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PIPE

FITTINGS

ACCESSORIES



Decontamination Cleansers



Alconox

Powdered Precision Cleaner

Concentrated, anionic detergent for manual and ultrasonic cleaning. Free rinsing to give you reliable results without interfering residues. Ideal for cleaning contaminants from glassware, metals, plastic, ceramic, porcelain, rubber, and fiberglass. Excellent replacement for corrosive acids and hazardous solvents. USDA authorized. Dilute 1:100. pH 9.5

Liqui-Nox

Critical Cleaning Liquid Detergent

Concentrated, anionic liquid detergent for manual and ultrasonic cleaning. Free rinsing to yield reliable results with no interfering residues. Extremely mild and completely soluble in hard and soft water. USDA authorized. Dilute 1:100. pH 8.5



Citranox

Liquid Acid Cleaner and Detergent

Phosphate free, concentrated cleaner and metal brightener for high performance removal of metal oxides, scale, salts, and inorganic residues in manual and ultrasonic cleaning. Corrosion inhibited and free rinsing for reliable results and no interfering residues. Ideal for trace metal analysis. USDA authorized. Dilute 2:100. pH 2.5



Disposable Bailers

| Size | Weight |
|---------------------------------|-------------------|
| 1.6" X 36" | Unweighted * |
| 1.6" X 36" | Weighted * |
| 1.6" X 36" | Double Weighted * |
| 1.6" X 36" | Sink Fast |
| .75" X 36" | Unweighted * |
| .75" X 36" | Weighted * |
| .50" X 36" | Unweighted * |
| .50" X 36" | Weighted * |
| * Includes Slow Emptying Device | |
| Size | Weight |
| 3.5" X 36" | Unweighted |

Aqua Bailers

Aqua Bailers' disposable polyethylene bailers are made with the highest regard to quality in the marketplace. The large open-top design allows nearly an inch of space for easy tie-on. The thick, rigid construction with 100% pure virgin polyethylene guarantees a sturdy bailer with no warping or collapsing.

Sink Fast Bailers

SIMPLY the fastest-sinking bailer on the market. Combining higher-density PVC with our durable, field-tested weight design, SinkFast Bailers are sure to save you time and money in the field.

Mini Bailers

Smaller wells mean smaller bailers and Aqua Bailers has what you need. In 1/2" or 3/4" outside diameters; polyethylene, AquaClear PVC, or FEP bailers are available in 3-foot lengths and a variety of weights. You can be assured to have no problem lowering these bailers down your well.

VOC Tips

The Aqua Bailers VOC Tips, also known as Slow-Emptying Devices, are constructed of poly or FEP and sized to fit any bailer you use. These tips reduce water flow from the bailer, minimizing agitation and allowing a more accurate measurement of VOCs.

Biggie Bailer

Aqua Bailers' Biggie Bailer is the only 3-foot bailer that holds over 5 liters of water, making purging 4" wells faster and easier. Available in original polyethylene or AquaClear PVC and designed tough, the disposable Biggie Bailer can withstand rugged use and the large pour top is a cinch to tie on as well as empty quickly.



Bailer Cord

| Type | Size |
|------------------------|--------------|
| Solid Braid Nylon Rope | .10" X 500' |
| Solid Braid Nylon Rope | .125" X 600' |



Groundwater Purging Pumps

Whale Purge Pumps provide an easy-to-use, high-quality, economical solution for purging, sampling, and well development to a depth of 27 m (90 ft). The pump's 36 mm (1 7/16") diameter is ideal for use in 2" or larger monitoring wells.

- Used and trusted within the groundwater industry for more than 20 years.
- Recommended by drillers, hydrologists, and field technicians.
- High quality at a competitive price.
- Practical for dedicated use and disposal.
- Supplied for heavy gauge cable to reduce voltage drop (Super Purger and Mega Purger).
- Hermetically sealed electric connectors (Super Purger and Mega Purger).
- Completely pre-assembled and packaged with leads and alligator clips.
- Attach 13 mm (1/2") or 11 mm (3/8") tubing and lower into well.
- Connect leads to 12V d.c. power source and pump is energized.

