

Ep Minerals[®]



Diatomite



Perlite



Cellulose

WHAT IS DIATOMACEOUS EARTH

Diatomaceous earth (DE), also known as Kieselguhr or diatomite, consists of the glass skeletons of millions of microscopic unicellular plants known as diatoms. During the late Tertiary Period, approximately 5 to 20 million years ago, massive deposits of these diatoms were formed in the freshwater lakes which covered much of what is now Nevada and Eastern Oregon. These rich deposits can be several hundred feet thick.

Today, there are still many diatom varieties that live in both freshwater and saltwater, staying close to the surface of the water, with other species of plankton. Alive, they are at the bottom of the food chain. Dead, they leave a micron-sized silica support structure (known as a frustule) exhibiting great beauty, strength, and intricacy.

All EP Minerals Celatom® diatomaceous earth products are produced from freshwater diatoms, predominantly of the species *Melosira Granulata*.

EP Minerals entered the DE market in 1945 with its filter aid brand, Celatom®, and has since become one of the top two producers of DE worldwide.

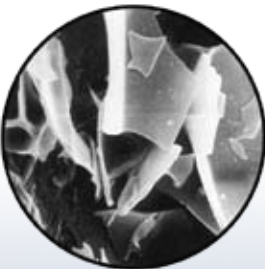
Upon entering the filter aid market, EP Minerals pioneered the development and production of granular DE absorbents. To this day, EP Minerals continues to deliver the highest quality filter aids, high capacity absorbents, and functional additives for paints, catalyst supports, polyethylene film and many other markets.

Our large, high-purity DE ore reserves in Nevada and Oregon, combined with multiple manufacturing sites, provide our customers with reliable and consistent supply. Our commitment to customer satisfaction and innovation assures that we will continue to meet the challenge of creating and delivering quality products for existing and emerging markets.



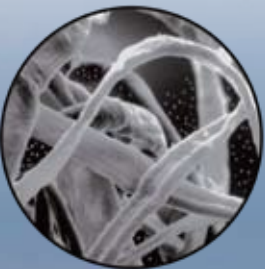
Diatomaceous Earth

EP Minerals' high quality DE deposits consist exclusively of freshwater diatoms, with up to 98% of the *Melosira Granulata* species. The cylindrical shape and high pore volume of these diatoms provides high mechanical strength, and natural filtration and absorption capabilities. Due to these characteristics, EP Minerals' DE is a high performance filter aid and is also ideal for a multitude of functional additive applications.



Perlite

Perlite is a hydrated, naturally occurring volcanic glass. Its unique structure consists of numerous concentric layers, similar to the layers of an onion. When heated above 1600° F, the water bound in the rock vaporizes, causing perlite to expand up to 20 times its original size. The resulting product has an extremely low bulk density. Perlite's inert composition meets most purity requirements and it is effective for a wide range of filtration applications, especially those that require high throughput and moderate clarity.



Cellulose

Cellulose fibers are derived from purified, virgin wood pulp. Cellulose is an ashless product and is relatively inert to acids, alkalis and solvents. It is the preferred filter media for processes sensitive to silica, and it is also a versatile functional additive. EP Minerals offers two cellulose-based product lines: Pre-co-Floc® and Dialose™. Pre-co-Floc® is a 100% pure cellulose powdered product. Dialose™ is a blend of Celatom® DE and Pre-co-Floc® cellulose.



Filtration

For over 100 years, DE filtration has been the workhorse of food and beverage processing. Today, DE continues to produce high-quality filtrates more economically than other liquid/solid separation technologies. DE is the most widely-used filter aid in the world, and is ideal for applications requiring high clarity.

Many of the products you use everyday are filtered through Celatom® DE. Examples include: beer, wine, fruit juices, biodiesel, edible oils, syrups, sweeteners, swimming pools, industrial wastewater, petro-chemicals, enzymes, potable water and many more.

CelaBrew® DE is our high purity brewing grade which helps reduce soluble iron in beer, and increase beer stability and shelf life.

Celatom® and CelaBrew® DE filter aids are available in a full range of grades with specific permeabilities to cover all of your requirements. The lower permeability grades have small pores that produce a high degree of clarification. The higher permeability grades form cakes with larger pores and provide increased throughput.

EP Minerals offers a broad range of Celatom® Perlite filter aids, designed for filtration applications that require high throughput, or that have high loadings of soft deformable solids.

Our Pre-co-Floc® and Dialose® filter aids are excellent supplements for DE and Perlite for faster precoat formation, cake stability, and longer screen life. They are also useful for extreme pH conditions and recovery of valuable particulates, such as precious metals.



