et al, 1992), abiotic reduction of competing VOCs, thereby improving long term performance of PFAS sequestration. The combined effects often result in synergistic processes that significantly prolong the remediation lifetime to achieve increased value and/or exceed remedial objectives. The coupling of adsorption and degradation reduces the potential for contaminant rollover effects or competing contaminant rebound that is frequently observed with conventional remediation technologies.

How does P-SorbTM reduce diffusive mass flux and potentially reduce overall time of remediation at mixed COC and PFAS sites?

The addition of **P-SorbTM** into the target treatment zone of the aquifer, results in rapid adsorption/sequestration of PFAS and other organic compounds. This is revealed in reduced dissolved phase concentrations in the aquifer, verified by reducing trends in groundwater monitoring wells. By drawing down the dissolved-phase concentration, **P-SorbTM** steepens the concentration gradient and accelerates back-diffusion of contaminants held in the adsorbed phase and low-permeability matrix into the mobile porewater, where they in turn are captured. Lowering these elevated soluble-phase concentrations can also shorten the lag time for biodegradation of co-occurring biodegradable organics (Aktas et al., 2012). Pairing **P-SorbTM** with complementary biotic or abiotic processes is therefore essential to destroy biodegradable COCs over time and to reduce long-term competition for adsorption sites.

Interested to learn more and see how P-SorbTM can be applied at your site with PFAS or PFAS and other COCs?

CERES Remediation Products provide technical design support to all clients to ensure applicability, effectiveness, and guidance on treatability studies, pilot testing, performance assessment and full-scale design. CERES is your partner in this project because we want success as much or more than all stakeholders. We strive to achieve goals first time around and rarely preface that multiple rounds of treatment will be required. CERES endeavors to support clients from conceptual site model review, data gap evaluation and data collection and all the way through permitting support, delivery scheduling and performance verification. We provide reliable customer service to all customers.

Contact us today to introduce yourself or your project.