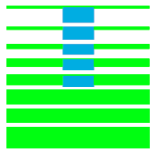
Whale Purging Pumps

| | Whale Super Purger | Whale Mega Purger |
|-------------------------------|---|----------------------------------|
| Dimensions: (Length/Dia) | 258 mm (10.2") X 36 mm (1 7/16") | 387 mm (15.2") X 36 mm (1 7/16") |
| Maximum Current Draw: | 10 amps | 10 amps |
| Maximum Lift/Head: | 10 m (60 ft) | 27 m (90ft) |
| Length / Thickness of Cable: | 21 m (70ft) 1.3 mm CSA | 29 m (95ft) 1.3 mm CSA |
| Maximum Flow Rate per Minute: | 10.5 ltrs (2.78 US gals) | 13.3 ltrs (3.5 US gals) |
| Power Requirements: | 12 V DC | |
| Outlet Diameter: | 11 mm (3/8") and 13mm (1/2") adapter supplied | |
| Operating Temperature: | Maximum 140° F (66° C) | |
| Materials of Casing: | ABS / Polycarbonate stainless steel | |
| Material of Pump Impeller: | Nitrile | |
| Material of Seal: | Nitrile | |



Clear PVC Tube

| Length | Width |
|--------|-------------|
| 200' | 3/8" X 1/2" |



Steel Shelby Tubes

This sampler is designed to take undisturbed samples from cohesive type soils and clays. The thin steel tube containing the sample may be removed from the sampler head and used as a container to transport the sample to the laboratory thus avoiding any damage to the sample or costly delays in operation. In practice, several replacement tubes are carried by the crew to minimize disturbance, preserve moisture, and cut down on delays in the sampling procedure. The thin wall tube is made available in either steel, galvanized, or brass and in carrying lengths.

This sampler is also commonly called a "Shelby" or "Chicago" thin wall sampler. The procedure for taking samples is outlined under ASTM Standard Procedures, whereby the sampler is pressed into the undisturbed clay or silts by hydraulic force.

| Size | Length of Steel Tube | Weight |
|---|----------------------|------------------|
| 2" O.D. X 1-7/8" I.D. 50.8mm X 47.7mm | 30" 762 mm | 7 lbs 3.1 kg |
| 3" O.D. X 2-7/8" I.D. 76.2mm X 72.0 mm | 30" 762mm | 16 lbs 7.2 kg |

Soil Sample Liners

Brass and Stainless Steel liners
for split and solid tube samplers.



| Size | Material |
|---------|-----------------|
| 2" X 6" | Stainless Steel |
| 2" X 4" | Stainless Steel |
| 2" X 6" | Brass |
| 2" X 4" | Brass |
| Caps | Plastic |



Heron Instruments



Dipper-T Water Level Meter

The dipper-T water level indicator is used for measuring the depth of water in wells, boreholes, and standpipes. The “Dipper-T” will signal water with a bright LED light and a solid buzzer.



H.OIL—Oil Interface Meter

The H.OIL interface meter includes yellow tensile steel tape manufactured to the ASME standard of accuracy jacketed in Kynar, Heron Carry Case, cleaning kit and field replaceable probe.



The Heron Water Tape

The economical Water Tape includes a Kevlar reinforced white polyethylene tape, Heron Carry Bag and fully pressure rated easy clean Enviro probe.



Seamless Filter Sock



Aqua-Sleeve®

A continuous seamless filter fabric, knitted specifically for ground water monitoring and remediation.

Aqua-Sleeve® filter fabric is used to prevent sediment and small fines from clogging the well point. It allows water to pass through the pipe at a high rate while minimizing silica sand or fine particle invasion which can cause well failure. It is used in both vertical and horizontal applications. The unequaled durability of Aqua-Sleeve® filter fabric make it highly resistant to strong and weak acids and alkalines, organic chemicals, and salt solutions.

| Width | Length |
|---------|--------|
| 1" | 100' |
| 2" | 100' |
| 4" | 100' |
| 6" | 100' |
| 8"- 12" | 100' |

SPECIFICATIONS

| | Aqua-Sleeve® | Test Method |
|---|-------------------|-------------|
| Fiber | Polyester | |
| Weight (Oz/yd ²) Applied | 5.4 | ASTM D-3776 |
| Melt Point, F (C) | 500 (260) | |
| Thickness — in (mm) | 0.070 (1.9) | |
| Mullen Burst, p.s.q. (kpa) | 115 | ASTM D-3786 |
| Air Permeability Ft ³ /ft ² /min (cm ³ /cm ² /sec) | 350 (175) | ASTM D-737 |
| Water Flow Rate (US) gal/ft ² /min-3"head | 90 | |
| Water Permittivity | 1.5(s-1) | |
| AOS, US sieve, (UM) | 60 (250) | ASTM D-4751 |
| UV Degradation Strength Retained | 70% after 300 hrs | ASTM D-4355 |