Functional Additives

EP Minerals Celatom® high purity DE functional additives are used around the world for literally hundreds of applications. The quality and unique properties of our diatoms provide important performance benefits when incorporated into our customers' products. Some of these properties include: porosity, high surface area, chemical inertness, whiteness, thermal stability, brightness, absorbency, consistent particle shape and size, and low density.

Celatom® DE additives are outstanding pigment extenders and flattening (matting) agents, preferred by premier coatings formulators around the world. Celatom® effectively controls gloss and sheen, extends primary pigments, adds bulk and strength, controls permeability and enhances adhesion. Celatom® DE provides the industry with unmatched flexibility.

Our finest grades of DE are used in clear polyolefin films. These products are manufactured to stringent specifications for particle size, absorption, moisture and

color. The high degree of uniformity of the diatoms in our Celatom® and CelaBrite® products give them superior performance properties as antiblock agents.



We also offer Shield Release®, a unique, specially-modified grade of DE used by automotive windshield manufacturers worldwide as a processing aid to ensure quality and clarity.

Celatom® DE and Pre-co-Floc® cellulose products are used in applications, from oil wells, construction materials and steel mills, to dental molding compounds, pharmaceuticals and cosmetics.



Agriculture

For centuries, farmers have known that diatomaceous earth powder is safe and beneficial to livestock. It is also useful for controlling insects. Many animals seem to instinctively understand this and can be seen rolling in and eating natural diatomite. EP Minerals offers several organic, natural DE grades to serve the agricultural industry.



Used as a natural insecticide, All Gone!® damages insect shells; causing them to die by dehydration. All Gone!® is a mechanical insecticide so there is no survival and no build-up in immunity. All Gone! can be safely used in and around flower beds, vegetable gardens, and in homes for pest control.

Insect damage to stored grain has long been a serious problem. In recent decades, mankind has resorted to toxic chemicals to control these pests. These chemicals can cause human illness and environmental damage. Over time, insects can develop resistance to these chemicals. CropGuard™ is a food-grade product designed for killing insects in stored grain and other dry stored bulk foods. CropGuard™ is safe, tasteless, and odorless, so it does not have to be removed from the grain before milling. It can remain in the flour with no effect on the finished food products. It can also be applied as a dust or a liquid spray on garden vegetables and crops for safe and effective insect control.

EP Minerals' AFA grade (Animal Feed Additive) is EPA registered and meets FDA CODEX requirements. Many organic farmers and pet owners who use our special food-grade DE powders have experienced health benefits as well as a reduction in parasites, flies, veterinary bills, and overall animal stress.



Soil Amendments



EP Minerals manufactures **AXIS®** soil amendments and **PlayBall!®** infield conditioners. Both products, made from 100% natural calcined diatomaceous earth, represent the pinnacle of performance for air and water management in turf, sports fields, landscapes and gardens.

Whether the problem is compacted clay or sandy soil, heavy rainfall or desert conditions, **AXIS®** provides permanent porosity and absorbency for healthy soils. One pound of **AXIS®** absorbs up to 1.42 pounds of water. More importantly, nearly all of this water is made available back to the plant roots as it is needed. This water holding capacity allows our customers to significantly reduce their irrigation needs. **AXIS®** 85% porosity increases drainage and allows needed oxygen to penetrate the soil for beneficial microbe and root growth. In addition to all of these benefits, **AXIS®** Fine is USGA approved for use in golf greens.

PlayBall!® infield conditioners deliver the highest performance and cost efficiency of any infield conditioner available. Because **PlayBall!®** is made from calcined DE, it is more durable and twice as absorbent as other conditioners. **PlayBall!®** does not break due to weather and a single application will last for many years. **PlayBall!®** holds moisture longer when wetted down to reduce dust, and allows play to resume almost immediately after rain.

Just as **PlayBall!®** and **AXIS®** create the ideal soil structure for all types of turf and infields, **Trotter™** Dust Eliminator provides indoor and outdoor equestrian arenas with the water-holding capacity needed to prevent dust. Blended into any footing material, **Trotter** will keep your arena looking and performing at its best.

Absorbents

For over 60 years, EP Minerals has led the way in natural absorbent technologies. From small floor spills to large scale industrial accidents and hazardous waste spills, our products continue to meet the challenge.