Seamless Filter Sock

The Carriff Drain-Sleeve®



| Width |
|-------|
| 12" |
| 15" |
| 18" |
| 24" |

The Carriff Drain-Sleeve® filter is the economical choice. It eliminates the need for gravel backfill, delivering significant savings in installation time, material, and labor. Because it can be cut to the required length, waste is kept to a minimum. Most importantly the Carriff Drain-Sleeve® filter is the dependable way to help keep your drain lines clog-free. The Carriff Drain-Sleeve® filter helps prevent expensive drainage system replacement or repairs down the road.

With the Carriff Drain-Sleeve® product or filter, you'll be able to install pipe with confidence, knowing that the hardy one-piece knitted polyester covering your pipe will keep out most sedimentation and increase water flow. Installation is easy — when your supplier delivers the pipe with the filter on it, you are ready to go! No special equipment is necessary and when compared to non-woven filter material, the Carriff Drain-Sleeve® filter is more resistant to ripping and tearing in the installation process.

SPECIFICATIONS

| | Carriff Drain-Sleeve® | Test Method |
|---|------------------------------|--------------------|
| Fiber | Polyester | |
| Weight (Oz/yd ²) Applied | 2.5-3.5 | ASTM D-3776 |
| Melt Point, F (C) | 500 (260) | |
| Puncture Resistant | 35 | ASTM D-4833 |
| Mullen Burst, p.s.q. (kpa) | 100 | ASTM D-3786 |
| Denier per Filament | 150 | |
| Water Flow Rate (US) gal/ft ² /min-3"head | 300 | |
| Water Permittivity | 1.5(s-1) | ASTM 4491 |
| AOS, US sieve, (UM) | 30 (600) | ASTM D-4751 |
| UV Degradation Strength Retained | 70% after 3 hrs | ASTM D-4355 |

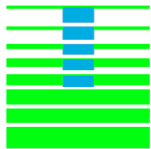


Stainless Steel Centralizers

- Centralizers are made of 100% Stainless Steel Construction.
- Manufactured in sizes 1" through 16".
- High Strength Worm drive clamps have many advantages over standards T-bolt centralizers.
- Heavy Duty and Heavy Duty Long Centralizers available! Provides stronger straps for superior centralization on heavy casing and screen.
- Easy to install. Just use a nut driver, cordless drill motor (with a nut driver attachment) or standard screw driver.



| Centralizer Pipe/ Casing Size | Diameter of Pipe/ Casing | Maximum Expansion |
|----------------------------------|-----------------------------|----------------------|
| 1.00" | 1.315" | 11.00" |
| 1.25" | 1.66" | 11.00" |
| 1.50" | 1.90" | 12.00" |
| 2.00" | 2.375" | 12.00" |
| 2.50" | 2.875" | 13.00" |
| 3.00" | 3.50" | 13.00" |
| 4.00" | 4.50" | 16.00" |
| 4.50" | 4.95" | 16.50" |
| 5.00" | 5.563" | 17.00" |
| 6.00" | 6.625" | 18.00" |
| 8.00" | 8.625" | 22.00" |
| 10.00" | 10.75" | 24.00" |
| 12.00" | 12.75" | 26.00" |
| 14.00" | 14.00" | 28.00" |
| 16.00" | 16.00" | 30.00" |
| 17.40" | 17.40" | 31.00" |



Internal Plastic Pipe Cutters



Make accurate, square cuts at floor level or in other blind locations. Easily present for depth of cut, they are installed in the pipe and make their cuts in seconds. Best used with individual PVC and ABS plastic pipe sizes ranging from 1 1/2" to 6" diameter.

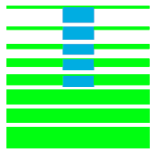
Recommended user supplied power source:
1/2" Capacity, 350-450 rpm drill, rated 4.6 to 6 amps.

| Pipe Size | Schedule | Shipping Weight | Cutting Depth Range? |
|-----------|-----------------|-----------------|----------------------|
| 1.5" | 40 pipe and DWV | 1 lb. | 1.625" - 8.25" |
| 2.0" | 40 pipe and DWV | 1 lb. 10 oz. | 1.625" - 8.25" |
| 2.0" | 80 pipe and DWV | 1 lb. 5 oz. | 1.625" - 8.25" |
| 3.0" | 40 pipe and DWV | 2.5 lbs. | 1.625" - 8.25" |
| 3.0" | 80 pipe and DWV | 2.5 lbs. | 1.625" - 8.25" |
| 4.0" | 40 pipe and DWV | 3 lbs. | 1.625" - 11.625" |
| 4.0" | 80 pipe and DWV | 3 lbs. | 1.625" - 11.625" |
| 6.0" | 40 pipe and DWV | 2 lbs. 11 oz. | 1.625" - 11.625" |

Auger Plugs

| Poly HDPE | Wood |
|-----------|--------|
| 2.25" | 2.25" |
| 3.25" | 3.25" |
| 3.75" | 3.75" |
| 4.25" | 4.25" |
| 6.25" | 6.25" |
| 6.625" | 6.625" |
| 8.25" | 8.25" |
| 10.25" | 10.25" |





Locking Caps and Plugs

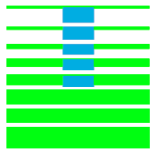
Koby Torquer Locking Well Plugs

Koby Torquer Locking Well Plugs are designed and engineered for monitoring well security. Manufactured from an engineering grade polymer blend commonly used to replace steel gears in industry. They are resistant to most chemicals and are unaffected



- No metal parts.
- Easily disassembled in the field for decon.
- High-Tech liquid tight seamless dual rubber gaskets.
- Accepts #1 or #3 type pad locks or lock-out tags.
- Strong instrument tethering tool with dual use.
- Easily convertible for pressure gauges, vacuum gauges and threaded line fittings.
- Smooth acting ergo grip easy on, easy off wing nut.
- Large easy to read well identification lettering.
- Bright safety colors.
- Flush OD design for easy well installation.

| Outside Diameter | Schedule | Gasket Expansion | Installed Height |
|------------------|----------|------------------|------------------|
| 0.50" | 40/80 | 0.75" | 1.25" |
| 0.75" | 40 | 1.00" | 1.75" |
| 0.75" | 80 | 1.00" | 1.75" |
| 1.00" | 40/80 | 1.25" | 1.75" |
| 1.25" | 40/80 | 1.50" | 1.75" |
| 1.50" | 40/80 | 1.75" | 1.75" |
| 2.00" | 40 | 2.25" | 1.75" |
| 2.00" | 80 | 2.25" | 1.75" |
| 2.50" | 40/80 | 2.75" | 1.75" |
| 3.00" | 40/80 | 3.40" | 2.00" |
| 4.00" | 40 | 4.25" | 2.00" |
| 4.00" | 80 | 4.25" | 2.25" |
| 5.00" | 40/80 | 5.25" | 2.25" |
| 6.00" | 40/80 | 6.25" | 2.25" |



Locking Caps and Plugs

Morrison Test Well Plug

The *Morrison Test Well Plug* is a lockable cover/plug for monitoring wells. As wing bolt is tightened, the seal compresses against the wall of the well casing to provide a water-tight tamper-proof fit.



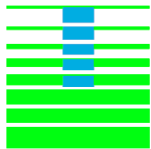
| Outside Diameter | Gasket Expansion | Installed Height |
|------------------|------------------|------------------|
| 2" | 2 1/2" | 1 3/4" |
| 4" | 4 2/5" | 1 3/4" |
| 6" | 7" | 2" |

Cherne Original Gripper®

- Ideal for sewer testing and long-term applications.
- Made with glass-reinforced ABS plastic.
- End-of-pipe design seals only at the end of a pipe.
- Equipped with a yellow chromate-coated locking latch.

| Outside Diameter | Gasket Expansion | Installed Height |
|------------------|------------------|------------------|
| 2" | 2.17" | 1 1/4" |
| 3" | 3.10" | 1 1/4" |
| 4" | 4.06" | 1 3/4" |
| 6" | 6.08" | 1 3/4" |
| 8" | 8.03" | 1 3/4" |