FLOOR-DRY™ is a lightweight absorbent that is ideal for automotive, custodial, and industrial markets. The high pore volume, large surface area and superior strength of DE give FLOOR-DRY™ exceptional absorbency. It absorbs twice as much liquid as calcined clay and 22% more than competing DE absorbents. FLOOR-DRY™ cleans up spills leaving no residue or film, helping eliminate dangerous slip hazards and messy clean-up. FLOOR-DRY™ is highly purified and calcined (kiln-fired) for superior absorbent qualities. It is non-WHMIS (Workplace Hazardous Material Information System) controlled, non-toxic, non-corrosive, non-reactive and safe for landfills.*

SOLID-A-SORB® brand absorbent provides a safe and reliable option for cleaning laboratory and toxic spills. Its high absorbency meets and exceeds current government regulations, including requirements for radioactive waste disposal. SOLID-A-SORB® is non-corrosive and non-reactive with harsh chemicals (except hydrofluoric acid) making it safe to handle. Additionally, once in the landfill, it promotes a healthy atmosphere for microbial “bugs” to grow, speeding up the natural biodegradation of oil-based liquids.

*Check with local agencies on proper disposal methods applicable to your area.



Services

EP Minerals believes that excellent service is something that all of our customers deserve. We offer two fully staffed customer service centers located in Reno, NV and Munster, Germany with additional support also available through our global sales network.

Our philosophy is to deliver more than just a high quality product to our customers. We offer our global technical services to assist our customers in optimizing the use of our products, and troubleshooting their processes. Our Technical Services Department and R&D staff have a very deep practical background in the laboratory and in the field. They are ready to assist with any application requirements.

Our R&D facilities are equipped with sophisticated analytical capabilities, including: wet chemistry analysis, particle size distribution, surface area, GFAA, ICP, XRF and XRD analysis, filtration optimization, pilot scale filtration and calcination, optical microscopy and much more. Contact us for more information.

Once our customers have chosen to use the highest quality material available, EP Minerals offers several methods of packaging and delivery. Our material is packaged in easy-to-use 10 to 50lb, (4.54kg to 22.68kg) bags depending on the product or in bulk bags (super sacks). Shipment in bulk hopper cars or bulk trucks is also available for most grades.



EP Minerals delivers product to all corners of the world, utilizing ocean containers, over the road trucking, rail service, and flatbeds. We also have a large distributor network and warehouses throughout the world to service our customers' every need.



Quality

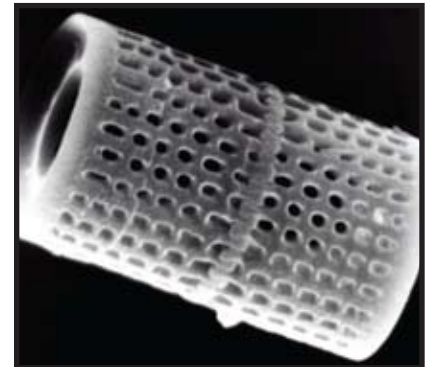
EP Minerals, LLC is committed to continually improving quality, service, and value for our customers. It's integral to the way we do business. All EP Minerals-owned facilities are ISO-9001:2000 certified, and every EP Minerals employee and business process is dedicated to the satisfaction of our customers and the protection of our environment.

Our geological team routinely tests our deposits to ensure sufficient, high-purity ore reserves for generations to come. Additionally, we continuously test our ore, as it enters our manufacturing facilities, to ensure it meets our rigorous quality requirements. Frequent in-process testing allows us to assure customers will always receive consistent and high-quality products from EP Minerals.

We offer complete traceability on all of our products. We inkjet lot numbers on every bag so our customers will always be able to tell exactly when and at which facility the product was produced. We can provide certificates of analysis on every lot, which helps our customers meet their quality objectives. When our customers encounter an issue, we actively work with them to find and implement an effective solution. This is a key part of our continuous improvement commitment.

All of our facilities undergo extensive internal and external quality audits. We invite all of our customers to visit our facilities and conduct their own audits if desired.

Constant Improvement - Our design and development team are constantly looking for new and innovative ways to build quality into our products. Managing change throughout our manufacturing processes and creating new products that will serve new markets, EP Minerals' commitment to consistency and quality builds value into every product we produce.



Established in 1843, EP Management Corporation is a diversified supplier of advanced technology, highly-engineered products for many unique applications. For over 160 years, it has continued its heritage of high quality and “The Application of Innovation”.

EP Management Corporation’s divisions include:

EP Minerals, LLC, a worldwide producer of diatomaceous earth, perlite, and cellulose products for a wide variety of filtration, absorbent, functional additive, and agricultural applications.

Wolverine Advanced Materials, LLC, a global supplier of vibration damping, noise reduction, and sealing materials for automotive and consumer electronics markets.

Sales Offices

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