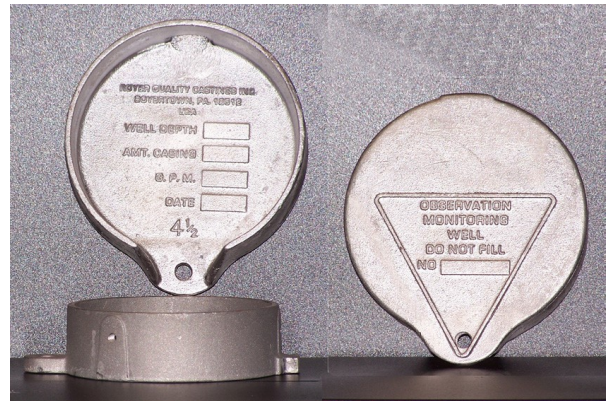




Locking Caps and Plugs

Royer's Aluminum Locking Caps

- Three Allen set screw to secure ring to casing.
- Observation Monitoring "Do Not Fill" Triangle on the cover.
- Permanent Well Log Pad records:
 - Well depth
 - Amount of casing
 - Gallons per minute
 - Date



| Outside Diameter | Max Pipe O.D. | Max Cap O.D. | Installed Height |
|------------------|---------------|--------------|------------------|
| 2" | 2 3/8" | 4 1/2" | 1 3/4" |
| 4" | 4 1/2" | 6 3/4" | 1 3/4" |
| 6" | 6 5/8" | 8 3/4" | 1 3/4" |
| 8" | 8 3/4" | 10 3/4" | 1 3/4" |
| 10" | 10 3/4" | 12 3/4" | 1 3/4" |
| 12" | 12 3/4" | 14 3/4" | 1 3/4" |

Enviro Design Grip-n Lock Caps

The *Enviro Design Grip-n Lock Caps* are watertight, tamperproof, locking, and hinged nylon monitoring caps. Concentric rings at the base insure watertight integrity. Warning label and well number increase well recognition. Heavy duty Nylon construction with high impact, heat resistant, and UV resistant chemical properties. This cap is completely inert and fits most standard locks.

| Outside Diameter | Gasket Expansion | Installed Height |
|------------------|------------------|------------------|
| 2" | NA | 3" |
| 4" | NA | 3" |





EXTRACTION-CAP



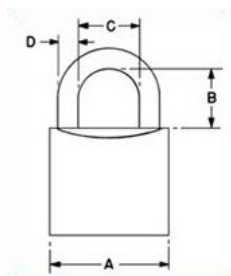
The **EXTRACTION-CAP** is a self-sealing vapor-sampling cap that takes the place of a standard monitoring well cap where vapor monitoring is required. It operates as a watertight locking expansion plug with the capability of having vapor or water extracted through the cap without removing the cap from the well. Quick connect attachment available.

| Outside Diameter | Sample Type | Gasket Expansion | Installed Height |
|------------------|-------------|------------------|------------------|
| 1" | Air | 1 1/4" | 3" |
| 2" | Air/Water | 2 1/4" | 3 1/2" |
| 4" | Air | 4 1/4" | 3 3/4" |
| 4" | Air/Water | 4 1/4" | 3 3/4" |



Locks

| Brand | Type—Key | Body | Shackle | A | B | C | D |
|---------|--------------------------|-------|---------|-------|-------|-------|-------|
| Master | 3KA-3247 | Steel | Steel | 1.82" | 0.75" | 0.60" | 0.38" |
| Master | 3KA-3120 | Steel | Steel | 1.78" | 0.75" | 0.60" | 0.38" |
| Master | 4KA-3753 | Brass | Steel | 1.78" | 0.75" | 0.60" | 0.38" |
| Master | 2KA-X2600 | Brass | Steel | 1.82" | 0.91" | 0.89" | 0.31" |
| Master | 7KA-P485 | Steel | Steel | 1.29" | 0.60" | 0.51" | 0.20" |
| Dolphin | | Brass | Steel | 1.49" | 0.74" | 0.72" | 0.22" |
| Olympus | Contact for Availability | | | | | | |



EMI Manholes

- Painted Cast Iron Lid and Ring
- Well ID Plate
- PCV or Welded Steel Skirt
- Stainless Steel Bolts & Rivets
- Buna-N Gasket
- H-20, HS-20, RR-F-621-0 load rated



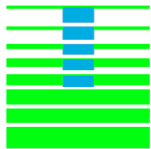
| Size | Skirt Material |
|----------|----------------|
| 7" X 10" | Steel |
| 8" X 8" | Steel |
| 8" X 12" | Steel |
| 8" X 8" | PVC |
| 8" X 12" | PVC |

Buffalo Box

- Close grain ASTM A48-85 CL30 Grey Iron
- High grade Buna-N gaskets
- Brass Penta bolt
- H-20 Load Rated



| Size | Skirt Material |
|----------|----------------|
| 3" X 6" | Cast Iron |
| 4" X 10" | Cast Iron |



Morrison: Model 418xa

- Round manholes with bolted lid and gasket seal.
- Standard hex head stainless steel bolts.
- H-20 Load Rated



| Size | Skirt Material |
|-----------|----------------|
| 7" X 10" | Steel |
| 8" X 8" | Steel |
| 8" X 12" | Steel |
| 12" X 12" | Steel |
| 18" X 12" | Steel |
| 18" X 18" | Steel |

Koby

- Nylon receiver and cover.
- HDPE Skirt.
- Buna-N O-ring.
- Stainless steel fasteners, slotted head.
- AASHTO M-306 Load Rated



| Size | Skirt Material |
|---------|----------------|
| 3" X 6" | HDPE |

Above Ground Protective Covers

Above Ground Protective Covers are locking steel covers with rust inhibiting primer. Aluminum and custom sizes available.



| Size | Material |
|--------------|-------------|
| 4" X 4" X 5' | 1/8" Steel |
| 6" X 6" X 5' | 3/16" Steel |
| 8" X 8" X 5' | 3/16" Steel |



Kwik Klamp I

- Equipped with serrated and hardened replaceable jaws.
- Excellent holding capability with load tests over 3500 lbs.
- Designed to hold pipes 1" through 2" PVC, stainless & galvanized.
- Safety pin to prevent accidental unclamping.
- All steel construction but light weight- only 14 lbs.
- Easy to operate, over center locking of jaws when downward pressure is applied to lever.
- KWIK KLAMP allows workers to bring pipe joint up to an easy working level.
- Replacement jaws available.



Kwik Klamp II

The heavy duty KWIK KLAMP II is the driller's answer for holding larger pipe sizes: 2 1/2", 3", and 4". KWIK KLAMP II is an enlarged version of our popular KWIK KLAMP I for pipe sizes 1" through 2" with many of the same features. Replacement jaws available.

- Jaws are equipped with 16 carbide tipped grippers.
- Excellent holding capability with load tests done over 7,000 lbs.





Filter Sand and Bentonite

ENVIROPLUG® No.8 and **No.16** are high-swelling Wyoming Bentonite in granular form. The unique molecular structure allows them to absorb five times their weight of water and swell to a volume of 12 to 16 times their dry bulk, making it an ideal well sealant. Applied dry or in a pumpable slurry, these fine granules expand against casing and formations to create a very low permeability flexible grout seal.

PUMPABLE GROUT SEALS ENVIROPLUG® No. 16 can be used in a pumpable slurry mix to grout wells or abandon holes. **ENVIROPLUG®** hydration can be delayed by mixing 10 ounces of **UNI-DRILL®** per 30 gallons of water. Agitate until the polymer is dispersed, then add 50 pounds of **ENVIROPLUG® No. 16** or **No. 20**. Pump immediately. **ENVIROPLUG® No. 8** and **No. 16** are packaged in multi-walled paper bags, 50 pounds each.



| Type | Bag Size | Min Passing Mesh | Max Passing Mesh |
|----------------|----------|------------------|------------------|
| Enviroplug #8 | 50 (lbs) | 4 | 20 |
| Enviroplug #16 | 50 (lbs) | 8 | 50 |



Filter Sand and Bentonite

ENVIROPLUG® MEDIUM was the FIRST Bentonite chips developed and marketed. They are pure Wyoming Bentonite, designed for use as sealants for hole abandonment, casing seals or any vertical seal to prevent water movement up or down a bore hole. When absorbing water, ENVIROPLUG® MEDIUM swells to fill voids, exerting pressure against all surfaces to create a flexible low permeability seal. Since **ENVIROPLUG®** is introduced in a “dry” state, shrinkage cannot occur and there is a reserve expansion capacity. Generally hydration takes 1 to 2 hours.

| Type | Bag Size | Sizing | Bulk Density |
|-------------------------|----------|-------------|-----------------------|
| Enviroplug Medium Chips | 50 (lbs) | 3/8" - 1/4" | 68 lb/ft ³ |

| TYPICAL E.P. TOXICITY ANALYSIS | | |
|--------------------------------|----------------|-----------------|
| Chemical | Standard (ppm) | Set Grout (ppm) |
| Arsenic | 5 | <0.1 |
| Barium | 100 | 0.5 |
| Cadmium | 1 | <.05 |
| Chromium | 5 | <0.1 |
| Lead | 5 | <0.1 |
| Mercury | 0.2 | <.02 |
| Selenium | 1 | <.05 |
| Silver | 5 | <0.1 |



| TYPICAL CHEMICAL ANALYSIS % | |
|--------------------------------|------------|
| Chemical | Percentage |
| SiO ₂ | 61.4% |
| Al ₂ O ₃ | 18.1% |
| Fe ₂ O ₃ | 3.5% |
| K ₂ O | 0.1% |
| H ₂ O | 7.8% |
| MgO | 1.7% |
| CaO ₃ | 0.4% |
| TiO ₂ | 0.2% |
| Na ₂ O | 2.3% |
| Other | 0.07% |
| Loss on Ignition | 4.4% |



Filter Sand and Bentonite

ENVIROPLUG® GROUT is a patented formula Bentonite product designed to be used as a water well grouting fluid, drill hole abandonment fluid, grout for geotechnical monitoring wells after casing placement, and other geotechnical construction applications requiring non-destructible subgrade seals. Once in place, **ENVIROPLUG® GROUT** begins to set and assume a caulk-like consistency that contacts formations to establish a low permeability seal (1 X 10⁻⁹ cm/sec). Mixing ratios yield up to 30% solids slurry.

| Type | Bag Size | Processed Bulk Density | Dry Fineness (Mesh) |
|------------------|----------|------------------------|---------------------|
| Enviroplug Grout | 50 (lbs) | 58 lbs/ft ³ | 200 |

| TYPICAL E.P. TOXICITY ANALYSIS | | |
|--------------------------------|----------------|-----------------|
| Chemical | Standard (ppm) | Set Grout (ppm) |
| Arsenic | 5 | <0.1 |
| Barium | 100 | 0.5 |
| Cadmium | 1 | <.05 |
| Chromium | 5 | <0.1 |
| Lead | 5 | <0.1 |
| Mercury | 0.2 | <.02 |
| Selenium | 1 | <.05 |
| Silver | 5 | <0.1 |



| TYPICAL CHEMICAL ANALYSIS % | |
|--------------------------------|------------|
| Chemical | Percentage |
| SiO ₂ | 61.4% |
| Al ₂ O ₃ | 18.1% |
| Fe ₂ O ₃ | 3.5% |
| K ₂ O | 0.1% |
| MnO | 0.1% |
| MgO | 1.7% |
| CaO ₃ | 0.4% |
| TiO ₂ | 0.2% |
| Na ₂ O | 2.3% |
| H ₂ O | 0.07% |
| Loss on Ignition | 4.4% |



Filter Sand and Bentonite

GROUT-WELL® is a one step Bentonite grouting material designed to achieve low permeability seals in water wells, monitor wells, geotechnical borings, and heat pump holes. They achieve a range of solids contents, 17% to 20% solids by weight. **GROUT-WELL® DF's** granular nature reduces dusty conditions during mixing operations.

| Type | Bag Size | Processed Bulk Density | Dry Bulk Density |
|-----------|----------|--------------------------|-----------------------------|
| Groutwell | 50 (lbs) | 9.4 –9.5 lbs /lbs/gallon | 55-60 lbs / ft ³ |

| TYPICAL E.P. TOXICITY ANALYSIS | | |
|--------------------------------|----------------|-----------------|
| Chemical | Standard (ppm) | Set Grout (ppm) |
| Arsenic | 5 | <0.1 |
| Barium | 100 | 0.5 |
| Cadmium | 1 | <.05 |
| Chromium | 5 | <0.1 |
| Lead | 5 | <0.1 |
| Mercury | 0.2 | <.02 |
| Selenium | 1 | <.05 |
| Silver | 5 | <0.1 |



| TYPICAL CHEMICAL ANALYSIS % | |
|--------------------------------|------------|
| Chemical | Percentage |
| SiO ₂ | 61.4% |
| Al ₂ O ₃ | 18.1% |
| Fe ₂ O ₃ | 3.5% |
| K ₂ O | 0.1% |
| MnO | 0.02% |
| MgO | 1.7% |
| CaO ₃ | 0.4% |
| TiO ₂ | 0.2% |
| Na ₂ O | 2.3% |
| Other | 0.07% |
| Loss on Ignition | 4.4% |



Filter Sand and Bentonite

Extra High Yield Bentonite

- Uses higher performance formula that makes it very effective. This premium grade beneficiated Wyoming Bentonite is designed for use in mineral exploration, water well, and directional drilling operations.
- An efficient viscosifier that performs well in a variety of water qualities and successfully reduces application rates, and mixes easily and quickly.
- Listed with the National Sanitation Foundation for use in potable water well construction.



| Type | Bag Size | Barrel Yield |
|----------------------|----------|--------------|
| Extra High Yield Gel | 50 (lbs) | 220-235 |

NaturalGel[®]

- Used in oil and gas exploration, slurry trenching, diaphragm walls, and as a soil add mixture.
- For use in drilling operations where unaltered high quality sodium Bentonite is desirable.
- Ideal for drilling water monitor wells where additives may affect chemical analysis.

| Type | Bag Size | Viscosity Builder | pH |
|-------------|----------|-------------------|-----------|
| Natural Gel | 50 (lbs) | 200 mesh | 9.1 ± 0.1 |

| CHEMICAL ANALYSIS % | |
|--------------------------------|------------|
| Chemical | Percentage |
| SiO ₂ | 61.4% |
| Al ₂ O ₃ | 18.1% |
| Fe ₂ O ₃ | 3.5% |
| K ₂ O | 0.1% |
| MnO | 0.02% |
| MgO | 1.7% |
| CaO ₃ | 0.4% |
| TiO ₂ | 0.2% |
| Na ₂ O | 2.3% |
| Other | 0.07% |
| Loss on Ignition | 4.4% |



Filter Sand and Bentonite

PDSCO Bentonite Pel Plug

- Compressed, 100% chemically unaltered high swelling western sodium Bentonite pellet.
- Available in three sizes: 1/4", 3/8", and 1/2"

| Type | Pail Size |
|--------------|-----------|
| Pellets—1/4" | 50 (lbs) |
| Pellets—3/8" | 50 (lbs) |
| Pellets—1/2" | 50 (lbs) |

Pel-Plug TR30

- A clean, virtually odorless and easy to handle Bentonite pellet which combines the high quality yield of western Bentonite with a biodegradable non-sticking coating.
- The coating, developed by PDSCo, allows the pellets to be poured through standing water without sticking together, eliminating voids and bridging.
- Pel-Plug TR30 has the same ability to absorb water and maintain the 8-12 times expansion pattern that has been typical of the regular Pel-Plug Bentonite pellet.
- Pellets should be allowed to hydrate for at least 2 to 3 hours depending on water quality.

| Type | Pail Size |
|---------------------|-----------|
| Pellets—1/4" Coated | 50 (lbs) |
| Pellets—3/8" Coated | 50 (lbs) |
| Pellets—1/2" Coated | 50 (lbs) |

| CHEMICAL ANALYSIS % | |
|--------------------------------|------------|
| Chemical | Percentage |
| SiO ₂ | 66.6% |
| Al ₂ O ₃ | 17.9% |
| Fe ₂ O ₃ | 3.67% |
| K ₂ O | 0.31% |
| CaO | 0.57% |
| MgO | 1.80% |
| Na ₂ O | 2.50% |
| Bound Water | 6.51% |
| Moisture at 2200° F | 0.14% |



Filter Sand

FILTERSIL®

- Well Gravel Sands are produced from round and sub-round monocrystalline industrial quartz.
- Chemically inert and free of organic contaminants FILTERSIL® will not alter the chemistry of water producing wells, nor distort the analytical results of effluents drawn from monitoring wells.
- These durable and dense sands are sized to uniformity coefficients of 1.5 or lower for more uniform down hole placement.

| ASTM Mean Mesh Size | Bag Size |
|---------------------|----------|
| 8-16 | 50 (lbs) |
| 12-20 | 50 (lbs) |
| 16-30 | 50 (lbs) |
| 20-40 | 50 (lbs) |
| 30-50 | 50 (lbs) |

| CHEMICAL ANALYSIS % | |
|--------------------------------|------------|
| Chemical | Percentage |
| SiO ₂ | 99.22% |
| Al ₂ O ₃ | 0.22% |
| Fe ₂ O ₃ | 0.20% |
| K ₂ O | 0.16% |
| CaO | 0.02% |
| MgO | 0.01% |
| Na ₂ O | 0.01% |
| TiO ₂ | 0.03% |
| Loss on Ignition | 0.13% |

